


# SAFETY DATA SHEET

## Section 1. Identification

- Product identifier** : 6478 F  
**Material Number** : 05549655  
**Identified uses** : Inorganic pigment  
**Supplier/Manufacturer** : LANXESS Corporation  
Product Safety & Regulatory Affairs  
111 RIDC Park West Drive  
Pittsburgh, PA 15275-1112  
USA
- For information: US/Canada (800) LANXESS  
International +1 412 809 1000
- In case of emergency** : Chemtrec (800) 424-9300  
International (703) 527-3887  
Lanxess Emergency Phone (800) 410-3063.

## Section 2. Hazards identification

- HAZCOM Standard Status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Physical state** : Powder.
- Color** : Brown.
- Classification of the substance or mixture** : SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION [Fertility] - Category 2  
TOXIC TO REPRODUCTION [Unborn child] - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [lungs] - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [central nervous system (CNS)] - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [lungs] - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 63.2%
- Hazard pictograms** : 
- Signal word** : Danger
- Hazard statements** : Causes serious eye damage. Causes skin irritation. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs. (lungs) May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS)) May cause damage to organs through prolonged or repeated exposure if inhaled. (lungs)
- Hazard Not Otherwise Classified (HNOC)** : Causes digestive tract burns.
- Precautionary statements**

## Section 2. Hazards identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves and eye/face protection. Use only in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Do not taste or swallow. Wash thoroughly after handling. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Corrosive to digestive tract

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Umber	45 - 51%	12713-03-0
Crystalline Quartz Silica	12 - 18%	14808-60-7
Manganese Oxide	10 - 15%	1313-13-9
Manganese	5 - 10%	7439-96-5
Aluminum Oxide	3 - 5%	1344-28-1
Calcium Oxide	1 - 3%	1305-78-8
Magnesium oxide	1 - 3%	1309-48-4
Phosphorus Pentoxide	1 - 3%	1314-56-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of first aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. In case of contact with eyes, flush eyes with plenty of water for at least 30 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.
- Skin contact** : In case of contact, flush skin with plenty of water for at least 30 minutes. Get medical attention immediately. Immediately remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

**Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Potential acute health effects

**Eye contact** : Causes serious eye damage. May cause mechanical irritation (abrasion).

**Inhalation** : May cause respiratory irritation. No known acute effects. Exposure to Silica, Quartz can cause a very serious lung disease called Silicosis with cough, shortness of breath, and changes in chest x-ray.

**Skin contact** : Causes skin irritation. No known acute effects. May cause mechanical irritation (abrasion).

**Ingestion** : Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach. No known acute effects.

### Over-exposure signs/symptoms

**Eye contact** : Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
The symptoms of silicosis may include: Shortness of breath, coughing, wheezing, fatigue, chest pain, loss of appetite and fever.  
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

**Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.  
Causes irritation with symptoms of reddening, itching, and swelling.

**Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
Corrosive with symptoms of coughing, burning, ulceration, and pain.

### Potential chronic health effects

May cause damage to organs through prolonged or repeated exposure if inhaled. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Excessive exposure to airborne crystalline silica can cause fibrotic lung damage, with scarring of the lungs with cough and shortness of breath. This is called "Silicosis". This is generally a slowly developing fibrotic disease as symptoms are usually delayed for 10 years or more. Symptoms are dyspnea, chest pain, breathlessness, and cough. The chronic lung scarring developed from the silica dust causes a progressive massive fibrosis. This may lead to increased susceptibility to tuberculosis. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

**Notes to physician** : Treat symptomatically. No specific treatment.

**Protection of first-aiders** : If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See toxicological information (Section 11)**

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), foam or dry chemical.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Water runoff from fire fighting may be corrosive.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
phosphorus oxides  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up** : Move containers from spill area. Approach release from upwind. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

**Conditions for safe storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container.

## Section 8. Exposure controls/personal protection

### Occupational exposure limits

Ingredient name	Exposure limits
Umber	<b>OSHA PEL (United States, 2/2013).</b> CEIL: 5 mg/m <sup>3</sup> , (as Mn)
Crystalline Quartz Silica	<b>OSHA PEL Z3 (United States, 2/2013).</b> TWA: 250 MPPCF / (%SiO <sub>2</sub> +5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO <sub>2</sub> +2) 8 hours. Form: Respirable <b>ACGIH TLV (United States, 6/2013).</b> TWA: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction
Manganese Oxide	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.2 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Respirable fraction <b>OSHA PEL (United States, 2/2013).</b> CEIL: 5 mg/m <sup>3</sup> , (as Mn)
Manganese	<b>OSHA PEL (United States, 2/2013).</b> CEIL: 5 mg/m <sup>3</sup> , (as Mn) Form: Fume <b>ACGIH TLV (United States, 6/2013).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.2 mg/m <sup>3</sup> , (as Mn) 8 hours. Form: Respirable fraction
Aluminum Oxide	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
Calcium Oxide	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
Magnesium oxide	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>OSHA PEL (United States, 2/2013).</b> TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total particulates

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Personal protection

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline. NIOSH approved, air-purifying particulate respirator with N-95 filters.
- Skin protection** : Permeation resistant clothing and foot protection. Permeation resistant gloves.
- Eye/face protection** : Protective goggles with side shield or tightly fitting protective goggles.
- Medical Surveillance** : Not available.

## Section 9. Physical and chemical properties

- Physical state** : Solid. [Powder.]
- Color** : Brown.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : 4 to 8 [Conc. (% w/w): 5%]
- Boiling point** : Not available.
- Melting point** : Not available.
- Flash point** : Closed cup: Not applicable.
- Evaporation rate** : Not available.
- Explosion limits** : Not available.
- Vapor pressure** : Not available.
- Specific gravity (Relative density)** : Not available.
- Bulk density** : 300 to 1000 kg/m<sup>3</sup>
- Solubility** : Very slightly soluble in the following materials: cold water
- Partition coefficient: n-octanol/water** : Not available.
- Vapor density** : Not available.
- Viscosity** : Dynamic: Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

- Eye contact** : Causes serious eye damage. May cause mechanical irritation (abrasion).
- Inhalation** : May cause respiratory irritation. No known acute effects. Exposure to Silica, Quartz can cause a very serious lung disease called Silicosis with cough, shortness of breath, and changes in chest x-ray.
- Skin contact** : Causes skin irritation. No known acute effects. May cause mechanical irritation (abrasion).
- Ingestion** : Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach. No known acute effects.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
The symptoms of silicosis may include: Shortness of breath, coughing, wheezing, fatigue, chest pain, loss of appetite and fever.  
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.  
Causes irritation with symptoms of reddening, itching, and swelling.
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
Corrosive with symptoms of coughing, burning, ulceration, and pain.

### Potential chronic health effects

#### Short term exposure

**Potential immediate effects** : Not available.

#### Long term exposure

**Potential delayed effects** : Not available.

**General** : May cause damage to organs through prolonged or repeated exposure if inhaled. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Excessive exposure to airborne crystalline silica can cause fibrotic lung damage, with scarring of the lungs with cough and shortness of breath. This is called "Silicosis". This is generally a slowly developing fibrotic disease as symptoms are usually delayed for 10 years or more. Symptoms are dyspnea, chest pain, breathlessness, and cough. The chronic lung scarring developed from the silica dust causes a progressive massive fibrosis. This may lead to increased susceptibility to tuberculosis. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
Manganese Oxide	LD50 Oral	Rat	3478 mg/kg	-	-
Manganese	LD50 Oral	Rat	>5000 mg/kg	-	-
Aluminum Oxide	LD50 Oral	Rat	>5000 mg/kg	-	OECD 401 Acute Oral Toxicity
Magnesium oxide	LD50 Oral	Rat	>5000 mg/kg	-	-

#### Irritation/Corrosion

##### Conclusion/Summary

**Skin** : Calcium Oxide:Corrosive.  
Magnesium oxide:Slight irritant  
Phosphorus Pentoxide:Corrosive.

**Eyes** : Calcium Oxide:Severe irritant , Rabbit  
Magnesium oxide:Slight irritant  
Phosphorus Pentoxide:Corrosive.

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Calcium Oxide	skin	Human	Not sensitizing

**Skin** : Calcium Oxide:Non-sensitizer.

#### Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Manganese Oxide	Sub-acute LCLo Inhalation Dusts and mists Chronic NOAEL Inhalation Vapor	Rat  Mammal - species unspecified	68 mg/m <sup>3</sup>  1 mg/m <sup>3</sup>	10 days; 6 hours per day 9 months
Magnesium oxide	Chronic NOAEL Inhalation Vapor	Rat	<1120 µg/m <sup>3</sup>	29 days

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Crystalline Quartz Silica	Sister chromatid exchange assay	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
Calcium Oxide	Ames test	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	480 Genetic Toxicology: <i>Saccharomyces</i> <i>Cerevisiae</i> , Gene Mutation Assay	Experiment: In vitro Subject: Yeast Metabolic activation: +/-	Negative
Phosphorus Pentoxide	OECD 471 Bacterial Reverse Mutation Test *	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test *	Experiment: In vitro Subject: Mammalian-Animal	Negative

**Conclusion/Summary** : Crystalline Quartz Silica:No mutagenic effect.



## Section 11. Toxicological information

### Carcinogenicity

Product/ingredient name	CAS #	IARC	NTP	OSHA
Umber Crystalline Quartz Silica	12713-03-0 14808-60-7	Not classified. 1 Carcinogenic to humans	Not classified. Proven.	Not classified. Not classified.
Manganese Oxide	1313-13-9	Not classified.	Not classified.	Not classified.
Manganese	7439-96-5	Not classified.	Not classified.	Not classified.
Aluminum Oxide	1344-28-1	Not classified.	Not classified.	Not classified.
Calcium Oxide	1305-78-8	Not classified.	Not classified.	Not classified.
Magnesium oxide	1309-48-4	Not classified.	Not classified.	Not classified.
Phosphorus Pentoxide	1314-56-3	Not classified.	Not classified.	Not classified.

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Species	Dose	Exposure
Calcium Oxide		Rat	Oral: 680 mg/kg NOAEL	-

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium Oxide	Negative - Oral	Rat	680 mg/kg NOAEL	-

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Crystalline Quartz Silica	Category 3	Not applicable.	Respiratory tract irritation
Manganese Oxide	Category 3	Not applicable.	Respiratory tract irritation
Aluminum Oxide	Category 3	Not applicable.	Respiratory tract irritation
Calcium Oxide	Category 1	Not determined	lungs
Magnesium oxide	Category 3	Not applicable.	Respiratory tract irritation
Phosphorus Pentoxide	Category 1	Inhalation	lungs

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Umber	Category 2	Not determined	central nervous system (CNS)
Manganese Oxide	Category 2	Not determined	central nervous system (CNS)
Manganese	Category 2	Not determined	central nervous system (CNS)
Aluminum Oxide	Category 2	Inhalation	lungs

### Acute toxicity estimates

Route	ATE value (Acute Toxicity Estimates)
Oral	11672.7 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Test	Result	Species	Exposure
Manganese Oxide	OECD 201 Alga, Growth Inhibition Test	Acute EC50 >0.07 mg/l Highest producible concentration. Fresh water	Algae	72 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute EC50 >0.0735 mg/l Highest producible concentration. Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >1000 mg/l Fresh water	Micro-organism - adapted and activated sludge micro-organism	3 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >0.05 mg/l Highest producible concentration. Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	OECD 211 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC 0.00735 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	8 days
Manganese	-	Acute LC50 >1000 mg/l	Fish - <i>Leuciscus idus</i>	48 hours
Aluminum Oxide	OECD 201 Alga, Growth Inhibition Test	Acute EC50 >100 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute EC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >100 mg/l	Fish - <i>Salmo trutta</i>	96 hours
Calcium Oxide	-	Acute EC50 159.6 mg/l	Daphnia	24 hours
	203 Fish, Acute Toxicity Test	Acute LC50 1070 mg/l Fresh water	Fish - <i>Cyprinus carpio</i>	96 hours
Phosphorus Pentoxide	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute LC50 >100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours *
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute LC50 50 to 100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >100 mg/l	Fish - <i>Danio rerio</i>	96 hours *
	-	Acute LC50 32 to 56 mg/l	Fish - <i>Danio rerio</i>	96 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute NOEC 50 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute NOEC 100 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours *
	OECD 203 Fish, Acute Toxicity Test	Acute NOEC 32 mg/l	Fish - <i>Danio rerio</i>	96 hours
OECD 203 Fish, Acute Toxicity Test	Acute NOEC 100 mg/l	Fish - <i>Danio rerio</i>	96 hours *	

**Conclusion/Summary** : Not available.

### Persistence and degradability

**Conclusion/Summary** : Not available.

## Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Manganese Oxide	-	-	Readily
Aluminum Oxide	-	-	Readily
Phosphorus Pentoxide	Fresh water <0.001 days	-	-

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	-	-	-	-		Not regulated.
<b>IMDG Class</b>	-	-	-	-		Not regulated.
<b>IATA-DGR Class</b>	-	-	-	-		Not regulated.

PG\* : Packing group

**RQ** : 2782 lbs

## Section 15. Regulatory information

**SARA 311/312** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

### Ingredient name

### CAS number

### Concentration (%)

**SARA Title III Section 302 Extremely Hazardous Substances** : Phosphorus

7723-14-0

< 1

**SARA Title III Section 313 Toxic Chemicals** : Umber  
Manganese Oxide  
Manganese  
Aluminum Oxide

### Ingredient name

### CAS number

### Concentration (%)

12713-03-0

45 - 51%

1313-13-9

10 - 15%

7439-96-5

5 - 10%

1344-28-1

3 - 5%

### Ingredient name

### CAS number

### RQ

## Section 15. Regulatory information

<b>US EPA CERCLA Hazardous Substances (40 CFR 302)</b>	: Manganese Oxide	1313-13-9	Included in the regulation but with no data values. See regulation for further details.
	Umber	12713-03-0	Included in the regulation but with no data values. See regulation for further details.

### State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>Ingredient name</u>	<u>CAS number</u>	<u>State Code</u>	<u>Concentration (%)</u>
Crystalline Quartz Silica	14808-60-7	MA - S, NJ - HS, PA - RTK HS	12 - 18%
Manganese	7439-96-5	MA - S, NJ - HS, PA - RTK HS	5 - 10%
Aluminum Oxide	1344-28-1	MA - S, NJ - HS, PA - RTK HS	3 - 5%
Calcium Oxide	1305-78-8	MA - S, NJ - HS, PA - RTK HS	1 - 3%
Magnesium oxide	1309-48-4	MA - S, NJ - HS, PA - RTK HS	1 - 3%
Phosphorus Pentoxide	1314-56-3	MA - S, NJ - HS, PA - RTK HS	1 - 3%
Umber	12713-03-0	PA - RTK HS	45 - 51%
Manganese Oxide	1313-13-9	PA - RTK HS	10 - 15%
Water	7732-18-5		5 - 10%

Massachusetts Substances: MA - S

Massachusetts Extraordinary Hazardous Substances: MA - Extra HS

New Jersey Hazardous Substances: NJ - HS

Pennsylvania RTK Hazardous Substances: PA - RTK HS

Pennsylvania Special Hazardous Substances: PA - Special HS

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>CAS #</u>	<u>Concentration (%)</u>	<u>Cancer</u>	<u>Reproductive</u>
Crystalline Quartz Silica	14808-60-7	12 - 18%	Yes	
Arsenic	7440-38-2	< 0.1%	Yes	
Lead	7439-92-1	< 0.1%	Yes	Yes
Cadmium	7440-43-9	< 0.1%	Yes	Yes
Mercury	7439-97-6	< 0.01%		Yes

**U.S. Toxic Substances Control Act** : This material is included in the TSCA Inventory as a naturally occurring chemical substance as described in 40 CFR 710.4 (b).

## Section 16. Other information

<b>Hazardous Material Information System</b>	:	<table border="1"> <tr> <td>Health</td> <td>* 3</td> </tr> <tr> <td>Flammability</td> <td>0</td> </tr> <tr> <td>Physical hazards</td> <td>0</td> </tr> <tr> <td></td> <td></td> </tr> </table>	Health	* 3	Flammability	0	Physical hazards	0		
Health	* 3									
Flammability	0									
Physical hazards	0									

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme  
\*=Chronic

## Section 16. Other information

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

LANXESS' method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS as a customer service.

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Product Safety and Regulatory Affairs

Indicates information that has changed from previously issued version.

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