Section 9

Hazard Communication

Small Mines may find section 9 of the abbreviated version of this manual to be more useful.
Section 9 Action Items

Hazard Communication

1. Prepare your written HazCom Program -- Use the generic Program and checklist in this Section.
2. Prepare your chemical list.
3. Collect and collate Material Safety Data Sheets (MSDS) for chemicals on your list and put them in notebooks. Obtain container labels.
4. Determine the chemicals each worker is exposed to.
5. Train workers on chemical hazards they are exposed to (Read your written program to them and also read the MSDS sections on the chemicals’ hazards and controls/protective measures).
6. Provide other operators and contractors information on the properties of your hazardous chemicals.
7. Select an MSDS for the product(s) you produce. See sample MSDS for product containing silica and one for limestone in this Section.
8. Label your product (See Crystalline Silica Label in this Section) and all hazardous chemicals on your mine site – see labeling instructions in checklist for Written HazCom Program).
9. Make a hazardous chemical information sheet for any contractors you hire to work on the mine site.
10. Make and place signs throughout the mine property restricting visitors from entering areas where they would be exposed to hazardous chemicals.
11. Modify your training plans to incorporate HazCom. You may simply attach a copy of the appropriate modification included near the end of this section.
SECTION 9
HAZCOM

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Test Your Knowledge of MSHA’s HazCom Rule (answers on bottom of page)

1. The HazCom standard restricts chemical use, requires controls and sets exposure limits? T $$\Box$$, F $$\Box$$.
2. The HazCom standard is an information and training standard to reduce chemically related injuries and illnesses T $$\Box$$, F $$\Box$$.
3. You must keep MSDSs for each hazardous chemical at your mine T $$\Box$$, F $$\Box$$.
4. You need not establish a written HazCom program T $$\Box$$, F $$\Box$$.
5. Your miners need to be trained about your HazCom program and about the hazards and protective measures for any new hazardous chemicals they will be exposed to T $$\Box$$, F $$\Box$$.
6. Training is required annually T $$\Box$$, F $$\Box$$.
7. The HazCom standard requires that you have MSDSs for chemicals that are either a physical or health hazard T $$\Box$$, F $$\Box$$.
8. The HazCom standard doesn’t require that your MSDSs be kept in a location where workers can access them readily T $$\Box$$, F $$\Box$$.
9. No consumer products need to be included in your Hazardous Chemical List T $$\Box$$, F $$\Box$$.
10. No articles need to be included in your Hazardous Chemical List T $$\Box$$, F $$\Box$$.
11. Personal items (food, tobacco, drugs, cosmetics etc.) packaged for retail sale and intended for personal use need not be included in your hazardous chemical list T $$\Box$$, F $$\Box$$.
12. Biological and radiation hazards need not be included in your hazardous chemical list T $$\Box$$, F $$\Box$$.
13. Wood or wood products, typically, need not be included in your hazardous chemical list T $$\Box$$, F $$\Box$$.
14. MSHA has sample written HazCom programs on the Internet at www.msha.gov T $$\Box$$, F $$\Box$$.
15. Missing or defaced labels on hazardous chemicals must be replaced immediately T $$\Box$$, F $$\Box$$.
16. A mine operator is not responsible for an inaccurate label supplied by a manufacturer T $$\Box$$, F $$\Box$$.
17. Most mine products contain respirable crystalline quartz and this requires that the mine prepare an MSDS and warning label T $$\Box$$, F $$\Box$$.
18. The date the standard was enforced is September 23, 2002 for mines with 6 or more miners and March 21, 2003 for mines with 5 or fewer miners T $$\Box$$, F $$\Box$$.
19. An unlabeled temporary, portable container must be empty at the end of the shift T $$\Box$$, F $$\Box$$.
20. The mine operator must make all written HazCom materials available to miners and designated representatives T $$\Box$$, F $$\Box$$.
21. The mine must pay for only the first copy of HazCom materials provided to miners T $$\Box$$, F $$\Box$$.
22. Training must include providing information on location of HazCom materials at the mine, location of hazardous chemicals at the mine, how to tell if a chemical is present, protective measures, and how the operator protects the miner T $$\Box$$, F $$\Box$$.
23. HazCom is currently covered under Part 47 of 30 CFR T $$\Box$$, F $$\Box$$.

Subsection A. GENERIC HAZCOM PROGRAM

(See Subsection B for Information on Preparing Your Chemical List)

Note -- To understand more about the HazCom standard, go to the interactive program on MSHA’s Internet site at http://www.msha.gov/Hazcom/Buttons/index.htm.

Contents of This Subsection:

1. A generic fill-in-the-blank HazCom Program on pages 4 through 6. This is the same program as the one found on MSHA’s web site. Fill in the blanks and you will have a written HazCom Program.

2. A checklist on pages 7 and 8 for you to use to help make sure that you are doing the things the HazCom standard requires.

3. A warning label for a product containing “Crystalline Silica” on page 9. If you have a mine product, you will need such a label.

4. An MSDS for a Sand and Gravel Product on pages 10-15. If you are mining sand and gravel, you may be able to use this one by simply filling in the company information requested.

5. An MSDS for a Limestone Product on pages 16-21. If you are mining limestone, you may be able to use this one by simply filling in the company information requested.

6. A fill-in-the-blank MSDS for other products you may produce on pages 21-23 and a sample of a filled-in MSDS on pages 23 and 25.

Note that you should be able to do the initial training yourself. This might consist of: 1) reading your written program to all employees and 2) for each hazardous chemical they may possibly be exposed to, reading the information on the label and (or) MSDS about it’s hazards and about how employees can protect themselves from these hazards. Keep a written record of this training (such as a Part 46 Task Training Certificate) on site including, for each subject: 1) the time spent (i.e. 15 minutes), 2) the training method (i.e. lecture, discussion), 3) coarse materials (i.e. written program, MSDSs, labels), and 4) the evaluation method (i.e. oral feedback).
HAZARD COMMUNICATION PROGRAM

Mine Name: __________________
ID No.: _________________

47.32(a)(1) HAZARD DETERMINATION

Each chemical brought on mine property and each chemical produced on mine property will be evaluated to determine if it is hazardous.

47.32(a)(2) LABELS AND OTHER FORMS OF WARNING

The labeling system at this time is:

☐ Manufacturers’ Labels
☐ Other

[Describe any in-house system, such as use of special numbers or graphics].

47.32(a)(3) MATERIAL SAFETY DATA SHEETS (MSDS)

This program includes a current, legible, and accessible Material Safety Data Sheet (MSDS) for each hazardous chemical at this mine site.

☐ Manufacturers’ MSDS
☐ Other

MSDS’s will be accessible to miners during each work shift for each hazardous chemical to which they may be exposed either:

☐ At each work area where the hazardous chemical is produced or used
☐ At an alternative location (__________________________________________), provided that the MSDS is readily available to miners in an emergency.

47.32(a)(4) MINER TRAINING

All miners will receive instruction about the physical and health hazards of chemicals in their work areas, the protective measures they can take against these hazards (personal protective equipment, ventilation, warning signs, etc.), and the contents of the mine’s HazCom Program (47.2).

NOTE: 30 CFR, Parts 46 & 48, have been amended to include HazCom Training Requirements

47.32(c)(1)(2) TRAINING FOR OTHER OPERATORS

Other operators at this mine will be provided with access to MSDS’s and informed about
hazardous chemicals to which their miners can be exposed, the labeling system on the containers of these chemicals, and appropriate protective measures.

47.32(b)(1,2) LIST OF HAZARDOUS CHEMICALS

This is a current list of all hazardous chemicals known to be at this mine, including hazardous chemical waste.

Each hazardous chemical on this property will be clearly identified in exactly the same way on the list, its container label, and its corresponding MSDS.

<table>
<thead>
<tr>
<th>No.</th>
<th>Chemical/Common/Trade Name</th>
<th>Mine or Work Area</th>
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<tbody>
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<td>No.</td>
<td>Chemical/Common/Trade Name</td>
<td>Mine or Work Area</td>
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</table>
HAZCOM PROGRAM CHECKLIST

**Note** – It is recommended that you attach this checklist to your Written HazCom Program!

1. □ Is chemical list current? Is a copy available with this Program and with each MSDS file?
2. □ Are copies of the MSDS available for every hazardous chemical brought onto the mine site?
3. □ Are MSDSs immediately available to workers (for chemicals they may be exposed to)?
4. □ Are all potentially exposed miners on all workshifts aware of where and how to immediately access MSDSs?
5. □ Are the same chemical names used on labels, on MSDSs and on your chemical list?
6. □ Do all hazardous chemical containers have a clearly readable label?
7. □ Are all temporary portable containers labeled if they are not emptied by the end of the shift?
8. □ Are all bulk storage containers of hazardous chemicals labeled (for example -- diesel fuel or gasoline)?
9. □ Are all stationary process containers identified by a label or alternative means which: a) clearly identifies the container to which it applies, b) contains the required hazard warning information, and c) is immediately available to miners in the work area.
10. □ Does each container of hazardous chemical produced at the mine have an up-to-date container label? (Crystalline Silica Warning Label on back of weight ticket is OK)
11. □ Is a single system (such as HMIS System sold by Label Master) available for making labels you are required to make? Are all affected persons trained on the system?
12. □ Are all employees trained on the following: a) the physical and health hazards of chemicals in each miner's work area; b) Protective measures a miner can take against these hazards; and c) the contents of the company’s HazCom program and where miners can gain access to it.
13. □ Is HazCom training for specific chemical hazards associated with new or non-routine tasks given before beginning the task?
14. □ Are all contractors and (or) other operators informed verbally and (or) in writing about 1) hazardous chemicals to which their employees may be exposed while on the mine site, 2)
the labeling system used for the chemicals of concern, and 3) appropriate protective measures?

15. ☐ Is HazCom training recorded properly on your new miner, new experienced miner, task and annual refresher training certificates (for Part 48 training check “other” box and write-in “Initial HazCom Training”, for Part 46 add subject “Initial HazCom Training”).

16. ☐ Does your training plan contain the HazCom Addendum?

17. ☐ Do potentially exposed miners and their representatives have information on mine hazardous wastes that (1) identifies the hazardous chemical components, (2) describes physical or health hazards, and (c) specifies appropriate protective measures?

18. ☐ Are alternative labeling methods being used for hazardous chemicals not in containers (signs, etc. for piles, holding ponds etc.)?

19. ☐ Have arrangements been made for providing, upon request, one free copy of labeling information, MSDSs, the mines HazCom program, list of hazardous chemicals and any other HazCom program documents to miners, miner’s representatives or contractor? Has a fair (per page) charge been set to be paid by all who request additional copies?

20. ☐ Have arrangements been made to provide customers, who request them, with one free copy of the MSDS and the chemical’s label (as well as any updates) for any hazardous chemical supplied by the mine? Has a fair, per-page charge been set for all who request additional copies? Note -- see attached warning label and MSDSs for sand and gravel and limestone products containing crystalline silica.

21. ☐ Are visitors informed of hazardous chemicals and how to protect themselves or are signs posted which restrict visitors from areas containing hazardous chemicals?

Note -- For more details on various exemptions and procedures, see the HazCom Standard (30CFR Part 47) or obtain a copy of the June 21, 2002 Federal Register (standard is near the end).
Crystalline Silica Warning Label

Note – Almost all mined products contain crystalline silica. For this reason, you will need some sort of warning label on your product. The generic form below is one possible alternative. You will need to fill in the information requested.

For bulk sales, this or other label may be printed on the back side of the batch ticket or given to the customer as a separate sheet attached to the batch ticket.

<table>
<thead>
<tr>
<th>Product Name: ______________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRYSTALLINE SILICA WARNING</td>
</tr>
<tr>
<td>CONTENTS:</td>
</tr>
<tr>
<td>This product contains crystalline silica. As sold, this product does NOT contain respirable crystalline silica. Some handling methods, however, may abrade the material and produce respirable dust.</td>
</tr>
<tr>
<td>CONTROLS:</td>
</tr>
<tr>
<td>Use exhaust ventilation and a high efficiency particulate (HEPA) filter dust respirator when handing this material in a way that abrades the product and produces respirable dust. Take precautions to prevent the production of respirable dust.</td>
</tr>
<tr>
<td>EFFECTS:</td>
</tr>
<tr>
<td>Breathing excessive amounts of respirable crystalline silica over a period of time can cause a disabling lung disease. The International Agency for Research on Cancer (IARC) has determined that respirable crystalline silica is a human carcinogen.</td>
</tr>
<tr>
<td>CONTACT(S) FOR ANSWERS TO SAFETY/HEALTH QUESTIONS:</td>
</tr>
<tr>
<td>Company Name ______________________</td>
</tr>
<tr>
<td>Company Address ____________________</td>
</tr>
<tr>
<td>Company Phone No. ____________________</td>
</tr>
<tr>
<td>Contact Person __________ Phone No. ____________________</td>
</tr>
</tbody>
</table>
MSDS FOR SAND & GRAVEL PRODUCT
Material Safety Data Sheet
(Natural Sand or Gravel)

1. IDENTIFICATION
Chemical Name: Natural Sand or Gravel
Chemical Formula: N/A
Trade Name: Sand or Gravel
Molecular Weight: N/A
Synonyms: Construction Aggregate
DOT Identification No: None

2. PRODUCT AND COMPONENT DATA

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>Chemical Name</th>
<th>CAS Registry No</th>
<th>% (Approx)</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sand* or Gravel*</td>
<td>None</td>
<td>14808-60-7</td>
<td>100</td>
<td>See section 6</td>
</tr>
<tr>
<td></td>
<td>*Composition varies naturally – typically contains quartz (crystalline silica).</td>
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</tbody>
</table>

3. PHYSICAL DATA
Appearance and odor: Angular or round multicolored particles. No odor.
Specific Gravity: 2.55 – 2.80
Boiling point (At 1 Atm.): N/A
Vapor Density in Air (Air = 1): N/A
Vapor Pressure (mmHg @ 20°C): 0
% Volatile, By Volume: 0%
Evaporation Rate (at 1Atm, and 25°C; n-butyl acetate = 1): 0
Solubility in Water: Negligible

4. REACTIVITY DATA
Stability: Stable
Conditions to Avoid: Avoid contact with incompatible materials (see below).
Incompatibility (materials to avoid): Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosion. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride.
Hazardous Decomposition Products: Silica-containing respirable dust particles may be generated by handling.
Hazardous Polymerization: Not known to polymerize

5. FIRE AND EXPLOSION HAZARD DATA
Flashpoint (Method used): Not flammable
Flammable Limits in Air: Not Flammable
Extinguishing Agents: None required
Unusual Fire and Explosion Hazards: Contact with powerful oxidizing agents may cause fire and/or explosions (see section 4 of this MSDS).
6. TOXICITY AND FIRST AID

EXPOSURE LIMITS (When exposure to this product and other chemicals is concurrent, the exposure limit must be defined in the workplace.) Unless specified otherwise, limits are expressed as eight-hour time-weighted averages (TWA).

ABBREVIATIONS: TLV = threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH); MSHA PEL = permissible exposure limit of the Mine Safety and Health Administration (MSHA); OSHA PEL = permissible exposure limit of the Occupational Safety and Health Administration (OSHA); mg/m³ = milligrams of substance per cubic meter of air.

Respirable Crystalline Silica:

2001 TWA TLV = 0.05 mg/m³ for quartz, tridymite or cristobalite, 0.1 mg/m³ for tripoli

MSHA and OSHA TWA PEL* (based on 1973 TWA TLV) for respirable particulate containing crystalline silica = 10 mg/m³ / (%SiO₂ + 2); This limits the TWA of the crystalline silica content to approximately 0.1 mg/m³.

* Divide calculated MSHA and OSHA PEL limits for quartz by 2 to obtain limits for crystalline silica in the form of tridymite or cristobalite.

Other Particulates:

Respirable particulate not otherwise classified (no asbestos & < 1% crystalline silica);

2001 TWA TLV = 3 mg/m³,

OSHA (& MSHA) PEL = 5 mg/m³ – this is also equal to the value obtained using the 1973 TLVs formula above for respirable dust containing crystalline quartz -- 10/(%SiO₂+2), which, when the % SiO₂ is equal to 0.00, 10/(0.00 + 2), equals 5 mg/m³.

Total particulate not otherwise classified (no asbestos & < 1% crystalline silica) --

2001 TWA TLV = 10 mg/m³
MSHA PEL = 30 mg/m³ / (% quartz + 3);
OSHA PEL = 30 mg/m³ / (% quartz + 2)

ACGIH. MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. However, because of the wide variation in individual susceptibility, lower exposure limits may be
MSDS FOR SAND & GRAVEL PRODUCT CONTINUED

appropriate for some individuals including persons with pre-existing medical conditions such as those described below.

Medical Conditions Aggravated By Exposure
Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.

Primary Route(s) of Exposure:  X_Inhalation   ___Skin   ___Ingestion

Acute Toxicity
EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion.
SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion.
SKIN ABSORPTION: Not expected to be a significant exposure route.
INGESTION: Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.
INHALATION: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.

Use of natural sand and gravel for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

First Aid
EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

SKIN: Wash with soap and water. Contact a physician if irritation persists or later develops.

INGESTION: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

INHALATION: Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.
MSDS FOR SAND & GRAVEL PRODUCT CONTINUED

For emergencies, contact __________________________________

Chronic Toxicity
Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, a lung disease. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Smoking may increase the risk of developing lung disorders, including emphysema and lung cancer. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a causal relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk of developing lung cancer, a risk that increases with the duration of exposure. Many of these studies of silicotics do not account for lung cancer confounders, especially smoking.

Sand or gravel is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). In October 1996, an IARC Working Group re-assessing crystalline silica, a component of this product, designated respirable crystalline silica as carcinogenic (Group 1). The NTP’S Report on Carcinogens, 9th edition, lists respirable crystalline silica as a “known human carcinogen.” In year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

7. PERSONAL PROTECTION AND CONTROLS

Respiratory Protection For respirable quartz levels that exceed or are likely to exceed an 8-hr TWA of 0.1 mg/m$^3$, a NIOSH approved dust respirator must be worn. For respirable quartz levels that exceed or are likely to exceed an 8-hr TWA of 0.5 mg/m$^3$, a NIOSH approved HEPA filter respirator must be
MSDS FOR SAND & GRAVEL PRODUCT CONTINUED

worn. If respirable quartz levels exceed or are likely to exceed an 8-hr TWA of 5 mg/m³, a NIOSH approved positive pressure, full-face respirator or equivalent is required. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.

**Ventilation**
Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

**Skin Protection**
See “Hygiene” section below.

**Eye Protection**
Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

**Hygiene**
Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

**Other Control Measures**
Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations that are well-ventilated with clean air.

8. STORAGE AND HANDLING PRECAUTIONS

This product is not intended or designed for use as an abrasive blasting medium or for foundry applications, and should not be used for these purposes.

Follow the personal protection and controls set forth in Section 7 of this MSDS when handling this product. Respirable crystalline silica-containing dust may be generated during processing, handling, and storage.

9. SPILL, LEAK AND DISPOSAL PRACTICES

**Steps to be Taken in Case Material is Released or Spilled**
The personal protection and controls identified in Section 7 of the MSDS should be used as appropriate. Spilled material, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry-sweep spilled material.

Prevent spilled materials from inadvertently entering streams, drains, or sewers.

For emergencies, contact _____________________________

Section 9 Subsection A Page 13
MSDS FOR SAND & GRAVEL PRODUCT CONTINUED

Waste Disposal Method
Pick up and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

10. TRANSPORTATION

DOT Hazard Classification: None  Placard Required: None  Label Required: Label as required by the OSHA Hazard Communication Standard [29 CFR 1910.1200 (f) and applicable state and local laws and regulations. See label in Appendix C

For Further Information Contact: Name ________________________, Phone No. ___________________
Address ________________________________________________

Date of Preparation: ____________________________________________

Emergency Information: Name ________________________, Phone No. ____________________, Email ________________________

Notice: ______________________ believes the information contained herein is accurate; however, ______________________ makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein is not intended to be and should not be construed as legal advice or as ensuring compliance with any federal, state or local laws and regulations. Any party using this product should review all such laws, rules or regulations prior to use.
NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.
MSDS FOR LIMESTONE PRODUCT
Material Safety Data Sheet
(Limestone)

1. IDENTIFICATION
Chemical Name: Limestone  Chemical Formula: N/A
Molecular Weight: N/A  Trade Name: Crushed Stone
DOT Identification No: None
Synonyms: Aggregate, Aglime, Barn Lime, Coverstone, Flexible Base, Fluxing Agent, Manufactured Sand, Mineral Filler, Screenings

2. PRODUCT AND COMPONENT DATA

<table>
<thead>
<tr>
<th>Component(s) Chemical Name</th>
<th>CAS Registry No.</th>
<th>% (Approx)</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone*</td>
<td>1317-65-3</td>
<td>100</td>
<td>See section 6</td>
</tr>
<tr>
<td>*Composition varies naturally – typically contains quartz (crystalline silica).</td>
<td>14808-60-7</td>
<td>&gt;1</td>
<td></td>
</tr>
</tbody>
</table>

3. PHYSICAL DATA
Appearance and odor: Angular gray, white and tan particles ranging in size from powder to boulders. No odor.
Specific Gravity: 2.6 – 2.75
Boiling point (At 1 Atm.): N/A
Vapor Density in Air (Air = 1): N/A
Vapor Pressure (mmHg @ 20 °C): N/A
% Volatile, By Volume (@ 100 °F): 0%
Evaporation Rate (at 1 Atm. and 25EC; n-butyl acetate = 1): 0
Solubility in Water: 0

4. REACTIVITY DATA
Stability: Stable
Conditions to Avoid: Avoid contact with incompatible materials (see below).
Incompatibility (materials to avoid): Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride.
Hazardous Decomposition Products: Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride.
Hazardous Polymerization: Not known to polymerize
5. FIRE AND EXPLOSION HAZARD DATA

Flashpoint (Method used): Not Flammable
Flammable Limits in Air: Not Flammable
Extinguishing Agents: None Required
Unusual Fire and Explosion Hazards: Contact with powerful oxidizing agents may cause fire and/or explosions (see section 4 of this MSDS).

6. TOXICITY AND FIRST AID

EXPOSURE LIMITS (When exposure to this product and other chemicals is concurrent, the exposure limit must be defined in the workplace.) Unless specified otherwise, limits are expressed as eight-hour time-weighted averages (TWA).

ABBREVIATIONS: TLV = threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH); MSHA PEL = permissible exposure limit of the Mine Safety and Health Administration

Respirable Crystalline Silica:

2001 TWA TLV = 0.05 mg/m³ for quartz, tridymite or cristobalite, 0.1 mg/m³ for tripoli

MSHA and OSHA TWA PEL* (based on 1973 TWA TLV) for respirable particulate containing crystalline silica = 10 mg/m³ / (%SiO₂ + 2); This limits the TWA of the crystalline silica content to approximately 0.1 mg/m³.

* Divide calculated MSHA and OSHA PEL limits for quartz by 2 to obtain limits for crystalline silica in the form of tridymite or cristobalite.

Other Particulates Including Limestone:

Respirable particulate not otherwise classified (no asbestos & < 1% crystalline silica);

2001 TWA TLV = 3 mg/m³,

OSHA (& MSHA) PEL = 5 mg/m³ – this is also equal to the value obtained using the 1973 TLVs formula above for respirable dust containing crystalline quartz -- 10/(%SiO₂+2), which, when the % SiO₂ is equal to 0.00, 10/(0.00 + 2), equals 5 mg/m³.

Total particulate not otherwise classified (no asbestos & < 1% crystalline silica) --

2001 TWA TLV = 10 mg/m³
MSDS FOR LIMESTONE PRODUCT CONTINUED

MSHA PEL = 30 mg/m$^3$ / (% quartz + 3);
OSHA PEL = 30 mg/m$^3$ / (% quartz + 2)

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions such as those described below.

Medical Conditions Aggravated by Exposure

Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.

Primary Route(s) of Exposure:  X Inhilation  __Skin  __Ingestion

Acute Toxicity

EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion.
SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion. SKIN ABSORPTION: Not expected to be a significant exposure route. INGESTION: Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.
INHALATION: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.

First Aid

EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.
SKIN: Wash with soap and water. Contact a physician if irritation persists or later develops.
INGESTION: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.
INHALATION: Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.
For emergencies, contact __________________________

Chronic Toxicity

Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, a lung disease. Not all individuals with silicosis will
exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Smoking may increase the risk of developing lung disorders, including emphysema and lung cancer. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size.

Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a causal relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk of developing lung cancer, a risk that increases with the duration of exposure. Many of these studies of silicotics do not account for lung cancer confounders, especially smoking.

Limestone is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). In October 1996, an IARC Working Group re-assessing crystalline silica, a component of this product, designated respirable crystalline silica as carcinogenic (Group 1). The NTP’s Report on Carcinogens, 9th edition, lists respirable crystalline silica as a “known human carcinogen.” In year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

California Proposition 65: WARNING: This product contains chemical(s) known to the state of California to cause cancer.

7. PERSONAL PROTECTION AND CONTROLS

Respiratory Protection
For respirable quartz levels that exceed or are likely to exceed an 8-hr TWA of 0.1 mg/m³, a NIOSH approved dust respirator must be worn. For respirable quartz levels that exceed or are likely to exceed an 8-hr TWA of 0.5 mg/m³, a NIOSH approved HEPA filter respirator must be worn. If respirable quartz levels exceed or are likely to exceed an 8-hr TWA of 5 mg/m³, a NIOSH approved positive pressure, full-face respirator or equivalent is required. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.
Ventilation: Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

Skin Protection
See “Hygiene” section below.

Eye Protection
Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

Hygiene
Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

Other Control Measures
Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.

8. STORAGE AND HANDLING PRECAUTIONS
Respirable crystalline silica-containing dust may be generated during processing, handling, and storage. The personal protection and controls identified in Section 7 of the MSDS should be used as appropriate. Do not store near food and beverages or smoking material.

9. SPILL, LEAK AND DISPOSAL PRACTICES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
The personal protection and controls identified in Section 7 of the MSDS should be used as appropriate. Spilled material, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry-sweep spilled material. Prevent spilled materials from inadvertently entering streams, drains, or sewers.

For emergencies, contact ______________________________

WASTE DISPOSAL METHOD
Pick up and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

10. TRANSPORTATION

DOT Hazard Classification: None

MSDS FOR LIMESTONE PRODUCT CONTINUED

Placard Required: None

Label Required: Label as required by the OSHA Hazard Communication Standard [29 CFR 1910.1200 (f) and applicable state and local laws and regulations. See label in Appendix C.
For Further Information Contact: Name ___________________, Phone No. _______________
Address ____________________________________________________________________________.

Date of Preparation: _____________________

Emergency Information: Name____________________, Phone No. ____________________, email _____________________.

Notice: ______________________ believes the information contained herein is accurate; however, ______________________ makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein is not intended to be and should not be construed as legal advice or as ensuring compliance with any federal, state or local laws and regulations. Any party using this product should review all such laws, rules or regulations prior to use.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.
Chemical: 
Common Trade Names(s): 
Use(s): 
Contact (Name/Phone): 

For additional information, Contact (Name/Phone): 
Check all that apply: 
- Flush eyes
- Remove clothing
- Wash skin soap/water
- Ingested – Induce Vomiting
- Ingested – Do Not Induce Vomiting
- Vapor Exposed – Remove to Ventilated Area
- Breathing Stopped – Administer Artificial Respiration

Other information: 
Call Physician ( 

Handling Procedures: 
- Gloves
- Respirator
- Keep from Heat, Electricity
- Protective Clothing
- Don’t mix with other Chemical
- Face Shield or Goggles

Leak/Spill Clean-up: 
- Vacuum
- Sand or Sawdust
- Absorb with Paper
- Place in Sealed Container
- Use in Landfill

Specific Information: 

Check all that apply 
- Local Exhaust Ventilation
- General Ventilation
- Enclosed Cab
- Isolate Process
- Administrative Controls
- Control Room

Specific Information: 

Chemical Formula: 
Molecular Wt.: 

Hazardous Ingredient, Concentrations, CAS Number: 

Physical State: Solid Liquid Gas

Appearance: Color/Odor: Vapor Pressure: 
Specific Gravity: Percent Volatile (by Volume) Freezing Point: 
Evaporation Rate: Flash Point: Vapor Density: 
Boiling Point: Solubility in Water: Flammability Limits: 
Auto Ignition Temperature: TDG Flammability Classification: 

L.E.L.: U.E.L.: 

Section 9 Subsection A Page 21
FILL-IN-THE-BLANK MSDS CONTINUED

Hazardous Combustion Products: __________________________________________________________

Sensitivity to Impact: □ Friction □ Chemical Reaction □ Physical Shocks

Rate of Burning ___________________ Explosive Power (kg) ___________________
Sensitivity to Static Discharge _______ Stability _________________________________
Incompatibility ___________________ Reactivity Conditions _______________________

Hazardous Decomposition Products:
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
-----------------------------------------------------------------------------------------------

Routes of Entry: □ Inhalation □ Ingestion □ Skin

Signs/Symptoms of Exposure: ______________________________________________________________

Medical Conditions Aggravated: _____________________________________________________________

Acute Effects:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Chronic Effects:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

□ Reproductive Toxicant (i.e., effects ability to have children)

□ Teratogen (i.e., affects developing child)

□ Mutagen (i.e., affects genetic makeup)

□ Carcinogen □ Probable Carcinogen □ Suspected Carcinogen

Source of Information: (_____________________________________________________)  

TWA Permissible
Exposure limit (PEL): __________________

OSHA Permissible
Exposure limit (PEL): __________________

NIOSH Recommended:
Exposure limit (REL): ________________

Other Exposure Limits/Levels: ____________________________________________________________

Preparer: ___________________________ Date Prepared: ________________________
SAMPLE FILLED-IN MSDS FOR MINE PRODUCT

IDENTITY

Chemical: Stone Aggregate Product containing Crystalline Silica
Common Trade Names(s): Aggregate, Gravel, Crushed Stone
Use(s): Road Fill, Concrete, Blacktop
Contact (Name/Phone): _______________________________________________________

EMERGENCY INFORMATION

For additional information, Contact (Name/Phone): ______________________________________
Check all that apply:
☐ Flush eyes ☐ Remove clothing ☐ Wash skin soap/water
☐ Ingested – Induce Vomiting ☐ Ingested – Do Not Induce Vomiting
☐ Vapor Exposed – Remove to Ventilated Area ☐ Breathing Stopped – Administer Artificial Respiration
Other information: Do not breathe the dust ☐ Call Physician (_________________________________________)

SAFE USE

Check all that apply
Handling Procedures: ☐ Gloves ☐ Respirator
☐ Keep from Heat, Electricity ☐ Protective Clothing
☐ Don’t mix with other Chemical ☐ Face Shield or Goggles
Leak/Spill Clean-up: ☐ Vacuum ☐ Place in Sealed Container
☐ Absorb with Paper ☐ Use in Landfill
Specific Information: Ventilate. Remove dust from clothes before entering unventilated area

CONTROL MEASURES

Check all that apply
☒ Local Exhaust Ventilation ☒ General Ventilation ☐ Enclosed Cab
☒ Isolate Process ☐ Administrative Controls ☒ Control Room
Specific Information: Ventilate to reduce respirable crystalline silica to PEL
Specific Information: __________________________________________________________

PROPERTIES

Chemical Formula: ______________________ Molecular Wt.: __________

Hazardous Ingredient, Concentrations, CAS Number:
Crystalline Silica, Respirable portion>5%, 14808-60-7

Physical State: ☒ Solid ☐ Liquid ☐ Gas

PROPERTY & PHYSICAL HAZARDS

Appearance: Granular rock Color/Odor: None
Specific Gravity: 2.65 Percent Volatile (by Volume) None Freezing Point: 3110 F
Evaporation Rate: Nil Flash Point: N/A Vapor Density: ______________________
Boiling Point: 4046 F Solubility in Water: None Flammability Limits: N/A
Auto Ignition Temperature: N/A TDG Flammability Classification: ________
L.E.L.: N/A U.E.L.: N/A
Hazardous Combustion Products: None

Sensitivity to Impact: ◐ Friction ◐ Chemical Reaction ◐ Physical Shocks

Rate of Burning: Not Combustable Explosive Power (kg):

Sensitivity to Static Discharge:

Friction

Chemical Reaction

Physical Shocks

Rate of Burning: Not Combustable

Explosive Power (kg):

Sensitivity to Static Discharge:

Stability: Very Stable

Incompatibility: None Known

Reactivity Conditions: High Temp > 2000°F

Hazardous Decomposition Products:
Soluble in hydrofluoric acid and can produce silicon tetrafluoride (Corrosive)

Routes of Entry: ☑ Inhalation ☐ Ingestion ☐ Skin

Signs/Symptoms of Exposure: Shortness of breath - Symptoms increase with increased exposure time.

Medical Conditions Aggravated: Any pre-existing lung conditions

Acute Effects:
Few. Shortness of breath, difficulty breathing when exposed to excessively high levels.

Chronic Effects:
Respirable crystalline silica may cause cancer, scleroderma (thickening & stiffness of skin, particularly in fingers), shortness of breath, difficult swallowing, joint problems, and tuberculosis, weight loss & fever, disability & death.

☐ Reproductive Toxicant (i.e., effects ability to have children)

☐ Teratogen (i.e., affects developing child)

☐ Mutagen (i.e., affects genetic makeup)

☒ Carcinogen ☐ Probable Carcinogen ☐ Suspected Carcinogen

Source of Information: NIOSH Pocket Guide & Other MSDSs for crystalline silica

<table>
<thead>
<tr>
<th></th>
<th>TWA Time Weighted Average</th>
<th>STEL Short Term Exposure Limit</th>
<th>C: Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSHA Permissible Exposure limit (PEL)</td>
<td>10mg/m³ (%SiO₂+2)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA Permissible Exposure limit (PEL)</td>
<td>10mg/m³ (%SiO₂+2)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH Recommended: Exposure limit (REL)</td>
<td>0.05 mg/m³ as SiO₂</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Exposure Limits/Levels: *Limits for quartz, use 1/2 this value for Cristobalite, tridymite

Preparer: __________________________ Date Prepared: _________________
Subsection B. CHEMICAL LIST

Contents of This Subsection:

1. Pages 26 and 27 are instructions on how to determine if a chemical must be included in your HazCom program.
2. Page 28 is a list of Internet Sites from which to get MSDSs and MSDS information.
3. Pages 29 through 42 contain a large list of common chemicals found at mines. You can use this to help recall chemicals you have on your mine site.
4. Pages 43 and 44 contain a small chemical list that may be more typical of your list if your mine is small.
5. Pages 45-54 contain modifications you must attach to your training plan to update it to include HazCom training.
6. Pages 55-70 contain the HazCom Standard.
Determining Which Chemicals to List

Note – This is a simplified procedure for selecting the chemicals to be included in your program. For additional details, review the 30CFR Part 47 standard. A good rule to follow is:” if in doubt, include the chemical in your program”.

I. List chemicals on your mine site. Also go through the attached list (Attachment 1) and check off the chemicals that are on your mine site. Add to the list those chemicals on your site that are not already included.

II. If the chemical is not a Physical or Health Hazard, write “no hazard” under “Included in Program”. If no worker is or could possibly be exposed to the chemical, write in “no exposure”. You may eliminate these chemicals from your HazCom program.

III. For each chemical on your list, write “exempt” if any of the following apply. Exempt chemicals may also be eliminated from your HazCom program.

1. The chemical is exempt if it is:
   a. A food item for personal use.
   b. A tobacco product for personal use.
   c. A medical drug for personal use.
   d. A cosmetic for personal use.
   e. A biological hazard (covered under different Federal Standards).
   f. A radiation hazard (covered under different Federal Standards).
   g. Wood or a wood product (unless you create sawdust, which is considered hazardous).
   h. On the OSHA Exempt List.
   i. Found in an article that does not release significant amounts of the chemical during normal use. (i.e.: a tire.)
   j. Consumer Product used in similar quantities and over a similar time period as would be used in the home in accordance with the manufacturer’s label instructions.

III. The chemicals remaining on your list should be included in your HazCom Program. These must be labeled (use manufacturer labels wherever possible), included in your file of MSDSs, and your workers must be trained by the effective date (September 23, 2002 for mines with 6 or more employees and March 21, 2003 for mines with 5 or fewer employees).

IV. Initial training must include: a) the contents of your HazCom Program (for example, you may read your written program including the checklist to all employees), b) the physical and health hazards of the chemical – for example, it’s vapors are extremely flammable and contact with the liquid will harm your skin (find the correct information on the label and MSDS), and c) protective measures they can take to prevent exposure – for example, never
smoke or weld near this chemical and always use ___________ gloves when working with it (find the correct information on the label and on the MSDS).

V. If you are unable to obtain a manufacturer’s MSDS for a hazardous chemical, a suitable alternative may be found at the Internet site listed in the last column of the chemical list or, if you may be able to locate another source free of charge using one of the Internet sites listed below.
Internet Sites Used to Locate MSDSSs and Other Useful HazCom Information

Sites Used to Locate Sample MSDSSs

<table>
<thead>
<tr>
<th>Site</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornell</td>
<td><a href="http://msds.pdc.cornell.edu/msdssrch.asp">http://msds.pdc.cornell.edu/msdssrch.asp</a></td>
</tr>
<tr>
<td>Vermont</td>
<td><a href="http://siri.org/msds2/index.php">http://siri.org/msds2/index.php</a></td>
</tr>
<tr>
<td>New Jersey</td>
<td><a href="http://www.state.nj.us/health/rtkweb/rtkhfs.htm">http://www.state.nj.us/health/rtkweb/rtkhfs.htm</a></td>
</tr>
<tr>
<td>Gases – MSDSSs</td>
<td><a href="http://www.boc.com/gases/msds_us/index_msds_us.cfm">http://www.boc.com/gases/msds_us/index_msds_us.cfm</a></td>
</tr>
</tbody>
</table>

Other Sites Providing Information on Chemical Hazards

<table>
<thead>
<tr>
<th>Site</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogens (Oxford)</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/carcinogens.html">http://ptcl.chem.ox.ac.uk/MSDS/carcinogens.html</a></td>
</tr>
<tr>
<td>Chemical Resistant Gloves</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/glovesbymaterial.html">http://ptcl.chem.ox.ac.uk/MSDS/glovesbymaterial.html</a></td>
</tr>
<tr>
<td>Chemical Risk Phrases</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/risk_phrases.html">http://ptcl.chem.ox.ac.uk/MSDS/risk_phrases.html</a></td>
</tr>
<tr>
<td>Common Chemicals</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/commons.html">http://ptcl.chem.ox.ac.uk/MSDS/commons.html</a></td>
</tr>
<tr>
<td>Consumer &amp; Industrial</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/consumer.html">http://ptcl.chem.ox.ac.uk/MSDS/consumer.html</a></td>
</tr>
<tr>
<td>Find a Chemical</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/cantfindit.html">http://ptcl.chem.ox.ac.uk/MSDS/cantfindit.html</a></td>
</tr>
<tr>
<td>High Toxicity Chemicals</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/high">http://ptcl.chem.ox.ac.uk/MSDS/high</a> toxicity.html</td>
</tr>
<tr>
<td>Incompatible Chemicals</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/incompatibles.html">http://ptcl.chem.ox.ac.uk/MSDS/incompatibles.html</a></td>
</tr>
<tr>
<td>MSDSS Template (Oxford)</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/msdstemplate.doc">http://ptcl.chem.ox.ac.uk/MSDS/msdstemplate.doc</a></td>
</tr>
<tr>
<td>Reactivity Worksheet</td>
<td><a href="http://response.restoration.noaa.gov/chemaids/react.html">http://response.restoration.noaa.gov/chemaids/react.html</a></td>
</tr>
<tr>
<td>Some low flash point chemicals</td>
<td><a href="http://ptcl.chem.ox.ac.uk/MSDS/lowflashpoint.html">http://ptcl.chem.ox.ac.uk/MSDS/lowflashpoint.html</a></td>
</tr>
</tbody>
</table>

VI. Most small mines will only have a few chemicals on their list. A more typical small mine list is included in Attachment 2.
ATTACHMENT 1 – LARGE CHEMICAL LIST
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Found at Mine</th>
<th>Location at Mine</th>
<th>Typical Use at Mine</th>
<th>Manufacturer Name</th>
<th>Manufacturer Phone</th>
<th>Included in Program?</th>
<th>Where Sample MSDS Can be Found*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td></td>
<td>Laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.state.nj.us/health/eh/rtkweb/0004.pdf">http://www.state.nj.us/health/eh/rtkweb/0004.pdf</a></td>
</tr>
<tr>
<td>Acetone</td>
<td></td>
<td>Cleaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.state.nj.us/health/eh/rtkweb/0006.pdf">http://www.state.nj.us/health/eh/rtkweb/0006.pdf</a></td>
</tr>
<tr>
<td>Compressed gas -- Acetylene</td>
<td></td>
<td>Welding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.state.nj.us/health/eh/rtkweb/0015.pdf">http://www.state.nj.us/health/eh/rtkweb/0015.pdf</a></td>
</tr>
<tr>
<td>Al, Aluminum-MF Unknown</td>
<td></td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Sulfate</td>
<td></td>
<td>Water Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.state.nj.us/health/eh/rtkweb/0068.pdf">http://www.state.nj.us/health/eh/rtkweb/0068.pdf</a></td>
</tr>
<tr>
<td>Alundum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://siri.org/msds/gn.cgi?query=alundum&amp;start=0">http://siri.org/msds/gn.cgi?query=alundum&amp;start=0</a></td>
</tr>
<tr>
<td>Ammonia</td>
<td></td>
<td></td>
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<td>Ammonium Chloride</td>
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<td>Ammonium Nitrate</td>
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<td>Where Sample MSDS Can be Found*</td>
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<td>Barium</td>
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<td>Barium (Soluble Compounds)</td>
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<td>Blasting emissions (carbon monoxide etc.)</td>
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<td>Calcium Chloride – Baker</td>
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<td><a href="http://www.jtbaker.com/msds/c0357.htm">http://www.jtbaker.com/msds/c0357.htm</a></td>
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<td>Calcium Hydroxide (Lime, Slaked or Hydrated Lime)</td>
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<td>Mortar, Cements, Water &amp; Waste Treatment, Neutralizing etc.</td>
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<td><a href="http://www.state.nj.us/health/eho/rtkweb/032.pdf">http://www.state.nj.us/health/eho/rtkweb/032.pdf</a></td>
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<td>Calcium Oxide (Lime, Burnt Lime)</td>
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<td>Water &amp; Waste Treatment, Neutralizing</td>
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<td>Carbon Dioxide</td>
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<td>Water Treatment</td>
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<td><a href="http://www.state.nj.us/health/eoh/rtkweb/0343.pdf">http://www.state.nj.us/health/eoh/rtkweb/0343.pdf</a></td>
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<td>Water treatment for boilers, cleaning etc.</td>
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<td><a href="http://www.jtbaker.com/msds/s3242.htm">http://www.jtbaker.com/msds/s3242.htm</a></td>
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<td>Carbonic Acid, Dithio, o-Pentyl Ester, Potassium Salt</td>
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<td>Carbonic Acid Monosodium Salt</td>
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<td>[<a href="http://www.state.nj.us/health/eoh/rtkweb/rtkhfs.htm">http://www.state.nj.us/health/eoh/rtkweb/rtkhfs.htm</a> - C](<a href="http://www.state.nj.us/health/eoh/rtkweb/rtkhfs.htm">http://www.state.nj.us/health/eoh/rtkweb/rtkhfs.htm</a> - C)</td>
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<td>Cleaner – Hand w/ mineral oil</td>
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<td>Combustion Emissions – Propane</td>
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<td>(Carbon Monoxide, Nitrogen Dioxide)</td>
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<td>Mobile Equipment</td>
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<td>Fuel (Carbon Monoxide, Nitrogen</td>
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<td>Combustion Emissions – gasoline</td>
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<td>(Carbon Monoxide, Nitrogen Dioxide)</td>
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<td>Chemical uses where denaturing not allowed</td>
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<td>Fuel Oil – (e.g. Marathon 0.05 % Sulfur)</td>
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<td>Fuel Oil – (e.g. Mobile”)</td>
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<td>Foundry Facing, Lubricant</td>
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<td>Grease – (e.g. Texaco RB)</td>
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<td>Lubrication</td>
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<td>Gypsum (Calcium Sulfate Dihydrate)</td>
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<td>Rock Dusting, Wall Board, Portland Cement</td>
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<td>Hydrochloric Acid (Muriatic Acid)</td>
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<td>Toilet Bowl Cleaner, Metal Cleaning for Soldering &amp; Welding</td>
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<td>Iron Scale</td>
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<td>Kerosene – (e.g. Shell Oil)</td>
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<td>Fuel, Mobile Equipment Fuel</td>
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<td>Typical Use at Mine</td>
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<td>Where Sample MSDS Can be Found*</td>
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<td>Limestone – (e.g. James River)</td>
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<td>Methyl Isobutyl Carbinol</td>
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<td>Mobile Equipment Engine Lube</td>
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<td>Motor Oil -- (e.g. Texaco -- Havoline)</td>
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<td>Mobile Equipment Engine Lube</td>
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<td>Motor Oil Used Waste</td>
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<td>Naphtha, Coal Tar</td>
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<td><a href="http://www.boc.com/gases/msds_us/index_msds_us.cfm">http://www.boc.com/gases/msds_us/index_msds_us.cfm</a></td>
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<td>Peroxide (hydrogen peroxide)</td>
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<td><a href="http://msds.pdc.cornell.edu/msds/siri/files/ckj/ckjny.html">http://msds.pdc.cornell.edu/msds/siri/files/ckj/ckjny.html</a></td>
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*URLs for MSDS documents.
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<thead>
<tr>
<th>Common Name</th>
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<th>Location at Mine</th>
<th>Typical Use at Mine</th>
<th>Manufacturer Name</th>
<th>Manufacturer Phone</th>
<th>Included in Program?</th>
<th>Where Sample MSDS Can be Found*</th>
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<tbody>
<tr>
<td>Pesticide regulated by EPA or D of Agriculture labeled in accord with Federal Insecticide, Fungicide and Rodenticide Act or Federal Seed Act</td>
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<td>Phosphoric Acid</td>
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<td><a href="http://siri.org/msds2/index.php">http://siri.org/msds2/index.php</a></td>
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<td>Poly(Chloroprene), 10% Cis-85% Trans</td>
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<td>Potassium Iodide</td>
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<td><a href="http://www.state.nj.us/health/eoh/rtkweb/rtkhs.htm">http://www.state.nj.us/health/eoh/rtkweb/rtkhs.htm</a> - P</td>
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<td>Potassium Permanganate</td>
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<td>Propadiene (Allene)</td>
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<td>Propane -- (e.g. Bernzomatic)</td>
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<td>Fuel, Welding/Cutting</td>
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<td>Propane -- (e.g. Ferrellgas)</td>
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<td>Fuel, Welding/Cutting</td>
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<td>Propane -- (e.g. National Welders Supply)</td>
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<td>Silicic Acid, Disodium Salt</td>
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<td><a href="http://siri.org/msds2/index.php">http://siri.org/msds2/index.php</a></td>
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<td>Silica, Crystalline</td>
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<td><a href="http://www.state.nj.us/health/eoh/rtkweb/rtkh.htm">http://www.state.nj.us/health/eoh/rtkweb/rtkh.htm</a> - S</td>
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<td>Sulfuric Acid, Cobalt(2+) Salt (1:1)</td>
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<td>Transmission Fluid -- (e.g. Conoco)</td>
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<td>Transmission Fluid -- (e.g. Witco Dextron III)</td>
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**ATTACHMENT 2 – SMALL CHEMICAL LIST**

“Typical Small Mine Chemical List”

<table>
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<tr>
<th>Mine HazCom Number</th>
<th>Chemical/Common Trade Name</th>
<th>Use Location</th>
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<tr>
<td>1</td>
<td>Diesel fuel off-highway</td>
<td>Fueling area</td>
</tr>
<tr>
<td>2</td>
<td>Diesel fuel on-highway</td>
<td>Fueling area</td>
</tr>
<tr>
<td>3</td>
<td>Gasoline</td>
<td>Fueling area</td>
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<tr>
<td>4</td>
<td>10W30 motor oil</td>
<td>Maintenance shop</td>
</tr>
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<td>5</td>
<td>10W40 motor oil</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>6</td>
<td>Exolube 9 (Heavy Gear Lube)</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>7</td>
<td>Exolube 3 (Light Gear Lube)</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>8</td>
<td>Sulfuric Acid; SafeteeSolv (Parts Cleaner Solvent)</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>9</td>
<td>Mineral Spirits</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>10</td>
<td>Acrylic enamel paint; Permacoat</td>
<td>Maintenance shop</td>
</tr>
<tr>
<td>11</td>
<td>Propylene glycol antifreeze</td>
<td>Maintenance shop</td>
</tr>
</tbody>
</table>
Subsection C

TRAINING PLAN MODIFICATIONS TO COMPLY WITH PART 47 HAZCOM STANDARD
PART 46 PLANS

HazCom training must be covered in your Parts 46 and 48 new miner, newly-employed experienced miner, and task training (as well as in your annual refresher training if you desire). All part 46 and 48 training plans will have to be updated to incorporate the new HazCom training requirements. MSHA has prepared the required modifications for these three types of training. Simply print out the three attached addendums, attach them to your written plan, and make sure HazCom is included in all three types of training.

Part 46 Addendum to Existing Training Plan

Part 46.5 New Miner Training

Part 46.5(b)(4) Instruction on the health and safety aspects of the tasks to be assigned

<table>
<thead>
<tr>
<th>Subject: 46.5(b)(4)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA raining modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>

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Part 46 Addendum to Existing Training Plan

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Part 46.6 Newly hired experienced miner training

**Part 46.6(b)(4)** Instruction on the health and safety aspects of the tasks to be assigned

<table>
<thead>
<tr>
<th>Subject: 46.6(b)(4)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health</td>
<td>Lecture, discussion, demonstration, audio/video or</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine, or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>hazards of chemicals in the miner’s work area</td>
<td>other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective measures a miner can take against</td>
<td>Lecture, discussion, demonstration, audio/video or</td>
<td>Protective equipment, copies of MSDSs used at the mine, or other</td>
<td>Oral and/or written questions, demonstration</td>
</tr>
<tr>
<td>these hazards</td>
<td>other</td>
<td></td>
<td>or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or</td>
<td>Company policy, information on where to find HazCom information, or other</td>
<td>Oral and/or written questions demonstration</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td></td>
<td>or other</td>
</tr>
</tbody>
</table>

Part 46 Addendum to Existing Training Plan

**Part 46.7** New task training

**Part 46.7(a)** Miner who is reassigned to a new task in which he or she has no previous work experience.

Also, HazCom will be provided when a new hazardous chemical is introduced into a miners work area and when an existing chemical is found to possess a new hazard.
PART 46 PLANS Continued

<table>
<thead>
<tr>
<th>Subject:  46.7(a)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the miner’s work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>
Part 48 Surface Plans

HazCom training must be covered in your Parts 46 and 48 new miner, newly-employed experienced miner, and task training (as well as in your annual refresher training if you desire). All part 46 and Part 48 training plans will have to be updated to incorporate the new HazCom training requirements. MSHA has prepared the required modifications for these three types of training. Simply print out the three attached addendums, attach them to your written plan, and make sure HazCom is included in all three types of training.

Part 48 (Surface) Addendum to Existing Training Plan

Part 48.25 Training of new miners; minimum courses of instruction; hours of instruction

Part 48.25(12) Health and safety aspects of the tasks to which the new miner will be assigned

<table>
<thead>
<tr>
<th>Subject: 46.25(12)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA raining modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>
Part 48 Surface Plans Continued

Part 48 (Surface) Addendum to Existing Training Plan

Part 48.26 **Experienced miner training**

**Part 48.26(11) Health and safety aspects of the tasks to which the new miner will be assigned**

<table>
<thead>
<tr>
<th>Subject: 48.26(11)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the miner’s work area</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine, or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine, or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information, or other</td>
<td>Oral and/or written questions demonstration or other</td>
</tr>
</tbody>
</table>
Part 48 Surface Plans Continued

Part 48 (Surface) Addendum to Existing Training Plan

Part 48.27 Training of miners assigned to a task in which they have had no previous experience; minimum courses of instruction.

Part 48.27(a)(1) Miners assigned to new work tasks as mobile equipment operators, drilling machine operators, haulage and conveyor system operators, ground control machine operators, and those in blasting operations shall not perform new works tasks in these categories until training prescribed in this paragraph and paragraph (b) of this section has been completed.

Part 48.27(c) Miners assigned a new task not covered in paragraph (a) of this section shall be instructed in the safety and health aspects and safe work procedures of the task.

Also, HazCom will be provided when a new hazardous chemical is introduced into a miner’s work area and when an existing chemical is found to possess a new hazard.

<table>
<thead>
<tr>
<th>Subject: 46.27(a)(1)/(c)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the miner’s work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>
Part 48 Underground Plans

HazCom training must be covered in your Parts 46 and 48 new miner, newly-employed experienced miner, and task training (as well as in your annual refresher training if you desire). All part 46 and Part 48 training plans will have to be updated to incorporate the new HazCom training requirements. MSHA has prepared the required modifications for these three types of training. Simply print out the three attached addendums, attach them to your written plan, and make sure HazCom is included in all three types of training.

