

Monocalcium Phosphate (21 - 22.7% P)

Section 1. Identification

Product identifier : Monocalcium Phosphate (21 - 22.7% P)

SDS # : 207

Other means of identification

Synonyms : Monocal; Calcium hydrogen phosphate

This safety data sheet applies to the following:

MCP - Monocalcium Phosphate 21% Feed Grade
MCPC - Monocalcium Phosphate 21% Feed Grade Coarse
MCPS - Monocalcium Phosphate Plus 22.7%

Product code(s) : MCP; MCPC; MCPS; MCPOS; MCPCOS

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
For further manufacture of feed.	
Uses advised against	Reason
Not to be used as an ingredient for human food.	Not approved

Supplier's details :

PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.)
1101 Skokie Blvd.
Suite 400
Northbrook, IL 60062

PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
Suite 500
122 1st Avenue South
Saskatoon, Saskatchewan S7K 7G3

Company phone number (North America):
1-800-524-0132 (Customer Service)

sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation) :

Nutrien North American
24 HOUR EMERGENCY TELEPHONE NUMBERS:

English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture : SERIOUS EYE DAMAGE - Category 1

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : Causes serious eye damage.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : None known.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Multi-constituent substance

Ingredient name	% (w/w)	CAS number
Calcium bis(dihydrogenorthophosphate)	77 - 85	7758-23-8
Calcium hydrogenphosphate	2 - 17	7757-93-9
Iron Orthophosphate	3 - 4	10045-86-0
Aluminum orthophosphate	2 - 3	7784-30-7
Water	1 - 2	7732-18-5
Calcium sulfate, dihydrate	1 - 2	10101-41-4

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 or the environment and hence require reporting in this section.

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : CORROSIVE. Begin eye irrigation immediately. All eye exposures require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reaction that occurs - see Notes to Physician below. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.

Inhalation : Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.

Section 4. First-aid measures

- Skin contact** : No known significant effects. Rinse the affected areas with water. Remove contaminated clothing, jewelry, and shoes. Wash/clean items before reuse. Seek medical attention for persistent skin pain or irritation. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. 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. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause slight transient irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : May cause slight transient irritation.
- Ingestion** : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Corrosives may cause coagulative or liquifaction necrosis. Treatment is symptomatic and supportive. The extent of injury depends on duration of exposure and concentration of liquid. Do not attempt to use chemicals to neutralize the exposure. 24 Hr Medical Emergency telephone number for professional support - From Canada or the U.S., English: 1-303-389-1653; French or Spanish: 1-303-389-1654.
- Specific treatments** : Outcomes can be improved by minimizing time to decontamination and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 30 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
acidic corrosive material
sulfur 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.

- Remark** : Contain and collect the water used to fight the fire for later treatment and disposal.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 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 adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Avoid dust generation. Use appropriate tools to transfer the spilled solid to a convenient waste disposal container. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Use appropriate equipment to put the spilled material in a waste disposal container. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Section 7. Handling and storage

Advice on general occupational hygiene

: Avoid contact with eyes. Wash contaminated skin with soap and water. After handling, always wash hands thoroughly with soap and water. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. May form steep piles that can collapse without warning when transported or stored in bulk. This may damage equipment and endanger workers. The risk of cliffing and sudden collapse increases if product is loaded or stored when hot or in high humidity conditions. Avoid forming steep slopes when removing product. If product has caked, cliffed, or has adhered to the storage or transport container, stay out of the potential engulfment zone in case the material collapses. Do not enter bins, railcars or trucks without conducting a risk assessment and following all confined space entry requirements. Ensure that consideration is given to fall protection and mobile equipment securement if applicable. Carefully loosen the set product from outside the container using mechanical vibration, sledge hammers, or other devices.

Ensure that bulk bags or smaller packaged products stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, rolling, or collapse. Use caution when opening truck or railcar doors as product may have shifted during transport.

Must be stored in a dry location. Absorbs moisture on long-term storage under high humidity conditions. Store away from incompatible materials (see Section 10). When product is stored in sealable containers, keep container tightly closed and sealed until ready for use. Sealable containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Store locked up. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>Canadian Regulations: Calcium hydrogenphosphate; Calcium bis (dihydrogenorthophosphate); Aluminum orthophosphate</p> <p>Iron Orthophosphate</p> <p>Calcium sulfate, dihydrate</p>	<p>CA Alberta Provincial: Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 10 mg/m³; Respirable fraction: 3 mg/m³.</p> <p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1 mg/m³, (as Fe) 8 hours.</p> <p>CA British Columbia Provincial (Canada, 5/2015). TWA: 1 mg/m³, (as Fe) 8 hours. STEL: 2 mg/m³, (as Fe) 15 minutes.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWA_{EV}: 1 mg/m³, (as Fe) 8 hours.</p> <p>CA Ontario Provincial (Canada, 7/2015). TWA: 1 mg/m³, (as Fe) 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 3 mg/m³, (measured as Fe) 15 minutes. TWA: 1 mg/m³, (measured as Fe) 8 hours.</p> <p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 10 mg/m³ 8 hours.</p> <p>CA Ontario Provincial (Canada, 1/2013). TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction</p>

Section 8. Exposure controls/personal protection

U.S. Federal Regulations:

Calcium hydrogenphosphate; Calcium bis (dihydrogenorthophosphate); Aluminum orthophosphate

Iron Orthophosphate

Calcium sulfate, dihydrate

Water

OSHA (United States):

Particulates not otherwise regulated (PNOR)
TWA (8 hours), Total dust: 15 mg/m³;
Respirable fraction: 5 mg/m³.

ACGIH TLV (United States, 3/2015).

TWA: 1 mg/m³, (as Fe) 8 hours.

NIOSH REL (United States, 10/2013).

TWA: 1 mg/m³, (as Fe) 10 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 1 mg/m³, (as Fe) 8 hours. Form: Soluble

ACGIH TLV (United States, 4/2014).

TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction
None assigned.

Appropriate engineering controls

: 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.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: sealed eyewear. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: disposable nitrile gloves

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state

: Solid.

Color

: Gray.

Odor

: Odorless.

Odor threshold

: Not applicable.

pH

: 2.8 [Conc. (% w/w): 10%]

Section 9. Physical and chemical properties

Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: Not applicable.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 2.22 g/cm ³ Bulk density: 58 - 61 lbs/ft ³ ; 914 - 962 kg/m ³
Solubility	: See below.
Solubility in water	: Slightly soluble in water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not available.
Viscosity	: Not applicable.

Section 10. Stability and reactivity

Reactivity	: Not considered to be reactive.
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	: Avoid creating dusty conditions and prevent wind dispersal.
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 toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium bis (dihydrogenorthophosphate)	LD50 Dermal	Rabbit	>2 g/kg	-
Calcium hydrogenphosphate	LD50 Oral	Rat	3986 mg/kg	-
	LD50 Oral	Woman - Female	>5000 mg/kg	-
Aluminum orthophosphate	LD50	Rat	>2000 mg/kg	-
Iron Orthophosphate	LD50 Oral	Rat - Female	>2000 mg/kg	-
Water	LD50 Oral	Rat	>90 g/kg	-
Calcium sulfate, dihydrate	LD50 Oral	Rat - Female	>2000 mg/kg	-

Conclusion/Summary : Not considered to be acutely toxic.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Calcium bis (dihydrogenorthophosphate)	Eyes - Cornea opacity	Rabbit	2	-	-
Calcium sulfate, dihydrate	Skin - Edema	Rabbit	0	-	72 hours
	Eyes - Edema of the conjunctivae	Rabbit	0	-	72 hours
	Eyes - Cornea opacity	Rabbit	0	-	72 hours
	Eyes - Iris lesion	Rabbit	0	-	72 hours

Conclusion/Summary

- Skin** : May cause slight transient irritation.
- Eyes** : Causes serious eye damage.
- Respiratory** : No known significant effects or critical hazards.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary

- : No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary

- : No known significant effects or critical hazards.

Reproductive toxicity

Not available.

Conclusion/Summary

- : No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary

- : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

- : Inhalation
Eye contact

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause slight transient irritation.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : May cause slight transient irritation.
- Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : See above.
- Potential delayed effects** : See above.

Long term exposure

- Potential immediate effects** : See above.
- Potential delayed effects** : See below.

Potential chronic health effects

- Conclusion/Summary** : Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

- Conclusion/Summary** : May be harmful to the environment if released in large quantities. Excessive nutrient runoff to a body of water may result in eutrophication.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Water	-1.38	-	low

Mobility in soil

- Soil/water partition coefficient (K_{oc})** : 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. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. 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.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Turkey	: Not determined.

U.S. Federal Regulations: : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ : Not applicable.


SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Calcium bis (dihydrogenorthophosphate)	77 - 85	No.	No.	No.	Yes.	No.

State regulations

Massachusetts	: None of the components are listed.
New York	: None of the components are listed.
New Jersey	: None of the components are listed.
Pennsylvania	: The following components are listed: Iron Salts
<u>California Prop. 65</u>	:  WARNING: This product can expose you to chemicals including cadmium, which is known to the State of California to cause cancer and to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov .

Section 16. Other information

History

Date of issue/Date of revision : 3/22/2019

Date of previous issue : 4/30/2015

Version : 2

Indicates information that has changed from previously issued version.
General format change.

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
SERIOUS EYE DAMAGE - Category 1	Calculation method

References

: Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
Agency for Toxic Substances and Disease Registry Databank, current revision at

Section 16. Other information

time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates
The Fertilizer Institute, Product Toxicology Testing Program Results, TFI, Washington , D.C., 2003

Notice to reader

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