



<b>SDS Title:</b> Cyanocobalamin Injection Safety Data Sheet	<b>SDS Number:</b> SDS-000066	<b>Page Number:</b> Page 1 of 15
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## Section 1. Identification

**GHS product identifier** : Cyanocobalamin Injection

**Other means of identification** : Not available.

**Product type** : Liquid.

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

**Product use** : Pharmaceuticals. (For intended use only.)  
Observe technical data sheet/instructions for use.  
Specific Treatments: Indicated for B12 deficiencies.

**Area of application** : Professional applications.

**Supplier's details** : Meitheal Pharmaceuticals, Inc.  
8700 W. Bryn Mawr, Suite 600S  
Chicago, IL 60631

Telephone: 224-443-4617  
www.meithealpharma.com

**e-mail address of person responsible for this SDS** : info@meithealpharma.com

**Emergency telephone number (with hours of operation)** : 844-824-8426 (Monday - Friday, 08:00 - 18:00 CST)

## Section 2. Hazards identification

**OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

**Classification of the substance or mixture** : Not classified.

### GHS label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

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## Section 2. Hazards identification

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Not available.

Ingredient name	Other names	%	Identifiers
water	-	≥90	CAS: 7732-18-5
benzyl alcohol	Benzyl alcohol	≤3	CAS: 100-51-6
sodium chloride	Sodium chloride	<1	CAS: 7647-14-5
cyanocobalamin	Cyanocobalamin (B12)	≤0.3	CAS: 68-19-9
Hydrochloric acid	-	≤0.1	CAS: 7647-01-0
sodium hydroxide	-	≤0.1	CAS: 1310-73-2

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 and hence require reporting in this section.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. 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. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

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## Section 4. First aid measures

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

### Specific hazards arising from the chemical

- : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides  
cobalt oxides

### Special protective actions for fire-fighters

### Special protective equipment 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.
- : 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

#### **For non-emergency personnel**

- : 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. Put on appropriate personal protective equipment.

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## Section 6. Accidental release measures

**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 environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 20 to 25°C (68 to 77°F). 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. See Section 10 for incompatible materials before handling or use.

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## Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
water	None.
benzyl alcohol	<b>OARS WEEL (United States, 4/2022)</b> TWA 8 hours: 10 ppm.
sodium chloride	None.
cyanocobalamin	None.
Hydrochloric acid	<b>ACGIH TLV (United States, 1/2024) A4.</b> C: 2 ppm. <b>NIOSH REL (United States, 10/2020)</b> CEIL: 5 ppm. CEIL: 7 mg/m <sup>3</sup> . <b>OSHA PEL (United States, 5/2018)</b> CEIL: 5 ppm. CEIL: 7 mg/m <sup>3</sup> . <b>CAL OSHA PEL (United States, 5/2018)</b> C: 2 ppm. TWA 8 hours: 0.45 mg/m <sup>3</sup> . TWA 8 hours: 0.3 ppm.
sodium hydroxide	<b>ACGIH TLV (United States, 1/2024)</b> C: 2 mg/m <sup>3</sup> . <b>NIOSH REL (United States, 10/2020)</b> CEIL: 2 mg/m <sup>3</sup> . <b>OSHA PEL (United States, 5/2018)</b> TWA 8 hours: 2 mg/m <sup>3</sup> . <b>CAL OSHA PEL (United States, 5/2018)</b> C: 2 mg/m <sup>3</sup> .

**Appropriate engineering controls**

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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.

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## Section 8. Exposure controls/personal protection

- 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: safety glasses with side-shields.
- 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.
- 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Red. [Dark]
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 4.5 to 7
- Melting point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.

### Vapor pressure

Ingredient name	Vapor Pressure at 20° C			Vapor pressure at 50° C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3		92.258	12.3	

- Relative vapor density** : Not available.

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## Section 9. Physical and chemical properties

<b>Relative density</b>	: Not available.						
<b>Density</b>	: Not available.						
<b>Solubility(ies)</b>	: <table border="1" style="display: inline-table; vertical-align: middle;"> <thead> <tr> <th style="color: blue;">Media</th> <th style="color: blue;">Result</th> </tr> </thead> <tbody> <tr> <td>cold water</td> <td>Easily soluble</td> </tr> <tr> <td>hot water</td> <td>Easily soluble</td> </tr> </tbody> </table>	Media	Result	cold water	Easily soluble	hot water	Easily soluble
Media	Result						
cold water	Easily soluble						
hot water	Easily soluble						
<b>Miscible with water</b>	: Yes.						
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.						
<b>Auto-ignition temperature</b>	: Not available.						
<b>Decomposition temperature</b>	: Not available.						
<b>SADT</b>	: Not available.						
<b>Viscosity</b>	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.						
<b>Flow time (ISO 2431)</b>	: Not available.						
<b>Particle characteristics</b>							
<b>Median particle size</b>	: Not applicable.						
<b>Other information</b>							
<b>Physical/chemical properties comments</b>	: No additional information.						

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	: Protect from light.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials and acids.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat - Male, Female	>4178 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
cyanocobalamin	LD Oral	Mouse	>5 g/kg	-
Hydrochloric acid	LC50 Inhalation Gas.	Rat	3124 ppm	1 hours

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
benzyl alcohol	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-
sodium chloride	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Hydrochloric acid	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 mg	-
sodium hydroxide	Eyes - Mild irritant	Rabbit	-	400 ug	-
	Eyes - Severe irritant	Rabbit	-	1 %	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 ug	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-

#### Sensitization

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Hydrochloric acid	-	3	-

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

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## Section 11. Toxicological information

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Name	Category	Route of exposure	Target organs
benzyl alcohol	Category 3	-	Respiratory tract irritation
Hydrochloric acid	Category 3	-	Respiratory tract irritation
sodium hydroxide	Category 3	-	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

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

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Long term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Potential chronic health effects**

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## Section 11. Toxicological information

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Cyanocobalamin Injection	82000.0	133333.3	N/A	N/A	100
benzyl alcohol	1230	2000	N/A	N/A	1.5
sodium chloride	3000	N/A	N/A	N/A	N/A
Hydrochloric acid	N/A	N/A	1562	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
benzyl alcohol sodium chloride	Acute LC50 10 ppm Fresh water	Fish - <i>Lepomis macrochirus</i>	96 hours
	Acute EC50 2430000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - <i>Cypris subglobosa</i>	48 hours
	Acute EC50 402.6 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - <i>Lemna minor</i>	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - <i>Morone saxatilis</i> - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - <i>Hyalella azteca</i> - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Hydrochloric acid	Chronic NOEC 6 g/L Fresh water	Aquatic plants - <i>Lemna minor</i>	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - <i>Daphnia pulex</i>	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - <i>Gambusia holbrooki</i> - Adult	8 weeks
	Acute LC50 240000 µg/l Marine water	Crustaceans - <i>Carcinus maenas</i> - Adult	48 hours
sodium hydroxide	Acute LC50 282 ppm Fresh water	Fish - <i>Gambusia affinis</i> - Adult	96 hours
	Acute EC50 40.38 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish - <i>Gambusia affinis</i> - Adult	96 hours

**Conclusion/Summary** : Not available.

### Persistence and degradability

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## Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
water	-1.38	-	Low
benzyl alcohol	0.87	-	Low
cyanocobalamin	3.57	-	Low

### 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. 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. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. 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

	DOT Classification	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-
<b>Transport hazard class(es)</b>	-	-	-
<b>Packing group</b>	-	-	-



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## Section 14. Transport information

<b>Environmental hazards</b>	No.	No.	No.
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### 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 IMO instruments** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are active or exempted.  
**Clean Water Act (CWA) 311:** Hydrochloric acid; sodium hydroxide

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : 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

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrochloric acid	≤0.1	Yes.	500	-	5000	-

**SARA 304 RQ** : 5555555.6 lbs / 2522222.2 kg

### SARA 311/312

**Classification** : Not applicable.

#### Composition/information on ingredients

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## Section 15. Regulatory information

Name	%	Classification
benzyl alcohol	≤3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
sodium chloride	<1	EYE IRRITATION - Category 2A
Hydrochloric acid	≤0.1	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
sodium hydroxide	≤0.1	HNOC - Corrosive to digestive tract CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Corrosive to digestive tract [severe]

**SARA 313**

Not applicable.

**State regulations**

**Massachusetts**

: The following components are listed: BENZYL ALCOHOL

**New York**

: None of the components are listed.

**New Jersey**

: None of the components are listed.

**Pennsylvania**

: The following components are listed: BENZENEMETHANOL

**California Prop. 65**

This product does not require a Safe Harbor warning under California Prop. 65.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

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## Section 15. Regulatory information

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

## Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	/	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

[National Fire Protection Association \(U.S.A.\)](#)



[Procedure used to derive the classification](#)

Classification	Justification
Not classified.	

[History](#)

- Date of issue/Date of revision** : 06/06/2024
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- Version** : 2.0
- Prepared by** : Sphera Solutions
- Key to abbreviations** :
  - ATE = Acute Toxicity Estimate
  - AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
  - 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



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## Section 16. Other information

modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
UN = United Nations

**References** : HCS (U.S.A.)- Hazard Communication Standard  
International transport regulations

**✔** Indicates information that has changed from previously issued version.

### Notice to reader

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Effective