Part 48 (Underground) Addendum to Existing Training Plan

Part 48. 5 Training of new miners; minimum courses of instruction; hours of instruction

Part 48.5(13) Health and safety aspects of the tasks to which the new miner will be assigned

<table>
<thead>
<tr>
<th>Subject: 46. 5(13)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA raining modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>
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Part 48 (Underground) Addendum to Existing Training Plan

Part 48.6 *Experienced miner training*

Part 48.6(11) Health and safety aspects of the tasks to which the new miner will be assigned

<table>
<thead>
<tr>
<th>Subject: 48.6(11)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the miner’s work area</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine, or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine, or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information, or other</td>
<td>Oral and/or written questions demonstration or other</td>
</tr>
</tbody>
</table>
Part 48 Underground Plans Continued

Part 48 (Underground) Addendum to Existing Training Plan

Part 48.7 **Training of miners assigned to a task in which they have had no previous experience; minimum courses of instruction.**

**Part 48.7(a)(1)** Miners assigned to new work tasks as mobile equipment operators, drilling machine operators, haulage and conveyor system operators, ground control machine operators, and those in blasting operations shall not perform new works tasks in these categories until training prescribed in this paragraph and paragraph (b) of this section has been completed.

**Part 48.7(c)** Miners assigned a new task not covered in paragraph (a) of this section shall be instructed in the safety and health aspects and safe work procedures of the task.

Also, HazCom will be provided when a new hazardous chemical is introduced into a miner’s work area and when an existing chemical is found to possess a new hazard.

<table>
<thead>
<tr>
<th>Subject: 48.7(a)(1)/(c)</th>
<th>Training Methods</th>
<th>Course Materials</th>
<th>Evaluation Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the physical and health hazards of chemicals in the miner’s work area</td>
<td>Lecture, discussion, audio/video or other</td>
<td>MSHA training modules, company safety rules, MSDSs used at the mine or other</td>
<td>Oral and/or written questions or other</td>
</tr>
<tr>
<td>Protective measures a miner can take against these hazards</td>
<td>Lecture, discussion, demonstration, audio/video or other</td>
<td>Protective equipment, copies of MSDSs used at the mine or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
<tr>
<td>Contents of the mine’s HazCom program</td>
<td>Lecture, demonstration, discussion, audio/video or other</td>
<td>Company policy, information on where to find HazCom information or other</td>
<td>Oral and/or written questions, demonstration or other</td>
</tr>
</tbody>
</table>
Subsection D

PART 47 HAZCOM STANDARD AND DRAFT
COMPLIANCE GUIDE
NOTE! This Copy Of The Standard is Included For Easy Reference. It May Contain Some Errors Resulting From Scanning The Material From the June 21, 2002 Edition of the Federal Register. Scan Errors We Were Able to Identify Have Been Corrected.
Part II

Department of Labor

Mine Safety and Health Administration
30 CFR Part 42 et al.
Hazard Communication (HazCom); Final Rule and Withdrawal of Interim Final Rule

From -- HAZCOM Final Rule

Federal Register, Vol. 67, No. 120, Friday, June 21, 2002

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PART 46—[AMENDED]

1. The authority citation for part 46 continues to read as follows:


2. Paragraph (b)(4) of § 46.5 is revised to read as follows:

§ 46.5 New miner training.

(b) * * *

(4) Instruction on the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, the mandatory health and safety standards pertinent to such tasks, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program;

* * * * *

3. Paragraph (b)(4) of § 46.6 is revised to read as follows:

§ 46.6 Newly hired experienced miner training.

(b) * * *
§ 46.7 New task training.

(a) You must provide any miner who is reassigned to a new task in which he or she has no previous work experience with training in the health and safety aspects of the task to be assigned, including the safe work procedures of such task, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program. This training must be provided before the miner performs the new task.

5. The second sentence of paragraph (c) of § 46.8 is amended by inserting the phrase “information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program;” after the phrase “including mandatory health and safety standards;”.

PART 47—[REDESIGNATED AS PART 42]

6. The authority for part 47 continues to read as follows:

Authority: 30 U.S.C. 957.

7. Part 47—National Mine Health and Safety Academy is transferred to subchapter G—Filing and Other Administrative Requirements, and redesignated as part 42.

PART 47—[ADDED]

8. Add a new part 47 to subchapter H in chapter I, title 30 of the Code of Federal Regulations to read as follows:

PART 47—HAZARD COMMUNICATION (HazCom)

Sec.

Subpart A—Purpose, Scope, Applicability, and Initial Miner Training

47.1 Purpose of a HazCom standard; applicability.

47.2 Operators and chemicals covered; initial miner training.

Subpart B—Definitions

47.11 Definitions of terms used in this part.

Subpart C—Hazard Determination

47.21 Identifying hazardous chemicals.

Subpart D—HazCom Program

47.31 Requirement for a HazCom program. 47.32 HazCom program contents.

Subpart E—Container Labels and Other Forms of Warning

47.41 Requirement for container labels.

47.42 Label contents. 47.43 Label alternatives. 47.44 Temporary, portable containers.

Subpart F—Material Safety Data Sheets (MSDS)
47.51 Requirement for an MSDS. 47.52 MSDS contents. 47.53 Alternative for hazardous waste. 47.54 Availability of an MSDS. 47.55 Retaining an MSDS.

Subpart G—Reserved

Subpart H—Making HazCom Information Available

47.71 Access to HazCom materials. 47.72 Cost for copies. 47.73 Providing labels and MSDSs to customers.

Subpart I—Trade Secret Hazardous Chemical

47.81 Provisions for withholding trade secrets.

47.82 Disclosure of information to MSHA.

47.83 Disclosure in a medical emergency.

47.84 Non-emergency disclosure.

47.85 Confidentiality agreement and remedies.

47.86 Denial of a written request for disclosure.

47.87 Review of denial.

Subpart J—Exemptions

47.91 Exemptions from the HazCom standard.

47.92 Exemptions from labeling.


Subpart A—Purpose, Scope, Applicability, and Initial Miner Training

§ 47.1 Purpose of a HazCom standard; applicability.

The purpose of this part is to reduce injuries and illnesses by ensuring that each operator—
(a) Identifies the chemicals at the mine,
(b) Determines which chemicals are hazardous,
(c) Establishes a HazCom program, and
(d) Informs each miner who can be exposed, and other on-site operators whose miners can be exposed, about chemical hazards and appropriate protective measures.
(e) As of September 23, 2002, all mines employing six or more miners are required to comply with this part.
(f) As of March 21, 2003, all mines employing five or fewer miners are required to comply with this part.

§ 47.2 Operators and chemicals covered; initial miner training.

(a) This part applies to any operator producing or using a hazardous chemical to which a miner can be exposed under normal conditions of use or in a foreseeable emergency. (Subpart
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J of this part lists exemptions from coverage.)
(b) Operators of mines which employ six or more miners must instruct each miner with information about the about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take, and the contents of the mine’s HazCom program by September 23, 2002. Operators that employ five or fewer miners must instruct each miner with information about the about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take, and the contents of the mine’s HazCom program by March 21, 2003.

Subpart B—Definitions

§ 47.11 Definitions of terms used in this part.

The definitions in Table 47.11 apply against these hazards, and the contents against these hazards, and the contents in this part as follows:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition for purposes of HazCom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>The right to examine and copy records.</td>
</tr>
<tr>
<td>Article</td>
<td>A manufactured item, other than a fluid or particle, that— (1) Is formed to a specific shape or design during manufacture, and (2) Has end-use functions dependent on its shape or design.</td>
</tr>
<tr>
<td>Chemical</td>
<td>Any element, chemical compound, or mixture of these.</td>
</tr>
<tr>
<td>Chemical name</td>
<td>(1) The scientific designation of a chemical in accordance with the nomenclature system of either the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS), or (2) A name that will clearly identify the chemical for the purpose of conducting a hazard evaluation.</td>
</tr>
<tr>
<td>Common name</td>
<td>Any designation or identification (such as a code name, code number, trade name, brand name, or generic name) used to identify a chemical other than by its chemical name.</td>
</tr>
<tr>
<td>Consumer product</td>
<td>A product or component of a product that is packaged, labeled, and distributed in the same form and concentration as it is sold for use by the general public.</td>
</tr>
<tr>
<td>Container</td>
<td>(1) Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like. (2) The following terms are not considered to be containers for the purpose of compliance with this part: (i) Pipes or piping systems; (ii) Conveyors; and (iii) Engines, fuel tanks, or other operating systems or parts in a vehicle.</td>
</tr>
<tr>
<td>Cosmetics and drugs</td>
<td>(1) Cosmetics are any article applied to the human body for cleansing, beautifying, promoting attractiveness, or altering appearance. (2) Drugs are any article used to affect the structure or any function of the body of humans or other animals.</td>
</tr>
<tr>
<td>Designated representative</td>
<td>(1) Any individual or organization to whom a miner gives written authorization to exercise the miner’s rights under this part, or (2) A representative of miners under part 40 of this chapter.</td>
</tr>
<tr>
<td>EPA</td>
<td>The U.S. Environmental Protection Agency.</td>
</tr>
<tr>
<td>Exposed</td>
<td>Subjected, or potentially subjected, to a physical or health hazard in the course of employment. “Subjected,” in terms of health hazards, includes any route of entry, such as through the lungs (inhalation), the stomach (ingestion), or the skin (skin absorption).</td>
</tr>
<tr>
<td>Foreseeable emergency</td>
<td>Any potential occurrence that could result in an uncontrolled release of a hazardous chemical into the mine.</td>
</tr>
<tr>
<td>Hazard warning</td>
<td>Any words, pictures, or symbols, appearing on a label or other form of warning, that convey the specific physical and health hazards of the chemical. (See the definitions for physical hazard and health hazard for examples of the hazards that the warning must convey.)</td>
</tr>
<tr>
<td>Hazardous chemical</td>
<td>Any chemical that can present a physical or health hazard.</td>
</tr>
<tr>
<td>Health hazard</td>
<td>A chemical for which there is statistically significant evidence that it can cause acute or chronic health effects in exposed persons. Health hazard includes chemicals which— (1) Cause cancer; (2) Damage the reproductive system or cause birth defects; (3) Are irritants, corrosives, or sensitizers; (4) Damage the liver; (5) Damage the kidneys; (6) Damage the nervous system; (7) Damage the blood or lymphatic systems; (8) Damage the stomach or intestines; (9) Damage the lungs, skin, eyes, or mucous membranes; or (10) Are toxic or highly toxic agents</td>
</tr>
<tr>
<td>Health professional</td>
<td>A physician, physician’s assistant, nurse, emergency medical technician, or other person qualified to provide medical or occupational health services. A chemical’s common name or chemical name.</td>
</tr>
<tr>
<td>Identity</td>
<td>Any written, printed, or graphic material displayed on or affixed to a container to identify its contents and convey other relevant information.</td>
</tr>
<tr>
<td>Material safety data sheet (MSDS)</td>
<td>Written or printed material concerning a hazardous chemical which— (1) An operator prepares in accordance with Table 47.52—Contents of MSDS; or (2) An employer prepares in accordance with 29 CFR 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59, or 1928.21 (OSHA Hazard Communication regulations); or (3) An</td>
</tr>
</tbody>
</table>
independent source prepares which contains equivalent information, such as International Chemical Safety Cards (ICSC) and Workplace Hazardous Material Information Sheets (WHMIS).

**Mixture**
Any combination of two or more chemicals which is not the result of a chemical reaction.

**Ordinary consumer use**
Household, family, school, recreation, or other personal use or enjoyment, as opposed to business use.

**OSHA**
The Occupational Safety and Health Administration, U.S. Department of Labor.

**Physical hazard**
A chemical for which there is scientifically valid evidence that it is—(1) **Combustible liquid:** (i) A liquid having a flash point at or above 100°F (37.8°C) and below 200°F (93.3°C); or (ii) A liquid mixture having components with flashpoints of 200°F (93.3°C) or higher, the total volume of which make up 99% or more of the mixture. (2) **Compressed gas:** (i) A contained gas or mixture of gases with an absolute pressure exceeding: (A) 40 psi (276 kPa) at 70°F (21.1°C); or (B) 104 psi (717 kPa) at 130°F (54.4°C) regardless of pressure at 70°F. (ii) A liquid having a vapor pressure exceeding 40 psi (276 kPa) at 100°F (37.8°C) as determined by ASTM D–323–82. (3) **Explosive:** A chemical that undergoes a rapid chemical change causing a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature. (4) **Flammable:** A chemical that will readily ignite and, when ignited, will burn persistently at ambient temperature and pressure in the normal concentration of oxygen in the air. (5) **Organic peroxide:** An explosive, shock sensitive, organic compound or an oxide that contains a high proportion of oxygen-superoxide. (6) **Oxidizer:** A chemical, other than an explosive, that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases. (7) **Pyrophoric:** Capable of igniting spontaneously in air at a temperature of 130°F (54.4°C) or below. (8) **Unstable (reactive):** A chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure, or temperature. (9) **Water-reactive:** A chemical that reacts with water to release a gas that is either flammable or a health hazard.

**Produce**
To manufacture, process, formulate, generate, or repackage.

**Raw material**
Ore, valuable minerals, worthless material or gangue, overburden, or a combination of these, that is removed from natural deposits by mining or is upgraded through milling.

**Trade secret**
Any confidential formula, pattern, process, device, information, or compilation of information that is used by the operator and that gives the operator an opportunity to obtain an advantage over competitors who do not know about it or use it.

**Use**
To package, handle, react, or transfer.

**Work area**
Any place in or about a mine where a miner works.

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§ 47.21 Identifying hazardous chemicals.

Subpart C—Hazard Determination

The operator must evaluate each chemical brought on mine property and each chemical produced on mine property to determine if it is hazardous as specified in Table 47.21 as follows:

**TABLE 47.21—IDENTIFYING HAZARDOUS CHEMICALS**

Category Basis for determining if a chemical is hazardous

(a) Chemical brought to the mine

The chemical is hazardous when its MSDS or container label indicates it is a physical or health hazard; or the operator may choose to evaluate the chemical using the criteria in paragraphs (b) and (c) of this table. (b) Chemical produced at the mine

The chemical is hazardous if any one of the following that it is a hazard: (1) Available evidence concerning its physical or health hazards. (2) MSHA standards in 30 CFR chapter I.

(c) Mixture produced at the mine

(1) If a mixture has been tested as a whole to determine its Category Basis for determining if a chemical is hazardous (3) Occupational Safety and Health Administration (OSHA), 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances. (4) American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices (2001). (5) U.S. Department of Health and Human Services, National Toxicology Program (NTP), Ninth Annual Report on Carcinogens, January 2001. (6) International Agency for Research on Cancer (IARC), Monographs and related supplements, Volumes 1 through 77. (c) Mixture produced at the mine

(1) If a mixture has been tested as a whole to determine its
hazards, use the results of that testing. (2) If a mixture has not been tested as a whole to determine its hazards—
(i) Use available, scientifically valid evidence to determine its physical hazard potential; (ii) Assume that it
presents the same health hazard as a non-carcinogenic component that makes up 1% or more (by weight or
volume) of the mixture; and (iii) Assume that it presents a carcinogenic health hazard if a component considered
carcinogenic by NTP or IARC makes up 0.1% or more (by weight or volume) of the mixture. (3) If evidence
indicates that a component could be released from a mixture in a concentration that could present a health risk to
miners, assume that the mixture presents the same hazard.

§ 47.31 Requirement for a HazCom program.

Subpart D—HazCom Program

Each operator must—
(a) Develop and implement a written HazCom program,
(b) Maintain it for as long as a hazardous chemical is known to be at the mine, and
(c) Share relevant HazCom information with other on-site operators whose miners can be affected.

§ 47.32 HazCom program contents.

The HazCom program must include the following:
(a) How this part is put into practice at the mine through the use of—
(1) Hazard determination,
(2) Labels and other forms of warning,
(3) Material safety data sheets (MSDSs), and
(4) Miner training.
(b) A list or other record identifying all hazardous chemicals known to be at the mine. The list must—
(1) Use a chemical identity that permits cross-referencing between the list, a chemical’s label, and its MSDS; and
(2) Be compiled for the whole mine or by individual work areas.
(c) At mines with more than one operator, the methods for—
(1) Providing other operators with access to MSDSs, and
(2) Informing other operators about’
(i) Hazardous chemicals to which their miners can be exposed,
(ii) The labeling system on the containers of these chemicals, and
(iii) Appropriate protective measures.

Subpart E—Container Labels and Other Forms of Warning

§ 47.41 Requirement for container labels.

(a) The operator must ensure that each container of a hazardous chemical has a label. If a container is tagged or marked with the appropriate
information, it is labeled.
(1) The operator must replace a container label immediately if it is missing or if the hazard information on the label is unreadable.
(2) The operator must not remove or deface existing labels on containers of hazardous chemicals.
(b) For each hazardous chemical produced at the mine, the operator must prepare a container label and update this label with any significant, new
information about the chemical’s hazards within 3 months of becoming aware of this information.
(c) For each hazardous chemical brought to the mine, the operator must replace an outdated label when a revised label is received from the chemical’s
manufacturer or supplier. The operator is not responsible for an inaccurate label obtained from the chemical’s manufacturer or supplier.

§ 47.42 Label contents.

When an operator must make a label, the label must—
(a) Be prominently displayed, legible, accurate, and in English;
(b) Display appropriate hazard warnings;
(c) Use a chemical identity that permits cross-referencing between the list of hazardous chemicals, a chemical’s label, and its MSDS; and
(d) Include the name and address of the operator or another responsible party who can provide additional information about the hazardous chemical.

§ 47.43 Label alternatives.

The operator may use signs, placards, process sheets, batch tickets, operating procedures, or other label alternatives for individual, stationary process
containers, provided that the alternative—
(a) Identifies the container to which it applies,
§ 47.44 Temporary, portable containers.

(a) The operator does not have to label a temporary, portable container if he or she ensures that the miner using the portable container—
(1) Knows the identity of the chemical, its hazards, and any protective measures needed, and
(2) Leaves the container empty at the end of the shift.
(b) Otherwise, the operator must mark the temporary, portable container with at least the common name of its contents.

Subpart F—Material Safety Data Sheets (MSDS)

§ 47.51 Requirement for an MSDS.

Operators must have an MSDS for each hazardous chemical which they produce or use. The MSDS may be in any medium, such as paper or electronic, that does not restrict availability.

(a) For each hazardous chemical produced at the mine, the operator must

prepare an MSDS, and update it with significant, new information about the chemical’s hazards or protective measures within 3 months of becoming aware of this information.

(b) For each hazardous chemical brought to the mine, the operator must rely on the MSDS received from the chemical manufacturer or supplier, develop their own MSDS, or obtain one from another source.

(c) Although the operator is not responsible for an inaccurate MSDS obtained from the chemical’s manufacturer, supplier, or other source, the operator must—
(1) Replace an outdated MSDS upon receipt of an updated revision, and
(2) Obtain an accurate MSDS as soon as possible after becoming aware of an inaccuracy.

(d) The operator is not required to prepare an MSDS for an intermediate chemical or by-product resulting from mining or milling if its hazards are already addressed on the MSDS of the source chemical.

TABLE 47.52—CONTENTS OF MSDS

§ 47.52 MSDS contents.

When an operator must prepare an MSDS for a hazardous chemical produced at the mine, the MSDS must—

(a) Be legible, accurate, and in English;
(b) Use a chemical identity that permits cross-referencing between the list of hazardous chemicals, the chemical’s label, and its MSDS; and
(c) Contain information, or indicate if no information is available, for the categories listed in Table 47.52 as follows: Category

Requirements, descriptions, and exceptions

(1) Identity ........................................................... The identity of the chemical or, if the chemical is a mixture, the identities of all hazardous ingredients. See § 47.21 (Identifying hazardous chemicals).
(2) Properties ....................................................... The physical and chemical characteristics of the chemical, such as vapor pressure and solubility in water.
(3) Physical ......................................................... The physical hazards of the chemical including the hazards potential for fire, explosion, and reactivity.
(4) Health hazards .............................................. The health hazards of the chemical including—
( i) Signs and symptoms of exposure,
( ii) Any medical conditions which are generally recognized as being aggravated by exposure to the chemical, and
( iii) The primary routes of entry for the chemical, such as lungs, stomach, or skin.
(5) Exposure limits .............................................. For the chemical or the ingredients of a mixture—
( i) The MSHA or OSHA permissible limit, if there is one, and
( ii) Any other exposure limit recommended by the preparer of the MSDS.
(6) Carcinogenicity .............................................. Whether the chemical or an ingredient in the mixture is a carcinogen or potential carcinogen. See the sources specified in § 47.21 (Identifying hazardous chemicals).
(7) Safe use ........................................................ Precautions for safe handling and use including—(i) Appropriate hygienic practices,
(ii) Protective measures during repair and maintenance of contaminated equipment, and
(iii) Procedures for clean-up of spills and leaks.
(8) Control measures ........................................... Generally applicable control measures such as engineering controls, work practices, and personal protective equipment.
(9) Emergency information ............................... (i) Emergency medical and first-aid procedures; and
(ii) The name, address, and telephone number of the operator or other responsible party who can provide additional information on the hazardous chemical and appropriate emergency procedures.
(10) Date prepared ............................................. The date the MSDS was prepared or last changed.

§ 47.53 Alternative for hazardous waste.
If the mine produces or uses hazardous waste, the operator must provide potentially exposed miners and designated representatives access to available information for the hazardous waste that—
(a) Identifies its hazardous chemical components,
(b) Describes its physical or health hazards, or
(c) Specifies appropriate protective measures.

§ 47.54 Availability of an MSDS.
The operator must make MSDSs accessible to miners during each work shift for each hazardous chemical to which they may be exposed either—
(a) At each work area where the hazardous chemical is produced or used, or
(b) At an alternative location, provided that the MSDS is readily available to miners in an emergency.

§ 47.55 Retaining an MSDS.
The operator must—
(a) Retain its MSDS for as long as the hazardous chemical is known to be at the mine, and
(b) Notify miners at least 3 months before disposing of the MSDS.

Subpart G—Reserved

Subpart H—Making HazCom Information Available

§ 47.71 Access to HazCom materials.
Upon request, the operator must provide access to all HazCom materials required by this part to miners and designated representatives, except as provided in § 47.81 through § 47.87 (provisions for trade secrets).

§ 47.72 Cost for copies.
(a) The operator must provide the first copy and each revision of the HazCom material without cost.
(b) Fees for a subsequent copy of the HazCom material must be non-discriminatory and reasonable.

§ 47.73 Providing labels and MSDSs to customers.
For a hazardous chemical produced at the mine, the operator must provide customers, upon request, with the chemical’s label or a copy of the label information, and the chemical’s MSDS.

Subpart I—Trade Secret Hazardous Chemical

§ 47.81 Provisions for withholding trade secrets.
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(a) Operators may withhold the identity of a trade secret chemical, including the name and other specific identification, from the written list of hazardous chemicals, the label, and the MSDS, provided that the operator—

(1) Can support the claim that the chemical’s identity is a trade secret,

(2) Identifies the chemical in a way that it can be referred to without disclosing the secret,

(3) Indicates in the MSDS that the chemical’s identity is withheld as a trade secret, and

(b) The operator must make the chemical’s identity available to miners, designated representatives, and health professionals in accordance with the provisions of this subpart.

(c) This subpart does not require the operator to disclose process or percentage of mixture information, which is a trade secret, under any circumstances.

§ 47.82 Disclosure of information to MSHA.

(a) Even if the operator has a trade secret claim, the operator must disclose to MSHA, upon request, any information which this subpart requires the operator to make available.

(b) The operator must make a trade secret claim, no later than at the time the information is provided to MSHA, so that MSHA can determine the trade secret status and implement the necessary protection.

§ 47.83 Disclosure in a medical emergency.

(a) Upon request and regardless of the existence of a written statement of need or a confidentiality agreement, the operator must immediately disclose the identity of a trade secret chemical to the treating health professional when that person determines that—

(1) A medical emergency exists, and

(2) The identity of the hazardous chemical is necessary for emergency or first-aid treatment.

(b) The operator may require a written statement of need and confidentiality agreement in accordance with the provisions of § 47.84 and § 47.85 as soon as circumstances permit.

§ 47.84 Non-emergency disclosure.

Upon request, the operator must disclose the identity of a trade secret chemical in a non-emergency situation to an exposed miner, the miner’s designated representative, or a health professional providing services to the miner, if the following conditions are met.

(a) The request is in writing.

(b) The request describes in reasonable detail an occupational health need for the information, as follows:

(1) To assess the chemical hazards to which the miner will be exposed.

(2) To conduct or assess health sampling to determine the miner’s exposure levels.

(3) To conduct reassignment or periodic medical surveillance of the exposed miner.

(4) To provide medical treatment to the exposed miner.

(5) To select or assess appropriate personal protective equipment for the exposed miner.

(6) To design or assess engineering controls or other protective measures for the exposed miner.

(7) To conduct studies to determine the health effects of exposure.

(c) The request explains in detail why the disclosure of the following information would not satisfy the purpose described in paragraph (b) of this section:

(1) The properties and effects of the chemical.

(2) Measures for controlling the miner’s exposure to the chemical.

(3) Methods of monitoring and analyzing the miner’s exposure to the chemical.

(4) Methods of diagnosing and treating harmful exposures to the chemical.

(d) The request describes the procedures to be used to maintain the confidentiality of the disclosed information.

(e) The person making the request enters a written confidentiality agreement that he or she will not use the information for any purpose other than the health needs asserted and agrees not to release the information under any circumstances, except as authorized by § 47.85, by the terms of the agreement, or by the operator.

§ 47.85 Confidentiality agreement and remedies.

(a) The confidentiality agreement authorized by § 47.84—

(1) May restrict the use of the trade secret chemical identity to the health purposes indicated in the written statement of need;

(2) May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages;

(3) Must allow the exposed miner, the miner’s designated representative, or the health professional to disclose the trade secret chemical identity to MSHA;

(4) May provide that the exposed miner, the miner’s designated representative, or the health professional inform the operator who provided the trade secret chemical identity prior to or at the same time as its disclosure to MSHA; and
§ 47.86 Denial of a written request for disclosure.

To deny a written request for disclosure of the identity of a trade secret chemical, the operator must—

(a) Put the denial in writing,
(1) Including evidence to substantiate the claim that the chemical’s identity is a trade secret,
(2) Stating the specific reasons why the request is being denied, and
(3) Explaining how alternative information will satisfy the specific medical or occupational health need without revealing the chemical’s identity.

(b) Nothing in this subpart precludes the parties from pursuing non-contractual remedies to the extent permitted by law.

§ 47.87 Review of denial.

(a) The health professional, miner, or designated representative may refer the written denial to MSHA for review. The request for review must include a copy of—
(1) The request for disclosure of the identity of the trade secret chemical,
(2) The confidentiality agreement, and
(3) The operator’s written denial.

(b) If MSHA determines that the identity of the trade secret chemical should have been disclosed, the operator will be subject to citation by MSHA.

(c) If MSHA determines that the confidentiality agreement would not sufficiently protect against unauthorized disclosure of the trade secret, MSHA may impose additional conditions to ensure that the occupational health services are provided without an undue risk of harm to the operator.

(d) If the operator contests a citation for a failure to release the identity of a trade secret chemical, the matter will be adjudicated by the Federal Mine Safety and Health Review Commission. The Administrative Law Judge may review the citation and supporting documentation “in camera” or issue appropriate orders to protect the trade secret.

Subpart J—Exemptions

§ 47.91 Exemptions from the HazCom standard.

A hazardous chemical is exempt from this part under the conditions described in Table 47.91 as follows:

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TABLE 47.91.—CHEMICALS AND PRODUCTS EXEMPT FROM THIS HAZCOM STANDARD

Exemption Conditions for exemption

Article ................................................................. If, under normal conditions of use, it—
(1) Releases no more than insignificant amounts of a hazardous chemical, and
(2) Poses no physical or health risk to exposed miners.

Biological hazards .............................................. All biological hazards, such as poisonous plants, insects, and micro-organisms.

Consumer product or hazardous substance regulated by CPSC.
(1) If the miner uses it for the purpose the manufacturer intended; and
(2) Such use does not expose the miner more often and for longer periods than ordinary consumer use.

Cosmetics, drugs, food, food additive, color additive, drinks, alcoholic beverages, tobacco and tobacco products, or medical or veterinary device or product, including materials intended for use as ingredients in such products (such as flavors and fragrances). When intended for personal consumption or use.

Radiation ......................................................... All ionizing or non-ionizing radiation, such as alpha or gamma, microwaves, or x-rays.
Wood or wood products, including lumber ......................... If they do not release or otherwise result in exposure to a hazardous chemical under normal conditions of use. For example, wood is not exempt if it is treated with a hazardous chemical or if it will be subsequently cut or sanded.

§ 47.92 Exemptions from labeling.

A hazardous chemical is exempt from subpart E of this part under the conditions described in Table 47.92 as follows:

TABLE 47.92—HAZARDOUS CHEMICALS EXEMPT FROM LABELING

Exemption Conditions for exemption

Chemical substance, consumer product, hazardous substance, or pesticide. When kept in its manufacturer’s or supplier’s original packaging labeled under other federal labeling requirements.

Hazardous substance ............................................. When the subject of remedial or removal action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in accordance with EPA regulations. Hazardous waste ..............................................


Raw material being mined or processed ............. While on mine property, except when the container holds a mixture of the raw material and another hazardous chemical and the mixture is found to be hazardous under § 47.21, Identifying hazardous chemicals.

Wood or wood products, including lumber ........ Wood or wood products are always exempt from labeling.

§ 48.7 Training of miners assigned to a task in which they have had no previous experience; minimum courses of instruction.

PART 48—[AMENDED]

9. The authority citation for part 48 continues to read as follows:


10. Paragraph (b)(13) of § 48.5 is revised to read as follows:

§ 48.5 Training of new miners; minimum courses of instruction; hours of instruction.

(b) * * *

(13) Health and safety aspects of the tasks to which the new miner will be assigned. The course shall include instruction in the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, the mandatory health and safety standards pertinent to such tasks, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program.

* * * * *

11. Paragraph (b)(11) of § 48.6 is revised to read as follows:

§ 48.6 Experienced miner training.

(b) * * *

(11) Health and safety aspects of the tasks to which the experienced miner is assigned. The course must include instruction in the health and safety aspects of the tasks assigned, including the safe work procedures of such tasks, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program. Experienced miners who must complete new task training under § 48.7 do not need to take training under this paragraph.

* * * * *
12. Paragraphs (a)(1) and (c) of § 48.7 are revised to read as follows:

(a) ***

(1) ** Health and safety aspects and safe operating procedures for work tasks, equipment, and machinery.** The training shall include instruction in the health and safety aspects and the safe operating procedures related to the assigned tasks, including information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program. The training shall be given in an on-the-job environment; and

(c) Miners assigned a new task not covered in paragraph (a) of this section shall be instructed in the safety and health aspects and safe work procedures of the task, including information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program, prior to performing such task.

* * * * *

13. Paragraphs (c) and (d) of § 48.8 are redesignated as paragraphs (d) and (e) respectively, and new paragraph (c) is added to read as follows:

§ 48.8 Annual refresher training of miners; minimum courses of instruction; hours of instruction.

* * * * *

(c) Refresher training may include other health and safety subjects that are relevant to mining operations at the mine. Recommended subjects include, but are not limited to, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program.

* * * * *

14. Paragraph (b)(12) of § 48.25 is revised to read as follows:

§ 48.25 Training of new miners; minimum courses of instruction; hours of instruction.

* * * * *

(b) ** Health and safety aspects of the tasks to which the new miner will be assigned.** The course shall include instructions in the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, the mandatory health and safety standards pertinent to such tasks, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program.

* * * * *

15. Paragraph (b)(11) of § 48.26 is revised to read as follows:

§ 48.26 Experienced miner training.

* * * * *

(b) ** Health and safety aspects of the tasks to which the experienced miner is assigned.** The course must include instruction in the health and safety aspects of the tasks assigned, including the safe work procedures of such tasks, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program. Experienced miners who must complete new task training under § 48.27 do not need to take training under this paragraph.

* * * * *

16. Paragraphs (a)(1) and (c) of § 48.27 are revised to read as follows:

§ 48.27 Training of miners assigned to a task in which they have had no previous experience; minimum courses of instruction.

(a) ***

(1) ** Health and safety aspects and safe operating procedures for work tasks, equipment, and machinery.** The training shall include instruction in the health and safety aspects and safe operating procedures related to the assigned task, including information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program. The training shall be given in an on-the-job environment; and

(c) Miners assigned a new task not covered in paragraph (a) of this section shall be instructed in the safety and health aspects and safe work procedures of the task, including information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program, prior to performing such task.

* * * * *

17. Paragraphs (c) and (d) of § 48.28 are redesignated as paragraphs (d) and (e) respectively, and new paragraph (c) is added to read as follows:

§ 48.28 Annual refresher training of miners; minimum courses of instruction; hours of instruction.
Refresher training may include other health and safety subjects that are relevant to mining operations at the mine. Recommended subjects include, but are not limited to, information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards, and the contents of the mine’s HazCom program.

PART 56—[AMENDED]

18. The authority citation for part 56 continues to read as follows:


19. Section 56.16004 is revised to read as follows:

§ 56.16004 Containers for hazardous materials.

Containers holding hazardous materials must be of a type approved for such use by recognized agencies.

§ 56.20012 [Removed]

20. Section 56.20012 is removed.

PART 57—[AMENDED]

21. The authority citation for part 57 continues to read as follows:


22. Section 57.16004 is revised to read as follows:

§ 57.16004 Containers for hazardous materials.

Containers holding hazardous materials must be of a type approved for such use by recognized agencies.

23. Section 57.20012 is removed.

PART 77—[AMENDED]

24. The authority citation for part 77 continues to read as follows:


25. Paragraph (c) of § 77.208 is revised to read as follows:

§ 77.208 Storage of materials.

(c) Containers holding hazardous materials must be of a type approved for such use by recognized agencies.
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# ACRONYMS USED IN THIS GUIDE

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<tr>
<td>30 CFR</td>
<td>Title 30 of the Code of Federal Regulations</td>
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<td>HazCom</td>
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<td>MSDS</td>
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<td>U.S. Mine Safety and Health Administration</td>
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<td>Personal Protective Equipment</td>
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PURPOSE AND SCOPE

We (MSHA) are establishing this final rule on “Hazard Communication” (HazCom) to reduce injuries and illnesses related to chemicals in the mining industry. HazCom requires mine operators to evaluate the hazards of chemicals they produce or use and provide information to miners concerning chemical hazards by means of a written hazard communication program; labeling containers of hazardous chemicals; providing access to material safety data sheets (MSDSs); and initial miner training … HazCom is based on two safety and health principles: miners have a right to know about the chemicals hazards where they work; and you have the responsibility to know about chemical hazards at your mine.

WHAT HAZCOM REQUIRES

HazCom requires you to inform miners about chemical hazards. This information is important because miners are at risk of harm in the absence of such knowledge. We expect HazCom, by increasing both knowledge and awareness, to bolster good work procedures and safer behavior, thus reducing injuries and illnesses related to chemicals. When put in effect at a mine, HazCom should result in better hazard identification and assessment; more consistent use of personal protective equipment; and greater awareness and care when working near hazardous chemicals.

WHAT HAZCOM DOES NOT REQUIRE OR ADDRESS

HazCom is not a risk-based health standard for measuring exposures, requiring controls, or providing personal protective equipment. Other standards address the problems of significant risk and the methods of controlling it.

Does HazCom force me to seek alternative products for hazardous chemicals?

HazCom does not require you to seek alternative, less hazardous substitutes.

If a product does not have an MSDS or label, is it a violation?

It may or may not be a violation of the standard, depending on the product. Products that are determined not to be hazardous for the purpose of this standard are not required to have MSDSs or labels. Some products are exempt from HazCom entirely, while others are exempt just from labeling. The potential for each product to be a hazard must be assessed separately through hazard determination.

We have to report chemical spills to EPA. Do we also have to report them to MSHA?

HazCom does not require you to report chemical spills. Other MSHA standards, however, may apply.

Will isocyanates still have to be included in my ventilation plan?

Yes. HazCom does not eliminate your responsibility to comply with other MSHA requirements.
Will a citation result if the MSDS says a PPE should be used, but a miner does not wear it? Who makes the decision on when and how much PPE should be used?

What happens if MSHA and the employer differ on what PPE should be used?

A citation will not be issued under HazCom on the basis that the PPE used by the miner is not the same as that recommended on the MSDS. HazCom requires you to train miners about the hazards and the need to wear PPE. It does not require you to provide appropriate PPE or miners to wear it. The use of PPE depends on the conditions at the mine and the severity of the hazard. Because an MSDS says that PPE should be worn doesn’t mean that it is necessary under all possible exposure conditions. Both you and the Compliance Specialist have the responsibility to determine if the circumstances are such that a PPE is appropriate.

Can MSHA cite our HazCom program? … personal protective equipment? … safe use and handling? … health effects?

You can be cited if your HazCom program fails to meet the requirements of the HazCom rule. You will not be cited under HazCom for unsafe handling or improper PPE, because HazCom does not require safe handling and use of hazardous chemicals nor the use of PPE. HazCom is an information and training rule. You could, however, be cited for violating other MSHA health and safety standards.

Will MSHA have investigative authority on miner’s exposures to hazardous chemicals?

Yes. MSHA has investigative authority under the Mine Act and other health and safety standards, including miner’s exposures to hazardous chemicals.

Why is there no exposure monitoring required in the rule?

HazCom’s purpose is information sharing. It does not limit a miner’s exposure. Exposure monitoring is used to decide the amount and types of controls necessary to limit exposures.

APPLICATION and JURISDICTION

To the extent practical, the substance of MSHA’s HazCom requirements is the same as that in OSHA’s HCS. Also, we have expressly stated that if a HazCom program meets OSHA’s HCS requirements, it will satisfy MSHA’s requirements except for the coverage of EPA-regulated hazardous waste (OSHA has a separate standard for hazardous waste operations).

If my HazCom program meets OSHA’s hazard communication standard, will MSHA accept my program?

Yes, except for the coverage of EPA regulated hazardous waste.

If I am already compliant with my state’s right-to-know laws, am I compliant with MSHA’s HazCom too?

You may or may not be. This will depend solely on the requirements of the state’s right-to-know laws.
If a Compliance Specialist must go to the mine office location where the shop is located, is the shop under MSHA’s jurisdiction and do the HazCom regulations apply at the shop?

HazCom applies at any operation under MSHA jurisdiction, including shops and offices.

How does HazCom differ from OSHA’s HCS?

Major differences between OSHA’s HCS and MSHA’s HazCom are as follows:

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<td>Training records under parts 46 and 48</td>
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HAZARD DETERMINATION

The final HazCom rule ... includes two basic ways for determining whether or not a chemical is hazardous: one for chemicals brought to the mine and the other for chemicals produced at the mine.

HAZARD DETERMINATION PROCEDURES

Is a hazard determination made on the concentrate or diluted form of a chemical? Whether in diluted or concentrated form, the hazard determination is made on the miner's likelihood of exposure. If the miner is exposed to the concentrate, you must use the concentrate for the determination; if exposed to the diluted form, you must use the diluted form for the determination.

What if there are post-2001 changes to the 2001 documents from IARC, etc. that you reference? We only reference the 2001 documents from IARC, NTP, etc.; however, the standard requires that you must include this chemical in your program if evidence becomes available indicating the chemical does pose a physical or health hazard to miners.

Can I use the NFPA codes as a way to make my hazard determination? Not alone. The hazard may be reflected in the code, but you must also use available evidence to determine the chemical's physical and health hazards.

If I hire a contractor to scrape and paint my old plant, do I have to test the old paint to see if it contains any hazardous chemicals so that I can inform the contractor? Yes. You will need to test the old paint unless you know what hazardous chemicals are in it from its MSDS, container label, or other information.

Is the respirable crystalline silica in coal going to be listed as a hazardous material? Yes. Respirable crystalline silica is a hazardous chemical, as is coal.
MIXTURES

The best way to determine the hazards of a mixture is to test the mixture as a whole ... for mixtures not tested as a whole ... you must use available, scientifically valid evidence to determine the mixture’s physical hazards and rely on available health hazard information for the mixture’s ingredients to determine its health hazards ... HazCom requires you to assume that a mixture presents the same hazard as a component if you have evidence that the component could be released from the mixture in a concentration that could present a health risk to miners.

When I mix chemicals together, how am I supposed to determine the mixture and its hazards?

HazCom does not require you to test the mixture as a whole to determine its hazards, although this would be the preferred way. HazCom allows you to infer the hazards of the mixture based on its ingredients. You must use available, scientifically valid evidence to determine its physical hazards and assume that it presents the same health hazard as a component that makes up 1% or more of the mixture. You must consider the chemical carcinogenic if a carcinogenic component makes up 0.1% or more of the mixture.

If I mix three chemicals at the mine, do I need a label and MSDS for each component or for the mixture? What if the mixture has health effects not addressed in the MSDSs for the individual components?

If the hazards are the same as the individual components, then the label could list all three components and you could use the MSDSs of the source chemicals for the mixture and for training miners. If the mixture created is a new chemical with hazards different from its components, you will have to prepare a label and MSDS for the new chemical and train the miners.

What about ore that contains hazardous contaminants?

If the ore contains hazardous chemical components, it must be treated as having the same hazards as its components that comprise 1% or more of the ore. You must consider the ore carcinogenic if a carcinogenic component makes up 0.1% or more of the ore.
EXEMPTIONS

The final rule ... has two categories of exemptions under HazCom. The exemptions from the HazCom standard and the exemptions from labeling.

ARTICLES

The final rule exempts articles from HazCom under normal conditions of use if they release no more than insignificant amounts of a hazardous chemical and they pose no physical or health risk to miners.

Do we need to provide an MSDS on the miles of conveyor belting at our mine?  
Conveyor belting is an article that releases little or no hazardous chemicals during normal use. In these cases, it is exempt from HazCom.

Do we need an MSDS for hazardous decomposition products of articles that could catch fire?  
No. You will not need an MSDS for the hazardous decomposition products from articles that catch on fire.

How about a trash bag used to collect garbage or other waste? ... chalk used to write on date boards? ... punctured (empty) aerosol cans? ... fluorescent lights with ballast?  
They are all articles exempt from HazCom.

CONSUMER PRODUCTS

The final rule ... exempts consumer products from HazCom if the miner uses the product for the purpose the manufacturer intended and the use does not expose the miner more often and for longer periods of time than ordinary consumer use would.

I made a judgment call that a chemical is exempt as a consumer product and have not provided training on it. If a Compliance Specialist decides that the chemical is not exempt, will I receive a citation for not including the chemical in my HazCom program?  
If the explanation of your determination to exclude a chemical from HazCom is reasonable and consistent with the criteria in the rule, the Compliance Specialist will not issue you a citation for failure to include the chemical in the HazCom program.

What are some examples of harmful chemicals in consumer products?  
Paints can contain toxic metals, such as lead or mercury which cause brain damage or developmental abnormalities. Solvents contain a wide variety of organic compounds capable of causing an equally diverse range of health
problems. Petroleum products, such as brake cleaners or lubricants, often contain benzene derivatives that can be carcinogenic as well as highly toxic.

What about the use of Windex in the bathhouse? What about the guy who uses cleaning products in the bathhouse? Do I have to have MSDSs on all of our janitorial supplies? What about household cleaning products? What about industrial cleaning products?

If your janitorial cleaning supplies contain a hazardous chemical, and your miner cleans your bathhouse daily, you will have to have an MSDS for them because this would be more frequent than ordinary consumer use and, therefore, not exempt under HazCom.

If I purchase chemicals at NAPA, COSTCO, etc., that are labeled as “industrial-strength” and use them at the mine only as intended by the manufacturer, do I need to list them in the HazCom program?

It doesn’t matter where you bought the chemical or if it’s labeled “industrial strength”, its frequency and duration of use determines if it is exempt as a consumer product.

HAZARDOUS WASTE

The final rule ... does not exempt EPA-regulated hazardous waste from (HazCom) training. Miners that have this type of hazardous material in their work area need all the information available to protect themselves from chemical hazards and from inadvertent exposure that could cause or contribute to an injury or illness.

Is the acid mine drainage and mine discharge water that I pump out of my underground mine considered a hazardous chemical?

Many mines discharge water with a neutral pH. There may be no hazard associated with the water. If the water is highly acidic or alkaline, there may be no exposure. If there is exposure to hazardous mine drainage or discharge, you must train your miners about the hazards and how to protect themselves, but you do not need to develop an MSDS.

Is fly ash a hazardous waste? ... refuse disposed of on site? ... coal prep plant waste? ... heavy metals in waste?

If a hazardous chemical is defined and regulated as a “hazardous waste” by EPA under RCRA, you do not have to prepare or maintain an MSDS for it or label it. Otherwise, you handle the mine waste and discharge under HazCom the same way you handle any other hazardous chemical produced at the mine.
WRITTEN PROGRAM

All mines must have a written HazCom program. The written program doesn’t have to be lengthy or complicated … MSHA intends the written hazard communication program be your plan for how you will implement HazCom at your mine … to provide hazard information to miners … to ensure that other operators at the mine receive the HazCom information they need.

Why do I have to have another written plan? Do I have to have my HazCom program approved by MSHA?

The intent of a written program is to ensure that you consider and implement all aspects of the HazCom standard. It also provides assurance to Compliance Specialists, miners and their representatives that you are addressing all parts of HazCom. MSHA does not have to approve it.

If the HazCom program does not have to be an approved plan, but MSHA does not think it is adequate, can they cite me?

Yes. Your HazCom program must address each item specified in the regulation in § 47.32.

What if I don’t have any hazardous chemicals at my mine? Do I have to have a HazCom program to say that HazCom doesn’t apply?

No. You do not have to have a written program. However, mines are dynamic work environments that change their methods to adjust to changing needs. You should at least conduct a survey of your mines to know with certainty that chemicals are not present which, under normal conditions of use or in foreseeable emergencies, can put your miners at risk. In our experience, the mining industry is highly dependent on processes and machinery that use, to name a few common examples, grease, diesel fuel, or gasoline.

Am I accountable for the content of my HazCom program? For example, if I include a more stringent requirement in my HazCom program, can MSHA issue a citation if I don’t comply with the more stringent requirement?

You are accountable for the content of your HazCom program to the extent that it meets the requirements of the rule. You can be cited if you do not address those provisions required by the standard and if your program is not developed, implemented, or maintained. Unlike some other safety and health plans, it does not have to be approved by MSHA. The Compliance Specialist must determine whether your program is implemented and maintained, and cite you if it is not.

Do I have to post my HazCom program?

No. But you do have to make it accessible to miners, designated representatives, and MSHA and NIOSH personnel.
I have four mine IDs. My crew travels to work at each of the four mine sites. Do I need four HazCom programs?

No. You can list the four mines on one HazCom written program and use the same program for each of the four. You will have to modify the chemical inventory and any other parts of the program if they differ from mine to mine and keep a copy at each mine.

**MINE OPERATORS and INDEPENDENT CONTRACTORS AS OPERATORS**

Where more than one operator works at a mine, your HazCom program also has to describe – how you inform these other operators about hazardous chemicals to which their miners can be exposed and any protective measures; how you provide other operators with relevant HazCom information; and how you identify hazards on labels and other warnings (the system or symbols you use).

Can I have multiple operators on the same HazCom program and include addenda if the program applies differently at each site? For example, if I have a small trucker contractor that works on my property, can I train him and share my HazCom program? Can the contractor use this arrangement to comply with HazCom?

Yes. The HazCom program, however, must list the contractor and describe your arrangement, and the contractor will have to keep his own copy of the program.

If contractors or miners, such as a mechanic or an electrician, carry chemicals on their trucks and travel between several mine sites, do they have to take MSDSs and related HazCom materials with them?

You have the flexibility under HazCom to determine the best way to meet the requirements for making MSDSs available. The operator must make the HazCom materials accessible and the MSDSs readily available. The miners and contractors may carry a binder of MSDSs or have some other means of obtaining them. The written program would have to specify that practice for the contractors, mechanics, electricians, or others who carry chemicals on their trucks and travel from mine to mine.

What about service providers, such as housekeeping, delivery, or pest control?

Generally, we would not require these service providers to have their own HazCom program. You must provide them site-specific hazard awareness training, as required under 30 CFR parts 46 and 48, which would include chemical hazards.

I am in compliance with HazCom. If I hire a contractor, do I have to make sure they have a HazCom program? If I know the contractor has no HazCom program, can we both be cited for his failure to have a program?

Depending on the circumstances, if you allow an independent contractor on mine property knowing that the contractor’s employees are untrained and the contractor does not have a HazCom program, both you and the contractor could be cited. You must get chemical hazard information either from the contractor or
another source. You are responsible for the health and safety of your miners, including training about hazardous chemicals.

Am I responsible for a contractor having a written HazCom program?
No. Under HazCom, you are responsible for sharing chemical hazard information with the contractor if the contractor’s employees could be exposed to a hazardous chemical at your mine. If you allow the independent contractor to expose your miners to hazardous chemicals and do not train your miners about those hazards, you are not complying with HazCom.

Should I request a copy of my independent contractor’s HazCom program?
It would be wise for you to obtain a copy of the contractors’ HazCom programs, but it is not required.

.................................................................
LIST/INVENTORY

The final rule requires you to compile a list of hazardous chemicals and maintain it for as long as a hazardous chemical is known to be at the mine. You are responsible for listing only the hazardous chemicals that you produce or bring to your work areas. The list, or inventory, of hazardous chemicals is a quick reference so that you, miners, other operators working at your mine, and MSHA and NIOSH personnel can see what hazardous chemicals are present… It must also use a chemical identity that permits cross-referencing between the list, a chemical’s label, and its MSDS.

What is the purpose of the HazCom inventory? Will I have to file everything under a user name, compound, or generic name?

The inventory is intended to help you identify the hazardous chemicals at your mine. You can keep your list in whatever format you choose. In some instances, this is a trade or brand name; in others it may be a common or generic name or a product number. You can compile it for the mine as a whole or for individual work areas.

Describe how cross-referencing of MSDSs, the inventory, and labels works for a computer database versus paper system.

They would work the same. You must be able to find the MSDS from the name on the label or inventory. You must be able to find the chemical on the inventory from the name on the label or MSDS.

Do I have to develop a complete list of all chemicals on the inventory or just the hazardous ones?

The chemical inventory should only list the hazardous chemicals known to be at the mine.

Do I need to list the contents of fire extinguishers on the inventory and have an MSDS on file?

Yes, if the chemical contents are hazardous.

Do I need to inventory moving equipment such as draglines, crosspit spreaders, and bucket wheels?

No. These equipment are considered articles and are exempt. The hazardous chemicals used on or in the equipment will be on the inventory because of their use in maintaining this equipment.

How often do I have to inventory my chemicals?

The list has to be kept up-to-date. As new hazardous chemicals are brought to the mine, you must include them on your list before using them.

Are two separate logs required to list hazardous chemicals and MSDSs?
No. The requirement is for a list of the hazardous chemicals that can be cross-referenced to the MSDSs and labels.

----------------------------------------------------------
LABELING

Labeling containers of hazardous chemicals is a major provision of HazCom ... The final rule ... requires that each container of a hazardous chemical be labeled, tagged, or marked with the identity of the hazardous chemical and appropriate warnings ... A label is an immediate source of information about a hazardous chemical in the work area, providing the identity of the chemical and a brief summary of the chemical's most serious hazards.

LABEL CONTENTS

HazCom requires that you label containers of the hazardous chemicals you produce. The label must be prominently displayed, legible, accurate, and in English.

Many mines hire workers who do not read English. What guidance can be given in this matter?
   The final rule requires that the label be in English. If your workforce reads another language, you could add another label in that language.

Define “unreadable” when it comes to labels?
   “Unreadable” for the purpose of labeling means the information on a label is illegible.

Do I have to include the name and address of a responsible party on the labels I make for containers that stay on mine property? The miners can get this information from the MSDS.
   You only have to include your name and address, or that of another responsible party, on the labels you make for your product that leaves mine property.

REPLACING MISSING LABELS

We receive and store chemicals in barrels. What are my responsibilities if the label falls off?
   You must replace a label immediately if it falls off or becomes illegible. You may prepare a label using information from the MSDS or other source or affix the MSDS to the container until a replacement label is prepared or one is obtained from the manufacturer. As required by § 47.42, the label must include a name that can be referenced with the list/inventory and appropriate hazard warnings.

If a Compliance Specialist finds a container label missing, will I be cited?
   Yes, if evidence exists that the label has been missing and not replaced by the operator.

How do you define “immediately” when a label is missing?
   For purposes of labeling, “immediately” means as soon as possible.
If a label is missing, can I “tag out” a container and not be in violation?
Yes. “Tag out” is an appropriate way to handle this. You will not be in violation of HazCom if you “tag out” the container, move it out of the way to ensure that no miners are exposed, and are in the process of getting another label.

“USED OIL” AND “HAZARDOUS WASTE”

For waste regulated by EPA, what label is required under HazCom?
Hazardous waste regulated by the EPA is exempt from MSHA labeling standards.

I store “used oil” in 55 gallon drums. Do I have to label every drum?
Yes. HazCom would require you to label each drum and we accept the labeling for EPA as appropriate for HazCom. EPA requires you to label “used oil” as such; HazCom does not. However, you have to train the exposed miners about its carcinogenic and other hazards.

LABELING COAL AND OTHER RAW MATERIALS

The final rule exempts containers of raw materials from labeling while they are on mine property because we expect that miners are familiar with the hazards of the material with the hazards of the material being mined … if you add a hazardous chemical to a container of raw material to form a mixture, you must label the container for the hazardous ingredient … if you add a chemical to a container of raw material to form a new compound which is no longer the raw material and which meets the criteria in the hazard determination section…then you must label the container for the newly created hazardous chemical.

Do I have to label my mine product (such as coal or crushed stone) while it’s on mine property, such as when it is in a stockpile?
No. HazCom exempts raw materials mined or processed from labeling while on mine property. If antifreeze or another hazardous chemical is added to the raw material, however, it would have to be labeled.

Do all railcars and customer trucks have to have a label of the product (such as coal, sand and gravel, crushed or dimension stone) when they leave the mine property?
No. HazCom does not require the labeling of products leaving mine property. HazCom requires that you provide the product label or labeling information to the customer upon request. Other state or federal agencies, however, may require you to label products going off mine property.

What if my customer requests a label?
HazCom requires you to provide the customer a label “upon request.”
When mine products, such as coal or bentonite, are brought onto mine property, do they have to be labeled?

If a mine product brought to another mine is a hazardous chemical and is placed in a container, such as a tank, you must label it. If the product is placed in a stockpile, you do not have to label it. In either case, all other provisions of HazCom apply.

Do we have to label gob material, which contains some silica?

No. Gob material is a raw material exempt from labeling while on mine property.

LABELING VEHICLES, BUILDINGS, AND OBVIOUS CONTAINERS

Mines typically process materials in bulk quantities … Label alternatives allows performance-oriented options for identifying chemical hazards to miners. The label alternatives may be signs, placards, process sheets, batch tickets, operating procedures, or other means appropriate for individual, stationary process containers. The alternative must identify the container to which it applies, communicate the same information as a label, and be readily available throughout the shift to miners in the work area.

Do we need to label lube and fuel trucks?

The truck itself does not have to be labeled. However, the containers that hold the lubricants or fuel must be labeled, if they are hazardous.

What about labeling obvious containers, such as oxygen or acetylene bottles?

Oxygen and acetylene bottles are required to be labeled under the requirements of HazCom. Oxygen and acetylene are compressed gases and, therefore, physical hazards. Typically, the supplier will have labeled them.

Must I label drip pans used to collect drips from connections?

No. The drip pan is considered a temporary, portable container. You must ensure that the miner who can be exposed knows what the chemical is, its hazards, and any protective measures. Also, the container must be left empty at the end of the shift. Otherwise, you must put at least the common name of the chemical on the container.

Many mines mix ANFO on site. Would three different labels be required for ammonium nitrate, fuel oil, and the ANFO mixture?

Each container of a hazardous chemical must have a label, so the containers of the fuel oil and ammonium nitrate would have to be labeled. The container housing the ANFO would not have to be labeled if the ANFO is mixed and stored in a temporary container. The miners exposed to the ANFO must be aware that they were working with ANFO, its hazards, and any protective measures needed. The container holding the ANFO must be left empty at the end of the shift.

How about signs used to identify a powder magazine? Are the placards used now okay?
The placards used now are acceptable alternatives to the labeling requirements of HazCom.

Do I have to label a portable water tank on a trailer that I use for mixing different chemicals, such as Round-Up, for spraying applications? If I have to label it, what do I label it with?

The water tank on a trailer would be considered a temporary, portable container and the provisions of temporary, portable containers would apply. If you do not empty the tank at the end of the shift, you must label it with at least the common name of the chemical, such as Round-Up.

**TEMPORARY, PORTABLE CONTAINERS**

Temporary, portable containers are a common convenience on mine properties … the final rule … does not require you to label a portable container if you make sure that the miners using it know the identity of the chemical in the portable container, its hazards, and any protective measures. If you label a temporary, portable container with at least the common name of its contents, you do not have to leave it empty at the end of the shift.

What is MSHA going to accept as labeling for small quantities of hazardous materials left for an oncoming shift?

HazCom requirements, including labeling, can apply to virtually any quantity. If you leave the container for use by the next shift, it has to be labeled with at least the common name of its contents.

What if a temporary container is as large as a 55-gallon drum? Could you consider a 250 gallon wheeled container, that is used to store lubricants temporarily, as a temporary portable container? … What about small lab containers or samples? Does size matter?

The size of the temporary, portable container does not matter. For it to be left unlabeled, however, it would have to be emptied at the end of each shift.

Does a grease gun require a warning label? What if I don’t empty my grease-gun at the end of the shift?

No. The grease gun does not have to be labeled. It is an article and exempt from HazCom. If the grease were hazardous, the manufacturer would label the grease cartridge or the box of grease cartridges. You will have to check the cartridge and box to see if one or both are labeled and make sure the miner knows the grease’s hazards.

Do I have to label each welding rod and each stick of roof bolt resin?

This situation is similar to that encountered with grease cartridges. Even if each welding rod or resin stick is not already labeled, you do not have to label them if the box is labeled. The label on the box is acceptable. In many cases, the individual sticks, rods, or cartridges will have a code number to link them to the box. You will have to make sure the miner knows the hazards.
What about labeling a portable container of methanol that we carry on our equipment during the winter? The container is seasonal-use, not one-day-use.

The container would have to be labeled under the requirements of § 47.41(a), labeling requirements, or § 47.44(b), alternative labeling for temporary, portable containers.

Does a portable container have to be labeled if it has multiple users?

Unlike OSHA's HCS, MSHA’s HazCom allows more than one miner to use the unlabeled temporary, portable container if each miner knows its contents, its hazards, and any protective measures needed. The container must be left empty at the end of the shift; otherwise, you must put at least the common name of the chemical on the container.

Must tanks which are portable, but not temporary, be labeled?

Tanks, which are portable, but not temporary, must be labeled if they contain a hazardous chemical.

What about containers such as 5-gallon safety cans used for solvents, oils, etc., or 5-gallon cans of hydraulic oil? Is just labeling them with the name of the product and an NFPA label sufficient?

If the can is used as a temporary, portable container, and is not emptied at the end of each shift, you can label it with just the common name of its contents, so long as it is referenced the same way in your list of hazardous chemicals and on the MSDS. Although it’s not required, you can use the NFPA label to indicate the chemical’s hazards. If you use NFPA’s label, you must supplement it with training to address the meanings of the codes.

**STATIONARY PROCESS CONTAINERS**

What if bulk amines are injected through process lines, which are not labeled, and a leak occurs causing a guy to get sick, would MSHA cite?

MSHA will not issue a citation under HazCom for the pipes not being labeled. HazCom does not require the labeling of pipes or piping systems. It requires that you inform miners who can be exposed under normal conditions of use or in a foreseeable emergency (such as leaks) about the contents of the pipes, the chemical’s hazards, and protective measures. A sick miner, however, may indicate that other standards have been violated and may result in a citation.
Our prep plant has several tanks in the process. For example, flocculant is contained in the initial tank and then it goes through several dilution and mixing tanks where it is diluted with water. Are we required to label the tanks? Do all subsequent tanks have to be fully labeled, or can they say “floc dilute”? Once the chemical leaves the initial tank, is it considered to be in “containers” per § 47.41 or is it considered to be in the “process”? What is the separation point for these two? Most newer coal prep plants have “closed circuits” for all their water vehicle processes so everything is confined in a series of tanks, pipes, and separators.

You must first determine whether or not the diluted flocculant is a hazard for the purpose of HazCom. If you determine that the diluted flocculant is not hazardous, then labeling is not required. If you determine that the diluted flocculant is hazardous and there is a potential for exposure, either through normal operations or in a foreseeable emergency, you would have to label the tanks. You would also have to inform miners of the hazards associated with the flocculant. HazCom allows label alternatives, such as a process sheet, for stationary process containers.

Do I have to label the open tanks in a frothing process or can I just label the initial chemical storage supply tanks?

You must first determine if the mixture is hazardous. If the mixture is hazardous, then you must label each tank of a hazardous chemical or use an alternative label, such as a process sheet.

If my property has an underground (buried) diesel storage tank, how do I handle the labeling? Do I have to label the pump?

The diesel storage tank is a container and must be labeled. Because it is impractical to place the label on the tank, you will have to use a label alternative, such as a sign, in accordance with § 47.43. Although you do not have to label the pipes, piping systems, and pumps under HazCom, you may have to meet the labeling requirements of other safety and health regulations for the storage and distribution system.

Does MSHA consider a heat exchanger, as used in a refrigeration system, as a container? What about a speed reducer on a conveyor?

No. The definition of “container” in HazCom specifically excludes pipes and piping systems and conveyors.
**LABEL ALTERNATIVES**

Do I have to put the NFPA diamond on a tank or barrel even though it has “diesel” marked on it? If I use an NFPA diamond, do I still have to have a label?  
The NFPA labeling system by itself is not sufficient. If the name on the container can be cross-referenced with the hazardous chemical’s MSDS and the list/inventory in the HazCom program, adding the NFPA diamond is sufficient to comply with HazCom, provided that you train your miners about the meaning of the labeling system.

**Are DOT placards considered proper labels under HazCom? Can we use NFPA 704 symbols/terms on our labels/placards? Can we use HMIS or another system?**  
HazCom does not require a specific labeling system. The NFPA diamond, DOT placards, HMIS, or other systems are acceptable labeling systems. You also may use a sign, placard, or other alternative for a stationary tank. You may use any labeling system so long as it conveys the appropriate hazard warnings and you communicate the specific physical and health hazards through other parts of your HazCom program, such as MSDSs and training. The labeling system is only as good as the training on the labeling system.

**Can the MSDS be used as a label?**  
Yes, but it is not advisable because the hazard information on the MSDS would not be as obvious as on a label. A label is an immediate source of information about a hazardous chemical. It provides the chemical’s identity and a brief summary of the chemical’s most serious hazards, uncluttered by all the other information on an MSDS.
MATERIAL SAFETY DATA SHEETS (MSDSs)

This final rule requires you to have an MSDS for each hazardous chemical to which a miner can be exposed under normal conditions of use or in a foreseeable emergency …

Does a mine operator have to have an MSDS “before using” a chemical?
No. The operator has to have the MSDS available. This availability can be by means of a fax-on-demand service or a computer database. However, before a miner can be exposed to a new chemical hazard, the operator must train the miner about the chemical’s hazards, how to recognize the hazard, and how to protect him or herself. This may require you to call the manufacturer and get a copy of the MSDS.

RESPONSIBILITY

Whose responsibility is it for a miner to understand the MSDS? Earlier references were made in the video that ‘everyone has a responsibility to read and get the MSDS.’ What about my obligation to ensure miners understand MSDSs?
HazCom is an information and training standard. You are required to provide information to miners who may be exposed about chemical hazards and protective measures in a way that it can be understood. It’s the miner’s responsibility to use the information to protect him/herself.

Am I responsible if the supplier provides incorrect information on an MSDS?
You are not responsible for an inaccurate MSDS supplied by the manufacturer. After you become aware of the incorrect information, however, you must obtain a correct MSDS.

If an operator’s MSDS is not the proper one at the mine site, how is the agency going to assure that a miner gets correct information?
Operators are required to have the right MSDS available. If not, they will be cited.

There are companies that create a product called synfuel. The manufacturing method is a trade secret. Who produces this MSDS?
The synfuel producer or supplier is responsible for producing the MSDS. HazCom has special provisions for trade secrets.

MSDSs FOR PRODUCTS, HAZARDOUS CHEMICALS

Will I have to keep an MSDS for a non-hazardous substance to prove it is non-hazardous?
No.
If I go to K-Mart and buy a can of starting fluid or epoxy resin, do I have to get an MSDS for it?
If you use these products as an ordinary consumer would, they would be exempt under HazCom as consumer products. Otherwise, you must get an MSDS from the manufacturer. You can try the manufacturer’s website or look on the back of the can for contact information.

Is there a generic MSDS for fly ash?
No.

Where do I get MSDSs for crushed limestone, trap rock, sand and gravel, coal, and other mining commodities?
We have MSDSs for some mining commodities on our website, www.msha.gov. Please check this out. MSDSs may also be available on other websites, such as industry trade associations.

I produce a high-silica product. Do I have to prepare a label and MSDS? Can it go on invoice or weigh ticket?
You have to prepare a label and MSDS. Your label can go on the invoice or weigh ticket.

Do I have to go out and get an MSDS when a hazard is part of hazardous waste that comes onto the mine site?
No. However, you have to provide miners and their representatives access to information you have that identifies the wastes' hazardous chemical components, describes their hazards, or specifies protective measures.

We buy scrap steel from a salvage company. We have no idea the grade, ratings, etc. When welded or cut, gases and vapors will be given off. However, the salvage yard does not have an MSDS on the steel. What do we do? How far do we need to chase information about steel?
Until you cut or weld on the scrap steel, it is an article exempt from HazCom. We realize that obtaining MSDSs for scrap steel, and the metal fumes and gases given off when welding or cutting, will be difficult. In lieu of the MSDS, we would expect that you work from the information that is available. Training should be provided to miners on the relevant hazards that you know about.

We are engaged in cutting on a bucket of a loader. We receive welding rods from several different suppliers. Do we need to have an MSDS for each of those?
Different MSDSs may be necessary depending on the specific hazards associated with the welding rods. If you compare MSDSs and ensure the composition is the same, you may use a single MSDS for each similar rod. For example, one 6013 rod is the same as another 6013 rod no matter who manufactures it.
We cut down trees on our mining property. Does that require an MSDS? Do I need an MSDS for every type of wood cut on our property? What if a contractor is cutting wood on our property for construction purposes? Do I need to provide an MSDS to the contractor?

Wood or wood products are exempt from HazCom if they don’t release hazardous chemicals under normal conditions of use. However, cutting and sawing trees results in the production of wood dust which can be hazardous. HazCom requires you to obtain an MSDS for the dusts and train miners about its hazards and protective measures. You may be able to find wood-related MSDSs on the internet.

How do I deal with pressure-treated wood? Do I have to label each piece of lumber? Should treated wood have an MSDS?

Treated wood is not exempt from HazCom. If the wood is treated with a pesticide or preservative or another hazardous chemical, you are required to have an MSDS for these hazardous chemicals. Wood and wood products are always exempt from labeling.

Do we have to have an MSDS for drawrock/falling rocks in an underground mine?

No. Drawrock/falling rocks are physical hazards but are not considered hazardous chemicals under HazCom. You do not have to have an MSDS for rocks.

Do I need to include non-potable water? Do I need an MSDS for it?

No. You do not have to include non-potable water, such as that in settling ponds or ground water in the mine, in your HazCom program or create an MSDS for it.

**GENERIC MSDS VS. PRODUCT SPECIFIC**

The final HazCom rule ... allows you to use a single MSDS for a class or family of chemicals with similar hazards or for mixtures with similar hazards and contents, such as organic solvents or lubricants in which the ingredients are the same but their percentages vary from mixture to mixture.

I have an MSDS for a product and ordered another company’s version of the same product. The hazards listed on the old MSDS differ from those included on the second MSDS. If I go back to using the earlier product, what is my responsibility?

You have two different products and you must have the MSDS for whichever product your miners are using.

Do I have to have a separate MSDS for different gasolines or diesel fuels? Can I use a generic MSDS?

Unless you compare MSDSs and ensure the hazardous components are the same, you must have a separate MSDS. Typically the composition varies such that a generic MSDS is inadequate. For example, additives may only be present in a specific brand or grade, or on a seasonal or regional basis.
I have a case of Gummout with an MSDS. Then I buy “Bob’s” brand, do I have to get another MSDS?
   Unless you compare MSDSs and ensure the composition is the same, you must have a separate MSDS. Typically the composition of solvents vary such that a generic MSDS is inadequate.

Do the MSDSs and list of chemicals have to be brand specific or can it list a product such as 10W-30 motor oil instead of Chevron 10W-30?
   You may use a common name for your list of chemicals if it can be cross-referenced with the MSDS and label. You must also compare MSDSs and ensure the composition is the same.

“Used oil” at mines often contains other fluids beside oil, in varying quantities, such as transmission fluid or metal from engine wear. Would a generic MSDS for “used oil” suffice in this case?
   An MSDS is not required for “used oil” per se. The MSDS of the source chemical should address the hazards of the used oil. However, for “hazardous waste” regulated by EPA, you also are required to provide available information that identifies its hazardous chemical components, describes its physical or health hazards, or specifies protective measures. An MSDS for this “hazardous waste” may or may not be available. You are not required to analyze the oil to determine its constituents.

Some mines mix “used oil” with ANFO. Would a generic MSDS for ANFO suffice in this case?
   No. You must prepare an MSDS for the mixture.

**AVAILABILITY OF MSDSs**

*The purpose of requiring MSDSs in the work area where the chemical is stored, handled, or used is so that miners have quick access to critical information in emergency situations. The final rule provides flexibility for you to determine the best way to meet this requirement.*

Do MSDSs have to be available in every section?
   No. Mine operators may keep MSDSs at an alternative location if they ensure that they are readily available to miners in an emergency.

Do we have to send an MSDS underground if a miner requests information about a chemical?
   You must make the information available to the miner and provide them with a copy upon request. For example, you could read the information to the miner over a mine telephone and then give him a copy of the MSDS when the miner comes to the surface.

If the MSDS is on a container, will that be sufficient for accessibility in the work area?
Must the MSDS be immediately available? What if power interruptions limit availability?
An MSDS must be available in the event of an emergency. If the MSDS information is kept on a computer, you must provide backup although it can be in any form, such as a laptop computer, fax on demand service, calling the chemical's manufacturer and obtaining the needed information, or keeping hard copies of the MSDS.

We have a large complex which includes an underground mine. What does "readily accessible" mean in relation to where the MSDSs are kept?
The regulation does not define "readily accessible." But the intent of the regulation is that miners have quick access to critical information in emergency situations. The final rule gives you flexibility to determine the best way to meet HazCom's access requirements with respect to MSDSs.

In the preamble it says that accessibility of MSDSs is 24 hours, is that the end of the shift?
The 24-hour reference in the preamble is with respect to § 47.71, Access to HazCom materials. That provision requires you to provide access to all HazCom materials required by the regulation to miners and designated representatives. Access is defined in the regulation as the right to examine and copy records. In the interest of flexibility, the final rule does not specify the time period in which you have to provide copies. Because HazCom requires you to keep all these HazCom materials available at the mine, including those available by computer, you should be able to provide them to miners, designated representatives, and federal officials on the same day or, at most, within 24 hours of receiving the request.

How easy must it be for a miner to get a copy of the MSDS? Would he have to request a specific one or can I just give him a pile of them that he would have to sort through?
Yes, you may have a miner look through a pile of MSDSs to obtain the one he wants.

MSDS RETENTION and NOTIFICATION OF DISPOSAL

The final rule requires that you keep the MSDS for as long as the chemical is at the mine and notify miners at least 3 months prior to disposing of the MSDS…You would have had the flexibility to use any method that notified each miner who may have been exposed…to ensure a miner had the opportunity to request a copy. The miner could then retain this information for future reference and you would not need to maintain the MSDS for an extended period of time.

Once we remove a chemical from our property, can we destroy its MSDS?
You have to notify miners 3 months before disposing of an MSDS.
Suppose we never discard any MSDSs after we stop using chemicals. Is there a problem with having an excess number of MSDSs?

No.

MSDS have to be kept 3 months after notifying miners that it will be removed from mine site. How is that handled if a company uses electronic MSDS?

The MSDS retention requirement is the same for electronic media as it is for a printed copy.

The rule requires that an MSDS be kept for 3 months after the chemical is no longer at the mine. If it has chronic effects, wouldn’t it be a good idea to keep it longer? What are the archiving and recordkeeping requirements on MSDSs which cover materials that contain components that may result in disease with a latency period?

HazCom does not require operators to retain and archive MSDSs for chemicals that have potential chronic health effects or result in diseases with a latency period. We determined this access provision is adequate to ensure that a miner could obtain a copy of the MSDS if the miner wants one.

What is meant by a “current MSDS”?

Current MSDSs are the most recently issued.

What does the term “outdated MSDS” mean?

An MSDS become outdated when a manufacturer issues a new MSDS for the hazardous chemical.

Does the notice to miners of my intent to dispose of an MSDS have to be in writing? Do I have to maintain a record that I notified the miners?

No. The notice to miners of intent to dispose of MSDSs does not have to be in writing. You can announce your intent in safety meetings or through contacts with miners during a shift. You may post the notice on the mine’s bulletin board, put it in a company newsletter, or use any means that you have to communicate with your miners.

ELECTRONIC MSDS SYSTEMS

... to clarify...our intention to allow internet access or a commercial database as a way to comply with the requirement that you have an MSDS for each hazardous chemical ... You can keep MSDSs at an alternative location, if you ensure that they are readily available to miners in an emergency ... If you wish to comply by retrieving MSDSs electronically from an internet site or a commercial database of chemicals, you must still meet the requirement that MSDSs be readily available to miners.

Can I use electronic file systems or fax-on-demand database systems to comply with the MSDS access requirements of HazCom?

Yes. You may use the internet or a commercial database as a way to comply with the MSDS requirements of HazCom. If you wish to comply by retrieving
MSDSs electronically from an internet site or a commercial database of chemicals, however, you must meet the requirement that MSDSs be readily available to miners. In other words, we expect you to make MSDSs available to miners in accordance with the requirements of § 47.54(b). The computer does not have to be connected full time to the internet site; but, miners must know how to use the computer or someone who knows how to access the MSDS electronically must be available anytime miners are exposed. For example, you have a lead mechanic and regular mechanic who perform maintenance work at night. If you are providing access to MSDSs electronically, these miners must be able and know how to retrieve an MSDS from the computer whenever they need or want one. This means that you may not lock the computer away from their use unless you give them a key. Otherwise, the MSDS is not readily available and you are denying them access to the MSDSs.

If I provide web-service and a computer to my miners, does this meet the requirements of the availability of MSDSs?

Yes. The final rule provides flexibility for you to determine the best way to meet this requirement. If you wish to comply by retrieving MSDSs electronically from an internet site or a commercial database of chemicals, you must still meet the requirement that MSDSs be readily available to miners. The computer does not have to be connected full time to the internet site. However, we still expect you to make MSDSs available to miners in accordance with § 47.54(b). Miners must know how to use the computer or someone who knows how to access the MSDS electronically must be available anytime miners are exposed.

Why doesn’t MSHA keep a database for all MSDSs used in mining? It would save paperwork, money, duplication of effort, etc.

MSHA has considered this idea, however, it is impractical for us to maintain MSDSs for every hazardous chemical product produced or used in the US mining community. However, we encourage the mining industry to use whatever database are available as a means for compliance.

Are the various MSDS databases that you mentioned in the national meeting (Cornell University, University of Vermont, etc.) fee-based?

These databases are free; some of the others are fee-based.

INDEPENDENT CONTRACTORS

We recognize that independent contractors especially need this flexibility because they work at different types of mines, typically multiple employer sites. Independent contractors, therefore, must coordinate the accessibility of MSDSs to other operators and miners, as well as their own employees.

When making multiple deliveries of the same material to the same work site, do I need to give an MSDS and a label on each delivery? I have a contractor demanding an MSDS and a label on each delivery. Can I charge him after the first MSDS and label are provided?
You must provide the customer a copy of the label and MSDS upon request and without cost.

Do I have to have an MSDS for “hazardous waste” handled by contractors?
No. The hazardous waste is regulated by the EPA.

I regularly use contractors who bring hazardous chemicals to my mine. Do the contractors have to keep MSDSs for those chemicals? What happens to the MSDSs once the contractor leaves the property? Do I have to get copies of the MSDSs of the contractors’ chemicals? Do I have to notify my miners before disposing of the MSDSs?
Contractors have the same responsibility as you to protect their miners. They must make MSDSs available to their miners and you must have copies for your miners if they can be exposed to the contractors’ chemicals. You must notify your miners, who could have been exposed, of your intent to dispose of the MSDSs for the contractors’ chemicals at least 3 months before you dispose of them.

Who must produce the MSDS for the coal that contractors mine for a parent company? Is the contractor operator responsible or the parent company that actually owns the coal?
The parent company.

Is the operator responsible for any MSDS changes they have made available to contractors?
Yes, and contractors are responsible for MSDS changes they have made available to operators.
TRAINING

The final rule requires operators of mines initially to instruct each miner with information about the physical and health hazards of chemicals in the miner’s work area, the protective measures a miner can take against these hazards and the contents of the mine’s HazCom program. Subsequent HazCom training must be conducted in accordance with 30 CFR parts 46 and 48. The conforming amendments to part 46 and 48 make clear that for initial training, new miner training, newly employed experienced miner training, annual refresher training, and whenever a new task is assigned, miners will now have a unified approach to provide a better training focus on working with hazardous chemicals.

INITIAL HAZCOM TRAINING

What training must be completed by the effective date of the rule?

You must instruct miners about —
> The physical and health hazards of the chemicals in the miner's work area;
> The requirements of HazCom;
> The mine’s HazCom program (including an explanation of the labeling system, the MSDSs, and how they can get the information and use it);
> Where HazCom materials (labeling information, the list of chemicals, and the MSDSs) are kept and that they’re available;
> The operations or areas of the mine where hazardous chemicals are present;
> How to tell if a chemical is present or if there's been an inadvertent release (smell, color, etc);
> What protective measures to take; and
> The work practices, engineering controls, emergency procedures, and use of personal protective equipment the mine uses to protect miners from hazardous chemical exposures.

If you have already provided some of this training to your employees, you do not need to re-train them on those parts.

Does initial HazCom training, incorporated in annual refresher training, have to be completed by the effective date?

Yes. You must complete it by the effective date.

If I train miners under parts 46 or 48 and give a general overview of HazCom, does that meet the requirements for HazCom training?

You should discuss this question with the EFS Training Specialist in your area. We would need to know more about the training you conducted under parts 46 or 48 before we could answer your question.
If my people were already trained under OSHA’s HCS, do I need to re-train them?  
If the training complies with OSHA’s HCS, you do not have to re-train those miners.

Does the initial HazCom training count under “New Miner” training?  
If you hire a new miner before the rule’s effective date and provide that person initial HazCom training, you may count it under New Miner training. The training must meet all the standards in parts 46 or 48, such as making a record or using a competent person or approved instructor to oversee the class.

TRAINING MINERS ON SPECIFIC CHEMICALS IN THEIR WORK AREA

If my mine uses 500 different chemicals, do I have to create 500 unique training sessions (i.e., 1 for each chemical)?  
No. We encourage operators to find appropriate groupings of chemicals. For example, you may group them by shared hazards or characteristics, such as solvents or fuels or dusts, and train your miners by those groupings.

I already trained my employees about some of the chemicals on my property. Do I have to conduct that training again? For example, if my miners were already trained about the hazards of coal, do I need to provide HazCom training on coal?  
If you have trained your miners about specific chemical hazards at your mine to comply with part 46, part 48, or OSHA’s HCS, you can apply the training to meet HazCom’s requirements to the extent it’s relevant. You don’t have to re-train them.

What if I have all my MSDSs in the mine office in a binder and have the miners sign off on them. Would that be adequate training?  
No.

HAZCOM AND NEW TASK TRAINING

Mine operators must provide any miner who is reassigned to a new task, in which he or she has no previous work experience, with training in the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, information about the physical and health hazards of chemicals in the miners’ work area, the protective measures a miner can take against these hazards and the contents of the mine’s HazCom program … MSHA wants to emphasize that if the introduction of a new chemical does not involve a new hazard, mine operators do not have to conduct new task training and, consequently, no paperwork requirement is triggered.

If a miner has been doing a task, such as cleaning parts with a solvent or fueling equipment with diesel fuel, do I have to task train the miner again about the chemical?  
No, provided the miner knows the physical and health hazards of the chemical, the protective measures that guard against the hazards, and the content of the HazCom program.
If we receive a new chemical, can we provide the information as an attachment to a weekly paycheck?
Yes. If you provide the information before the potential exposure can take place and it communicates to the miner what the hazards are and the appropriate protective measures, you may attach information to a weekly paycheck.

HAZCOM AND ANNUAL REFRESHER TRAINING

Is training required during annual refresher on hazardous materials and HazCom?
You are not required to conduct refresher HazCom training annually. We modified annual refresher requirements to include HazCom only as a recommended subject, but we modified other training requirements in parts 46 and 48 to include HazCom.

REVISING TRAINING PLANS UNDER HAZCOM

Do I have to submit a revised training plan to MSHA that includes HazCom?
Not if you attach MSHA’s pre-approved training plan revisions to your existing training plan.

What is being waived in the training program Policy Letter No. P02-III-1?
MSHA has issued a one-time waiver and waived the requirement to amend your training plan. You may use up to 2 hours of annual refresher training to complete the initial HazCom training. HazCom’s effective dates have not been extended. If you have six or more miners, you must have a HazCom program at your mine, including trained miners, by September 23. If you have five or fewer, you must be in compliance by March 21, 2003.

TRAINING RECORDS

Do we have to document initial HazCom training?
You have a choice about initial HazCom training: you may conduct it separately from parts 46 and 48 or you may integrate initial HazCom training into your existing training program. If you conduct initial HazCom training separately from your existing program, you do not need to make a record of it. If you integrate the initial HazCom training with your mine’s existing training program, you must make a record as you would any other training conducted under parts 46 and 48.

How will a Compliance Specialist know if a miner has been trained on a certain chemical if no training record is required?
MSHA Compliance Specialists already talk with mine operators and miners during inspections to better understand conditions at a mine and to make judgments. They are expected to talk with operators and miners about the chemicals miners work with and to determine if they have been trained.

Is the Compliance Specialist going to interview more than one miner per mine?
Yes. To get enough information to evaluate the effectiveness of the initial HazCom training, the Compliance Specialist will probably need to interview several miners.

**How do we document training after the effective dates?**

After the effective dates, your HazCom training will be integrated into your existing training program which is under either part 46 or 48. You will use the same documentation for HazCom that you use for your existing program.

**HAZCOM INSTRUCTORS**

Does the HazCom trainer have to be an MSHA-approved part 48 trainer?

As explained above, you have a choice about initial HazCom training: you may conduct it separately from parts 46 and 48 or you may integrate it into your existing training program. If you conduct the initial HazCom training separately from your existing program, you are not specifically required to use a “competent person” (as required by part 46) or an “approved-instructor” (as required by part 48). Although there is no provision that requires it, HazCom implies that the instructor be able to communicate effectively with those who are receiving the training. If you integrate the initial HazCom training with your mine’s training program, a “competent person” or an “approved-instructor” must conduct the training.

**SITE-SPECIFIC HAZARD TRAINING**

What kind of HazCom training must we give to visitors at the mine? What about service providers, such as housekeeping, delivery persons, or lawn and pest control who work on the mine only briefly or infrequently?

You must give them site-specific hazard awareness training. If they are going to be exposed to hazardous chemicals, those hazards must be part of the site-specific training. The level of training must be appropriate to the hazard presented.

**CONTRACTOR TRAINING**

Do mine operators have to train service repairmen regarding the chemical and physical hazards present at the mine site? Are contractors responsible for training when they are working on mine property?

You are required to inform independent contractors who are operators, including those who provide service and repair work, about the chemical hazards their miners may be exposed to at your mine. Contractors are defined as mine operators under HazCom (as well as under the Federal Mine Safety and Health Act and 30 CFR part 45). Contractors have the same responsibility as production operators to train their employees.
How will this affect contractors that come on site to do a job? Will they have to furnish the mine operator a list of chemicals they bring on site and compare them with the mining company to see if the mining company already has the chemicals listed? If the mine operator does not have the same chemicals on their list, will the contractor have to furnish them one and train the mine operator’s employees on the chemicals the contractor brings on site, or will the mine operator have to do their own training on them? To what extent do we need to provide cross-training to a contractor and vice-versa?

You are not required to cross-train contractors or contractor miners. You must provide contractors information about your hazardous chemicals (to which their miners can be exposed) and they must provide you information about their hazardous chemicals (to which your miners can be exposed). Additionally, you each must provide effective training about the hazards and protective measures to your miners. You may conduct cross-training, but the requirement is to provide information to each other. In most cases, however, you each understand best the hazards of your chemicals and the protective measures, and cross-training might provide the best training.

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TRADE SECRETS

The “Trade Secrets” subpart balances two important interests: The miner’s interest in obtaining information on hazardous chemicals and your proprietary interest in protecting your business. In general, we believe miner safety and health is best served by full disclosure of a chemical’s identity. We recognize, however, the need to protect trade secrets.

Do the trade secret provisions apply to mixtures or individual chemicals?
The trade secret provisions apply to mixtures or individual chemicals that are considered to be trade secrets by the manufacturer.

What action can the miner take if I withhold or deny a request for trade secret information?
Subpart I – “Trade Secrets” outlines the provisions for withholding trade secrets, disclosure to interested parties, review of denials, and a confidentiality agreement and other remedies.
EFFECTIVE DATES

We have determined that small mines will be able to comply with the HazCom final rule. However, we recognize that mine operations with five or fewer employees, because of their size, have special needs that justify providing them with more time to become familiar with the requirements of the HazCom rule.

My company has 15 mines each with five or fewer miners. Is each mine ID a separate mine? How does this affect my effective date?

MSHA treats each mine ID as a separate mine. All 15 mines would have an effective date of March 21, 2003.

What happens if on September 23, 2002, we have five miners, but on January 14, 2003 we hire another miner and have six miners on our payroll? Do we still have until March 2003 to train everyone in initial HazCom training?

Your compliance date depends on the employment at your mine on September 23, 2002, the effective date of the final rule. If you only had five miners on September 23 and hired another on January 14, your effective date is still March 21, 2003.

One of my contractors employs fewer than five miners. How do I comply if I must comply by September 23 and they don’t need to comply until March 21, 2003?

You are responsible for the safety and health of your miners. Ultimately, you are responsible for everything that happens on your property. You must share information about the hazardous chemicals you may expose the contractors’ employees to and the contractors must share information about the hazardous chemicals that they may expose your miners to. Some small contractors have HCS programs that are in compliance because the contractors also work under OSHA jurisdiction. These contractors should already have everything you need. You are liable for any small contractors that you hire to work at your mine. They must meet all HazCom requirements before they begin work, even if under other circumstances, their compliance date would be March 21, 2003.

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WHERE TO FIND HELP

MSHA wants to emphasize that we are committed to providing compliance assistance to all mine operations, regardless of size. In fact, there are many HazCom aids already available. MSHA has developed an instruction guide, PowerPoint presentations, videos, model HazCom programs, a brochure, and generic MSDSs, and plans extensive compliance assistance.

www.msha.gov
1. HazCom training must include training for each hazardous chemical miners are exposed to in the following areas: _______________ and _______________________. Training on the mine’s written ______________________ must be included.

2. The identity used for each hazardous chemical workers are exposed to must be such that it can be cross referenced between the MSDS, the label, and the _______________.

3. When must a miner receive HazCom training? _______________ _______________.

4. You can find out about your company’s HazCom program by reading it’s _______________ _______________.

5. All except temporary containers containing hazardous chemicals brought on the mine site must be _______________.

6. MSDS stands for ________________________________.

7. Almost all mine products contain enough crystalline silica to require that the mine prepare an _______ and ______________ for its product.

8. The date the HazCom standard goes into effect is _______________ for mines with 6 or more employees and _______________ for mines with 5 or less employees.

9. An unlabeled temporary portable container must be ____________ at the end of the shift.

10. The first step in developing a HazCom program is preparing a list of _______________ at the mine and securing copies of the ________ for each.

11. Containers of raw materials produced at the mine are exempt from the ______________ requirement.

12. A label must include the identity of a hazardous chemical and a brief summary of the chemical’s most serious ______________.

13. Consumer products need not be included on the company’s hazardous chemical list if they are used for the purpose the manufacturer intended and the use does not expose the miner more often and for longer periods of time than ______________ use would.

14. Hazardous chemicals in temporary portable containers must either be labeled or _______________.

15. The maximum size for a temporary portable container is ________________.

16. The maximum number of miners who can use a temporary portable container is ________________.

17. MSDSs on the hazardous chemicals a miner is exposed to must be _______________ ________________ to exposed miners.

18. How long must miners be notified before disposing of an MSDS? ________________.

19. What types of training must include HazCom training? _______________, ________________, ________________, and possibly ________________.

20. Initial HazCom training can be incorporated into what type of training? ________________.

21. You must provide independent contractors information about your __________________________.