

# Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 17, 2021


## 1 Identification

- **Product identifier**
- **Trade name: BLACK BEAUTY® FERRONICKEL SLAG**
- **Product code:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Raw Material - Industrial Uses.
- **Restrictions on use:** Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Harsco Corporation  
Harsco Environmental  
350 Poplar Church Road  
Camp Hill, PA 17011  
Phone: 717-763-7064  
E-Mail: reedcs@harsco.com
- **Emergency telephone number:**  
Emergency Contact: Verisk 3E  
Emergency Phone: 855-393-9889 (Access Code: 13793)  
Manufacturer Contact: Customer Service Department  
Manufacturer Emergency Phone: 888-733-3646 ext. 2

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
STOT RE 2 H373 May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

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- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**  
  
GHS08
- **Signal word:** Warning
- **Hazard statements:**  
H373 May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Precautionary statements:**  
P260 Do not breathe dust.  
P314 Get medical advice/attention if you feel unwell.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

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· **Chemical characterization: Mixtures**

· **Components:**

7631-86-9	Silicon dioxide	50-55%
1309-48-4	Magnesium oxide	30-35%
1345-25-1	iron oxide	10-15%
1344-28-1	Aluminum oxide	1-4%
1308-38-9	Chromium (III) oxide	<2.0%
1305-78-8	Calcium oxide Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	<1.0%
1344-43-0	Manganese Oxide	<1.0%
14808-60-7	Quartz (SiO <sub>2</sub> ) Carc. 1A, H350; STOT RE 1, H372	<0.1%
7440-02-0	nickel Skin Sens. 1, H317	<0.1%
7439-92-1	Lead Carc. 2, H351; Repr. 1A, H360	<0.01%
7440-43-9	cadmium (non-pyrophoric) Acute Tox. 3, H301; Acute Tox. 2, H330 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 1, H372	<0.001%
7440-41-7	beryllium Acute Tox. 3, H301; Acute Tox. 2, H330 Carc. 1B, H350; STOT RE 1, H372 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	<0.0005%

· **Additional information:**

Product composition is highly variable.

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

## 4 First-aid measures

· **Description of first aid measures**

· **General information:** Repeated or long-term inhalation of product dusts may cause pulmonary disease.

· **After inhalation:** Remove victim to fresh air. Seek medical attention for severe respiratory distress.

· **After skin contact:**

Wash with soap and water.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for 15 minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Mechanical irritation to eyes and skin.

Coughing

· **Danger:**

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Danger of impaired breathing.

May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Indication of any immediate medical attention and special treatment needed:**

If medical advice is needed, have product container or label at hand.

## 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

Heated product may form toxic fumes but is not expected to be a fire hazard.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up**

Vacuum or sweep and collect in a suitable container. For a large spill, collect uncontaminated product for possible re-use. Avoid creating dusty conditions.

Sweep up and place into an appropriate container.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Any deposit of dust which cannot be avoided must be regularly removed.

Do not dry clean dust covered objects and floors.

Use only in well ventilated areas.

· **Information about protection against explosions and fires:**

Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:**

Storage area should be dry and well-ventilated.

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- **Information about storage in one common storage facility:**  
Store away from oxidizers, strong acids, strong bases.  
Store away from foodstuffs.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

## 8 Exposure controls/personal protection

### · Control parameters

#### · Components with limit values that require monitoring at the workplace:

##### 60676-86-0 Silica, fused

PEL (USA)	20mppcf or 80mg/m <sup>3</sup> /%SiO <sub>2</sub>
TLV (USA)	TLV withdrawn
EV (Canada)	Long-term value: 0.1 mg/m <sup>3</sup> respirable
LMPE (Mexico)	Long-term value: 0.1 mg/m <sup>3</sup> (j)

##### 1309-48-4 Magnesium oxide

PEL (USA)	Long-term value: 15* mg/m <sup>3</sup> fume; *total particulate
TLV (USA)	Long-term value: 10* mg/m <sup>3</sup> *as inhalable fraction
EL (Canada)	Short-term value: 10** mg/m <sup>3</sup> Long-term value: 10* 3** mg/m <sup>3</sup> *inhalable fume;**respirable dust and fume
EV (Canada)	Long-term value: 10 mg/m <sup>3</sup> inhalable
LMPE (Mexico)	Long-term value: 10* mg/m <sup>3</sup> A4, *fracción respirable

##### 1345-25-1 iron oxide

REL (USA)	Long-term value: 1 mg/m <sup>3</sup> as Fe
TLV (USA)	Long-term value: 1 mg/m <sup>3</sup> as Fe
LMPE (Mexico)	Long-term value: 1 mg/m <sup>3</sup> como Fe

##### 1344-28-1 Aluminum oxide

PEL (USA)	Long-term value: 15*; 5** mg/m <sup>3</sup> *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m <sup>3</sup> as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m <sup>3</sup> as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m <sup>3</sup>

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EV (Canada)	respirable, as Al Long-term value: 10 mg/m <sup>3</sup> total dust
LMPE (Mexico)	Long-term value: 1* mg/m <sup>3</sup> A4, *fracción respirable
<b>1308-38-9 Chromium (III) oxide</b>	
PEL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Cr
REL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Cr; See Pocket Guide App. C
TLV (USA)	Long-term value: 0.003 mg/m <sup>3</sup> as Cr(III);inhalable; soluble comp.: DSEN;RSEN
EL (Canada)	Long-term value: 0.5 mg/m <sup>3</sup> as Cr; S(D); water soluble only: S(R)
LMPE (Mexico)	Long-term value: 0.5 mg/m <sup>3</sup> A4
<b>1305-78-8 Calcium oxide</b>	
PEL (USA)	Long-term value: 5 mg/m <sup>3</sup>
REL (USA)	Long-term value: 2 mg/m <sup>3</sup>
TLV (USA)	Long-term value: 2 mg/m <sup>3</sup>
EL (Canada)	Long-term value: 2 mg/m <sup>3</sup>
EV (Canada)	Long-term value: 2 mg/m <sup>3</sup>
LMPE (Mexico)	Long-term value: 2 mg/m <sup>3</sup>
<b>14808-60-7 Quartz (SiO<sub>2</sub>)</b>	
PEL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *resp. dust; 30mg/m <sup>3</sup> /%SiO <sub>2</sub> +2
REL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.025* mg/m <sup>3</sup> *as respirable fraction
EL (Canada)	Long-term value: 0.025 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.10* mg/m <sup>3</sup> *respirable fraction
LMPE (Mexico)	Long-term value: 0.025* mg/m <sup>3</sup> A2, *fracción respirable
<b>7440-02-0 nickel</b>	
PEL (USA)	Long-term value: 1 mg/m <sup>3</sup>
REL (USA)	Long-term value: 0.015 mg/m <sup>3</sup> as Ni; See Pocket Guide App. A
TLV (USA)	Long-term value: 1.5* mg/m <sup>3</sup> elemental, *inhalable fraction
EL (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> ACGIH A1, IARC 2B

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EV (Canada)	Long-term value: 1 mg/m <sup>3</sup> Inhalable fraction
LMPE (Mexico)	Long-term value: 1.5* mg/m <sup>3</sup> *elemental:A5, fracción inhalable

### 7440-43-9 cadmium

PEL (USA)	Long-term value: 0.005 mg/m <sup>3</sup> as Cd; see 29 CFR 1910.1027
REL (USA)	See Pocket Guide App. A
TLV (USA)	Long-term value: 0.01 0.002* mg/m <sup>3</sup> as Cd; *respirable fraction; BEI
EL (Canada)	Long-term value: 0.01 0.002* mg/m <sup>3</sup> as Cd; ACGIH A2, IARC 1; *respirable
EV (Canada)	Long-term value: 0.01 0.002* mg/m <sup>3</sup> *respirable
LMPE (Mexico)	Long-term value: 0.01 0.002** mg/m <sup>3</sup> A2, IBE; *fracción resp.

### 7440-41-7 beryllium

PEL (USA)	Short-term value: 0.002 mg/m <sup>3</sup> Long-term value: 0.0002; 0.002* mg/m <sup>3</sup> Ceiling limit value: 0.025**/** mg/m <sup>3</sup> , 0.005* ppm as Be; *see 1910.1024; **30 min peak/8-hr shift
REL (USA)	Ceiling limit value: 0.0005 mg/m <sup>3</sup> as Be; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.00005 mg/m <sup>3</sup> as Be; inhalable; RSEN; soluble comp.: Skin, DSEN
EL (Canada)	Long-term value: 0.00005 mg/m <sup>3</sup> as Be; ACGIH A1, IARC 1; Skin, S(R); soluble: S(D)
EV (Canada)	Short-term value: 0.01 mg/m <sup>3</sup> Long-term value: 0.002 mg/m <sup>3</sup> as Be; revoked as of 01/01/18
LMPE (Mexico)	Long-term value: 0.00005* mg/m <sup>3</sup> A1, PIEL, SEN, *fracción inhalable; como Be

### Particulates Not Otherwise Regulated (Respirable Fraction)

TLV (USA)	Long-term value: 3 mg/m <sup>3</sup>
TWA (USA)	Long-term value: 5 (15 mppcf*) mg/m <sup>3</sup> *mppcf = Millions of particles per ft <sup>3</sup> of air

### Particulates Not Otherwise Regulated (Total)

TWA (USA)	Long-term value: 15 mg/m <sup>3</sup>
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#### · Exposure controls

#### · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.

#### · Engineering controls:

No relevant information available.  
Provide adequate ventilation.

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- **Breathing equipment:**  
A NIOSH approved dust respirator should be used for operations generating dust.  
Filter P3
- **Protection of hands:**  
Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.
- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### Appearance:

Form: Granular

Color: Green

Odor: Odorless

Odor threshold: Not determined.

pH-value: Not applicable.

Melting point/Melting range: >1500 °C (>2732 °F)

Boiling point/Boiling range: >2000 °C (>3632 °F)

Flash point: Not applicable.

Flammability (solid, gaseous): Not determined.

Auto-ignition temperature: Not determined.

Decomposition temperature: Not determined.

Danger of explosion: Product does not present an explosion hazard.

#### Explosion limits

Lower: Not determined.

Upper: Not determined.

Oxidizing properties: Non-oxidizing.

Vapor pressure: Not determined.

Density at 20 °C (68 °F): 1.3-1.5 g/cm<sup>3</sup> (10.85-12.52 lbs/gal)

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

#### Solubility in / Miscibility with

Water: Not miscible or difficult to mix.  
Insoluble.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- **Other information** No relevant information available.

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Reacts with strong acids and alkali.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials** Strong acids and alkali.
- **Hazardous decomposition products**  
Under fire conditions only:  
Metal oxide smoke.  
Silicon oxides.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:**  
Mechanical irritation only.  
Based on available data, the classification criteria are not met.
- **On the eye:**  
Mechanical irritation only.  
Based on available data, the classification criteria are not met.
- **Sensitization:** Sensitizing effect by skin contact is possible with prolonged exposure.

### · IARC (International Agency for Research on Cancer):

14808-60-7	Quartz (SiO <sub>2</sub> )	1
7440-02-0	nickel	2B
7439-92-1	Lead	2B
7440-43-9	cadmium (non-pyrophoric)	1
7440-41-7	beryllium	1

### · NTP (National Toxicology Program):

14808-60-7	Quartz (SiO <sub>2</sub> )	K
7440-02-0	nickel	R
7439-92-1	Lead	R

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7440-43-9	cadmium (non-pyrophoric)	K
7440-41-7	beryllium	K

· **OSHA-Ca (Occupational Safety & Health Administration):**

7440-43-9	cadmium (non-pyrophoric)
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· **Probable route(s) of exposure:**

Ingestion.

Inhalation.

Eye contact.

Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** No relevant information available.

· **Repeated dose toxicity:**

Sensitizing effect by skin contact is possible with prolonged exposure.

Possible risk of irreversible effects.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:**

May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.

· **Other adverse effects** No relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

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## 14 Transport information

· <b>UN-Number</b> · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· <b>UN proper shipping name</b> · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· <b>Transport hazard class(es)</b> · DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.
· <b>Packing group</b> · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· <b>Environmental hazards</b> · Marine pollutant:	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

### · Section 302 (extremely hazardous substances):

None of the ingredients are listed.

### · Section 313 (Specific toxic chemical listings):

Substance / component not listed individually, but listed under family group as Nickel salts.

1344-28-1	Aluminum oxide
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1308-38-9	Chromium (III) oxide
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### · TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

### · Proposition 65 (California)

#### · Chemicals known to cause cancer:

14808-60-7	Quartz (SiO <sub>2</sub> )
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7440-02-0	nickel
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7439-92-1	Lead
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7440-43-9	cadmium (non-pyrophoric)
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7440-41-7	beryllium
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#### · Chemicals known to cause developmental toxicity for females:

7439-92-1	Lead
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· **Chemicals known to cause developmental toxicity for males:**

7439-92-1	Lead
7440-43-9	cadmium (non-pyrophoric)

· **Chemicals known to cause developmental toxicity:**

7439-92-1	Lead
7440-43-9	cadmium (non-pyrophoric)

· **EPA (Environmental Protection Agency):**

1308-38-9	Chromium (III) oxide	D, CBD
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· **IARC (International Agency for Research on Cancer):**

60676-86-0	Silica, fused	3
1308-38-9	Chromium (III) oxide	3
14808-60-7	Quartz (SiO <sub>2</sub> )	1
7440-02-0	nickel	2B
7439-92-1	Lead	2B
7440-43-9	cadmium (non-pyrophoric)	1
7440-41-7	beryllium	1

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 OSHA: Occupational Safety & Health Administration  
 Acute Tox. 3: Acute toxicity – Category 3  
 Acute Tox. 2: Acute toxicity – Category 2  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
 Skin Sens. 1: Skin sensitisation – Category 1  
 Muta. 2: Germ cell mutagenicity – Category 2  
 Carc. 1A: Carcinogenicity – Category 1A  
 Carc. 1B: Carcinogenicity – Category 1B  
 Carc. 2: Carcinogenicity – Category 2  
 Repr. 1A: Reproductive toxicity – Category 1A  
 Repr. 2: Reproductive toxicity – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))  
 Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/))

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overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers