

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200)



spectrum®

Revision date 04-July-2025

Revision Number 3

1. Identification

Product identifier

Product Name SODIUM HYDROXIDE, 50 PERCENT (W/W) SOLUTION, TECHNICAL

Other means of identification

Product Code(s) S-622

UN number or ID number UN1824

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use No information available

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address

Spectrum Chemical Mfg. Corp.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements



Danger

Hazard statements

May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dusts or mists.
Wear protective gloves/clothing and eye/face protection.
Use only outdoors or in a well-ventilated area.
Keep only in original packaging.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.
Specific treatment (see .? on this label).
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 doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
Rinse mouth.
Do NOT induce vomiting.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Store in corrosive resistant/ .? container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Unknown acute toxicity

Other information

May be harmful in contact with skin.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%
Water	7732-18-5	50

Sodium Hydroxide	1310-73-2	50
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4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Technical Measures/Precautions: Use only in area provided with appropriate exhaust ventilation Keep away from incompatible materials

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible Materials: Oxidizing agents Reducing agents Acids Bases Aldehydes Metals Powdered metals

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sodium Hydroxide 1310-73-2	-	2 mg/m ³ TWA	-

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear
Color Colorless
Odor No information available
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	>13	None known
pH (as aqueous solution)		None known
Melting point / freezing point	12 °C / 53.6 °F	None known
Initial boiling point and boiling range	142 °C / 287.6 °F	None known
Flash point	No data available	None known
Evaporation rate	no data available	None known
Flammability	no data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	1.5	None known
Water solubility	Miscible in water	None known
Solubility(ies)	Soluble in Alcohol	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	no data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Oxidizing agent. Acids. Bases.
Hazardous decomposition products	Spontaneous polymerisation.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May be harmful in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
Acute toxicity	Harmful if swallowed.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

**Unknown acute toxicity
Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	90 mL/kg (Rat)	-	-
Sodium Hydroxide 1310-73-2	325 mg/kg (Rat)	1350 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye damage. Causes burns.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	May cause respiratory irritation.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium Hydroxide 1310-73-2	-	LC50: =45.4mg/L (96h, Oncorhynchus mykiss)	-	40.4 mg/L EC50 Ceriodaphnia sp. 48h

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

UN number or ID number UN1824
Proper shipping name Sodium hydroxide solution
Transport hazard class(es) 8
Special Provisions II
Special Provisions B2, IB2, N34, T7, TP2
DOT Marine Pollutant NP
Description UN1824, Sodium hydroxide solution, 8, II
Emergency Response Guide Number 154

TDG

UN/ID no. UN1824
Proper shipping name Sodium hydroxide solution
Transport hazard class(es) 8
Packing Group II
Description UN1824, Sodium hydroxide solution, 8, II

MEX

UN-No UN1824
Proper Shipping Name Sodium hydroxide solution
Transport hazard class(es) 8
Packing Group II
Description UN1824, Sodium hydroxide solution, 8, II

ICAO (air)

UN/ID no. UN1824
Proper shipping name Sodium hydroxide solution
Transport hazard class(es) 8
Packing Group II
Description UN1824, Sodium hydroxide solution, 8, II
Special Provisions A3

IATA

UN number or ID number UN1824
Proper shipping name Sodium hydroxide solution
Transport hazard class(es) 8
Packing group II
Description UN1824, Sodium hydroxide solution, 8, II
Special Provisions A3, A803

ERG Code 8L

IMDG

UN number or ID number UN1824
 Proper shipping name Sodium hydroxide solution
 Transport hazard class(es) 8
 Packing group II
 EmS-No. F-A, S-B
 Marine pollutant NP
 Description UN1824, Sodium hydroxide solution, 8, II

ADR

UN number or ID number UN1824
 Proper shipping name Sodium hydroxide solution
 Transport hazard class(es) 8
 Packing group II
 Description UN1824, Sodium hydroxide solution, 8, II, (E)

RID

UN number or ID number UN1824
 Proper shipping name Sodium hydroxide solution
 Transport hazard class(es) 8
 Subsidiary Risk: 8
 Packing group II
 Description UN1824, Sodium hydroxide solution, 8, II

15. Regulatory information

International Inventories

TSCA Complies

DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS This product complies with ENCS:
 IECS This product complies with China:
 KECL Complies
 PICCS Complies
 AIIC All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

NZIoC Does not comply
 TCSI Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECS - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances

NZIoC - New Zealand Inventory of Chemicals
 TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CAA (Clean Air Act)

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Sodium Hydroxide 1310-73-2	1000 lb final RQ 454 kg final RQ	

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

International Inventories

Chemical name	CAS No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	IECSC	AIIC	EINECS-No.
	7732-18-5	PresentACTIVE	Present KE-35400	Present	Present -	X	X	Present 231-791-2
	1310-73-2	Present(ACTIVE)	Present KE-31487	Present	Present (1)-410	Present	Present	Present 215-185-5

U.S. Regulations

Chemical name	Massachusetts	M.A. EHS:	New Jersey	New Jersey - Environmental Hazardous Su	N.J.- Discharge Prevention:	New Jersey TCPA - EHS:	Pennsylvania	P.A. RTK - Environmental Hazard	P.A. RTK - Special Hazardous

Chemical name	Massachusetts	M.A. EHS:	New Jersey	New Jersey - Environmental Hazardous Substances	N.J.- Discharge Prevention:	New Jersey TCPA - EHS:	Pennsylvania	P.A. RTK - Environmental Hazard	P.A. RTK - Special Hazardous
Sodium Hydroxide	Present		1706		Present		Environmental hazard	Present	

Chemical name	Michigan - Critical Materials:	Michigan PSM HHC:	Minnesota - Hazardous Substance:	N.Y. Release - Hazardous Substances:	C.T. - Carcinogenic:
Sodium Hydroxide			Present	1000 lb RQ 100 lb RQ	

Chemical name	Louisiana Reportable Quantity List for Pollutants:	California Directors List of Hazardous Substances:	FDA - Food Additives Generally Recognized as Safe (GRAS):	FDA - Direct Food Additives	FDA - 21 CFR - Total Food Additives - List Sourced from EAFUS
Sodium Hydroxide	1000lbfinal RQ 454kgfinal RQ	Present	21 CFR 184.1763	21 CFR 173.310	155.191, 155.194, 163.110, 163.111, 163.112, 172.560, 172.814, 172.892, 173.310, 176.170, 176.180, 176.210, 177.1600, 177.2800, 184.1763, 73.85

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemical name	CAS No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
	1310-73-2	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

CERCLA

TSCA

Chemical name	CAS No.	Hazardous Substances RQs	TPQ	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category
	7732-18-5			None	None
	1310-73-2	1000 lb final RQ 454 kg final RQ		None	None

U.S. TSCA

Chemical name	CAS No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
	7732-18-5	Not Applicable	Not Applicable
	1310-73-2	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Not a dangerous product according to HPR classification criteria.

Component
Water

WHMIS 2015 Hazard Classification
Not a dangerous product according to HPR classification criteria

7732-18-5 (50)
Sodium Hydroxide
1310-73-2 (50)

Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract (73% in aqueous solution); Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation. (0.4% in aqueous solution); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation. (0.4% in aqueous solution); Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation. (0.4% in aqueous solution)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Chemical name	CAS No.	Canada (DSL)	Canada (NDSL)
	7732-18-5	Present	Not Listed
	1310-73-2	Present	Not Listed

Chemical name	CAS No.	CEPA Schedule I - Toxic Substances
	7732-18-5	Not listed
	1310-73-2	Not listed

Chemical name	CAS No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
	7732-18-5	Not listed
	1310-73-2	Not listed

Chemical name	CAS No.	EU GHS - SV - CLP (1272/2008)
	7732-18-5	
	1310-73-2	Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage.011-002-00-6 Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 5 %); Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (2 % <= C <5 %); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (0.5 % <= C <2 %); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation. (0.5 % <= C <2 %)

R-Phrases

R35 - Causes severe burns

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

Chemical name	CAS No.	Classification according to Directive 67/548/EEC or 1999/45/EC	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Sodium Hydroxide	1310-73-2	C; R35	5%≤C C; R35 2%≤C<5% C; R34 0.5%≤C<2% Xi; R36/38	S1/2 S26 S37/39 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Contains Sodium Hydroxide

Indication of danger:

C - Corrosive

16. Other information

<u>NFPA</u>	Health hazards 3	Flammability 0	Instability 0	Special hazards -
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 04-July-2025
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet