

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 01/01/2019

Revision date: NA

Supersedes: NA

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: Oxalic Acid, Dihydrate
CAS-No.	: 6153-56-6
Product code	: C5860
Formula	: C <sub>2</sub> H <sub>2</sub> O <sub>4</sub> .2H <sub>2</sub> O
Synonyms	: dicarboxylic acid C2, dihydrate / dicarboxylic acid, dihydrate / ethandionic acid, dihydrate / ethanedioic acid, dihydrate / oxiric acid, dihydrate

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Textile Cleansing product: component Leather/fur: dyeing Reagent
Recommended use	: Laboratory chemicals
Restrictions on use	: Not for food, drug or household use

#### 1.3. Supplier

DAWN SCI  
121 Liberty street Metuchen, NJ 08840  
T: 732-902-6300, F : 973-802-1005  
www.dawnsci.com | care@dawnsci.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin corrosion/irritation Category 1B	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US)	: Danger
Hazard statements (GHS-US)	: H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS-US)	: P260 - Do not breathe dust. P264 - Wash exposed skin thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a poison center or doctor/physician. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to comply with local, state and federal regulations If inhaled: Remove person to fresh air and keep comfortable for breathing

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Oxalic Acid, Dihydrate (Main constituent)	(CAS-No.) 6153-56-6	100	Skin Corr. 1B, H314 Eye Dam. 1, H318

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: administration of chemical antidote. Doctor: gastric lavage is not recommended.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Nausea. Vomiting.
- Symptoms/effects after skin contact : Tingling/irritation of the skin. FOLLOWING SYMPTOMS MAY APPEAR LATER: May stain the skin. Discolouration of the (finger)nails.
- Symptoms/effects after eye contact : Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue. Permanent eye damage.
- Symptoms/effects after ingestion : AFTER ABSORPTION OF LARGE QUANTITIES: Burns to the gastric/intestinal mucosa. Nausea. Blood in vomit. Blood in stool. Shock. FOLLOWING SYMPTOMS MAY APPEAR LATER: Decreased renal function. Change in urine output. Change in urine composition.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Decreased renal function. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Skin rash/inflammation.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Preferably: water spray. Polyvalent foam. Alcohol-resistant foam. ABC powder. Carbon dioxide.
- Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : DIRECT FIRE HAZARD. Non-flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area. Stop release.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.
Methods for cleaning up	: Stop dust cloud by humidifying. Neutralize spill with quicklime or soda ash. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Use corrosionproof equipment. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Protect from moisture. Keep container closed when not in use.
Incompatible products	: Strong bases. metals. Acid chlorides.

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Incompatible materials	: Heat sources.
Storage temperature	: 20 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. strong acids. (strong) bases. water/moisture.
Storage area	: Store at ambient temperature. Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: synthetic material. MATERIAL TO AVOID: iron.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Oxalic Acid, Dihydrate (6153-56-6)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Oxalic acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (Oxalic acid; USA; Short time value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

#### 8.3. Individual protection measures/Personal protective equipment

##### Personal protective equipment:

Protective clothing. Safety glasses. Gloves. Face shield. Chemical resistant apron. Dust production: dust mask with filter type P2.



##### Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: butyl rubber. natural rubber. neoprene. nitrile rubber. viton. PVC. GIVE GOOD RESISTANCE: leather. chlorinated polyethylene. polyethylene. neoprene/natural rubber. GIVE LESS RESISTANCE: styrene-butadiene rubber. nitrile rubber/PVC. PVA

##### Hand protection:

Gloves

##### Eye protection:

Face shield. In case of dust production: protective goggles

##### Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

##### Respiratory protection:

Dust production: dust mask with filter type P2

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Powder. Grains.

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Color	: Colourless or white
Odor	: Odorless
Odor threshold	: No data available
pH	: 1 (13 %)
pH solution	: 13 %
Melting point	: 101 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 22 hPa (50 °C)
Relative vapor density at 20 °C	: 4.3
Relative density	: 1.6
Specific gravity / density	: 1653 kg/m <sup>3</sup>
Molecular mass	: 126.07 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in glycerol. Water: 14 g/100ml Ethanol: 40 g/100ml
Log Pow	: -1.74 (Estimated value)
Auto-ignition temperature	: No data available
Decomposition temperature	: 157 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

Saturation concentration	: 0.0015 g/m <sup>3</sup>
Other properties	: Hygroscopic. May sublime. Substance has acid reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On heating: release of corrosive gases/vapours (formic acid). Upon combustion: CO and CO<sub>2</sub> are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases: release of heat. Decomposes on exposure to UV light: release of corrosive gases/vapours (formic acid).

### 10.2. Chemical stability

Unstable on exposure to light. Hygroscopic.

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

Incompatible materials. High temperature. Moisture. Avoid dust formation.

### 10.5. Incompatible materials

Strong oxidizers. Strong bases. metals. Acid chlorides.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure	: Inhalation; Skin and eye contact
Acute toxicity	: Not classified

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Oxalic Acid, Dihydrate (6153-56-6)</b>	
LD50 oral rat	7500 mg/kg
LD50 dermal rat	20000 mg/kg
ATE US (oral)	7500 mg/kg body weight
ATE US (dermal)	20000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1 (13 %)
Serious eye damage/irritation	: Causes serious eye damage. pH: 1 (13 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Nausea. Vomiting.
Symptoms/effects after skin contact	: Tingling/irritation of the skin. FOLLOWING SYMPTOMS MAY APPEAR LATER: May stain the skin. Discolouration of the (finger)nails.
Symptoms/effects after eye contact	: Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	: AFTER ABSORPTION OF LARGE QUANTITIES: Burns to the gastric/intestinal mucosa. Nausea. Blood in vomit. Blood in stool. Shock. FOLLOWING SYMPTOMS MAY APPEAR LATER: Decreased renal function. Change in urine output. Change in urine composition.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Decreased renal function. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Skin rash/inflammation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: Classification concerning the environment: not applicable.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Mild water pollutant (surface water). Ground water pollutant. Harmful to fishes. Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l). Slightly harmful to algae (EC50 (72h): 100 - 1000 mg/l). Slightly harmful to aquatic organisms (EC50 (48h): 100 - 1000 mg/l). pH shift.

<b>Oxalic Acid, Dihydrate (6153-56-6)</b>	
LC50 fish 1	34.1 mg/l (LC50; 96 h)
EC50 Daphnia 1	137 mg/l (EC50; 48 h)

#### 12.2. Persistence and degradability

<b>Oxalic Acid, Dihydrate (6153-56-6)</b>	
Persistence and degradability	Readily biodegradable in water. Readily biodegradable in water in anaerobic conditions. Photolysis in water. Biodegradable in the soil. Photolysis in the air.

#### 12.3. Bioaccumulative potential

<b>Oxalic Acid, Dihydrate (6153-56-6)</b>	
Log Pow	-1.74 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
- Additional information : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN3261 Corrosive solid, acidic, organic, n.o.s., 8, II
- UN-No.(DOT) : UN3261
- Proper Shipping Name (DOT) : Corrosive solid, acidic, organic, n.o.s.
- Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Packing group (DOT) : II - Medium Danger
- Hazard labels (DOT) : 8 - Corrosive



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 212
- DOT Packaging Bulk (49 CFR 173.xxx) : 240
- DOT Symbols : G - Identifies PSN requiring a technical name
- DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.  
IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner.  
T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2)  
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 15 kg
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 50 kg
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
- Other information : No supplementary information available.

# Oxalic Acid, Dihydrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Oxalic Acid, Dihydrate (6153-56-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Oxalic Acid, Dihydrate	CAS-No. 6153-56-6	100%
------------------------	-------------------	------

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Revision date : 01/16/2018

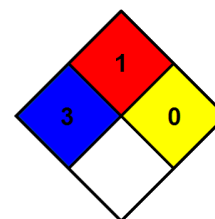
Full text of H-phrases: see section 16:

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



#### Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : F  
F - Safety glasses, Gloves, Synthetic apron, Dust respirator

SDS US Dawnsci

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and dawnsci assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.