

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Chloride No.2

Revision date 04-29-2022 Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) PL65Chloride2

Product Name Chloride No.2

Unique Formula Identifier (UFI) HTDM-WWH6-W420-GJTX

Pure substance/mixture

Contains Nitric acid

Mixture

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

Recommended use Reagent for water analysis

Uses advised against Others

1.3. Details of the supplier of the safety data sheet

Manufacturer

Water-I.D. GmbH Daimlerstr. 20

76344 Eggenstein, Germany

Tel.: +49 (0) 721 78 20 29 0, Fax: +49 (0) 721 78 20 29 11

Website: www.water-id.com

EHS / Compliance: lab@water-id.com

1.4. Emergency telephone number

Emergency Telephone Poison Control Centre Munich

Tel.: +49 (0) 89 19 24 0

Germany

24 hours service

Languages: German, English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Inhalation (Dusts/Mists)	Category 2 - (H330)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

Contains Nitric acid



Signal word Danger

Hazard statements

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

EUH071 - Corrosive to the respiratory tract

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P280 - Wear protective gloves/protective clothing and eye/face protection

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Additional information

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Ferric nitrate nonahydrate 7782-61-8	10-20	No data available	-	No data available			
Nitric acid 7697-37-2	1-5	No data available	231-714-2	Acute Tox. 1 (H330) Skin Corr. 1A (H314) (EUH071) Ox. Liq. 2 (H272)	Ox. Liq. 2 :: C>=99% Ox. Liq. 3 :: 70%<=C<99%		

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Ferric nitrate nonahydrate 7782-61-8	3250				
Nitric acid 7697-37-2				3.2214	

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately.

Remove to fresh air. 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. Get immediate medical

advice/attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get immediate medical advice/attention.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. Get immediate medical

advice/attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Do not breathe vapour or mist. 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. Use personal protective equipment as required. See section 8

for more information. Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Burning sensation.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated.

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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

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 vapours.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Do not breathe

> vapour or mist. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Attention! Corrosive material.

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

Use personal protection recommended in Section 8. For emergency responders

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the **Environmental precautions**

environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

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

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

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

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with Advice on safe handling

> skin, eyes or clothing. Do not breathe vapour or mist. 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 it before reuse.

Avoid contact with skin, eyes or clothing. Do not breathe vapour or mist. Wear suitable **General hygiene considerations**

gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and

immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Chemical name Furonean Union Austria Relaium Bulgaria Croatia

Storage Conditions

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

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	Euro	opean Union	Austria	Belgium	Bu	ılgaria	Croatia	
Nitric acid		-	STEL 1 ppm	STEL: 1 ppm	STEI	_: 1 ppm	STEL: 1 ppm	
7697-37-2			STEL 2.6 mg/m ³	STEL: 2.6 mg/m ³	STEL:	2.6 mg/m ³	STEL: 2.6 mg/m ³	
Chemical name		Cyprus	Czech Republic	Denmark	Es	stonia	Finland	
Ferric nitrate		-	-	TWA: 1 mg/m ³		-	TWA: 1 mg/m ³	
nonahydrate								
7782-61-8								
Nitric acid		EL: 1 ppm	TWA: 1 mg/m ³	-		_: 1 ppm	TWA: 0.5 ppm	
7697-37-2	STE	L: 2.6 mg/m ³	Ceiling: 2.5 mg/m ³		STEL:	2.6 mg/m ³	TWA: 1.3 mg/m ³	
							STEL: 1 ppm	
		_					STEL: 2.6 mg/m ³	
Chemical name		France	Germany	Germany MAK		reece	Hungary	
Nitric acid		EL: 1 ppm	TWA: 1 ppm	-		_: 1 ppm	STEL: 2.6 mg/m ³	
7697-37-2	SIE	L: 2.6 mg/m ³	TWA: 2.6 mg/m ³	1/ 1 DEI		2.6 mg/m ³	1.20	
Chemical name	T\4.	Ireland	Italy	Italy REL	L	atvia	Lithuania	
Ferric nitrate		/A: 1 mg/m³ EL: 2 mg/m³	-	-		-	-	
nonahydrate 7782-61-8	311	±L. ∠ mg/m°						
Nitric acid	27	EL: 1 ppm	STEL: 1 ppm	TWA: 2 ppm	T\\/ \	0.78 ppm	STEL: 1 ppm	
7697-37-2	STE	L: 2.6 mg/m ³	STEL: 1 ppill STEL: 2.6 mg/m ³	TWA: 5.2 mg/m ³		2 mg/m ³	STEL: 1 ppill STEL: 2.6 mg/m ³	
1031-31-2	512	L. 2.0 mg/m	OTEL. 2.0 mg/m	STEL: 4 ppm		_: 1 ppm	01LL. 2.0 mg/m	
				STEL: 10.3 mg/m ³		2.6 mg/m ³		
Chemical name	Lu	ixembourg	Malta	Netherlands		orway	Poland	
Ferric nitrate		-	-	-		3 mg/m ³	-	
nonahydrate						J		
7782-61-8								
Nitric acid	ST	EL: 1 ppm	STEL: 1 ppm	STEL: 1.3 mg/m ³	STEI	_: 4 ppm	STEL: 2.6 mg/m ³	
7697-37-2	STE	L: 2.6 mg/m ³	STEL: 2.6 mg/m ³		STEL:	10 mg/m ³	TWA: 1.4 mg/m ³	
Chemical name		Portugal	Romania	Slovakia	Slo	ovenia	Spain	
Ferric nitrate	TW	/A: 1 mg/m ³	-	-		-	TWA: 1 mg/m ³	
nonahydrate								
7782-61-8								
Nitric acid		VA: 2 ppm	STEL: 1 ppm	Ceiling: 2.6 mg/m ³		: 1 ppm	STEL: 1 ppm	
7697-37-2		EL: 1 ppm	STEL: 2.6 mg/m ³			2.6 mg/m ³	STEL: 2.6 mg/m ³	
	SIE	L: 2.6 mg/m ³				STEL ppm		
Chemical name		C,	weden	Switzerland	OIEL. S	TEL mg/m³	ted Kingdom	
		31	weden	TWA: 1 mg/m ³			VA: 1 mg/m³	
Ferric nitrate nonahydrate 7782-61-8			-	i vvA. i mg/m		''	va. i ilig/ili	
Nitric acid		NGV	: 0.5 ppm	TWA: 2 ppm		9-	ΓΕL: 1 ppm	
7697-37-2			1.3 mg/m ³				STEL: 2.6 mg/m ³	
1007 07 2			KGV: 1 ppm	STEL: 2 ppm				
			(GV: 2.6 mg/m ³	STEL: 5 mg/m ³				

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific

regulatory bodies

Derived No Effect Level (DNEL)
Predicted No Effect Concentration

No information available. No information available.

(PNEC)

8.2. Exposure controls

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 When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not breathe vapour or mist. Wear suitable

gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and

immediately after handling the product.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquidAppearanceLiquidColouryellowOdourOdourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing point

Boiling point / boiling range
Flammability (solid, gas)

No data available
None known
No data available
None known
No data available
None known
None known
None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known Autoignition temperature No data available None known Decomposition temperature PH < 2 None known None known

pH (as aqueous solution) No data available No information available

Kinematic viscosity No data available None known Dynamic viscosity No data available None known Water solubility No data available None known Solubility(ies) No data available None known **Partition coefficient** No data available None known Vapour pressure No data available None known Relative density No data available None known

None known

Bulk densityNo data availableLiquid DensityNo data availableRelative vapour densityNo data available

Particle characteristics

Particle SizeNo information availableParticle Size DistributionNo information available

9.2. Other information

9.2.1. Information with regards to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None. Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

Incompatible materials Acids. Bases. Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on

components). Corrosive by inhalation. 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.

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.

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 Coughing and/ or wheezing. Difficulty in breathing. Redness. Burning. May cause

blindness.

Numerical measures of toxicity

Acute toxicity

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

ATEmix (oral) 20,967.70 mg/kg ATEmix (inhalation-dust/mist) 0.084 mg/l ATEmix (inhalation-vapour) 54.40 mg/l

Unknown acute toxicity

15.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ferric nitrate nonahydrate	= 3250 mg/kg (Rat)		
Nitric acid			= 2500 ppm (Rat) 1 h

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 burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicityContains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient	
Nitric acid	-2.3	

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment	
Nitric acid	The substance is not PBT / vPvB PBT assessment does	
	not apply	

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment 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.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN2031 **14.2 UN proper shipping name** UN2031

14.3 Transport hazard class(es)14.4 Packing group

Description UN2031, Nitric acid, 8, II

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special Provisions None ERG Code 8L

IMDG

14.1 UN number or ID number UN2031 **14.2 UN proper shipping name** Nitric acid

14.3 Transport hazard class(es)14.4 Packing group

Description UN2031, Nitric acid, 8, II

14.5 Marine pollutant NP

14.6 Special precautions for user

Special Provisions None

EmS-No F-A, S-B No information available
7 Maritime transport in bulk No information available

14.7 Maritime transport in bulk according to IMO instruments

RID

14.1 UN number or ID number 14.2 UN proper shipping nameUN2031
Nitric acid

14.3 Transport hazard class(es) 8
14.4 Packing group ||

Description UN2031, Nitric acid, 8, II

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special Provisions None Classification code C1

ADR

14.1 UN number or ID number 14.2 UN proper shipping nameUN2031
Nitric acid

14.3 Transport hazard class(es)14.4 Packing group

Description UN2031, Nitric acid, 8, II, (E)

14.5 Environmental hazards Not applicable

14.6 Special precautions for user

Special Provisions None
Classification code C1
Tunnel restriction code (E)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

H2 - ACUTE TOXIC

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Complies

DSL/NDSL Does not comply
EINECS/ELINCS Does not comply
ENCS Complies
IECSC Complies
KECL Does not comply

PICCS Complies AICS Complies

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

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

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

Full text of H-Statements referred to under section 3

EUH071 - Corrosive to the respiratory tract

H272 - May intensify fire; oxidiser

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

Classification procedure				
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used			
Acute oral toxicity	Calculation method			
Acute dermal toxicity	Calculation method			
Acute inhalation toxicity - gas	Calculation method			
Acute inhalation toxicity - Vapour	Calculation method			
Acute inhalation toxicity - dust/mist	Calculation method			
Skin corrosion/irritation	Calculation method			
Serious eye damage/eye irritation	Calculation method			
Respiratory sensitisation	Calculation method			
Skin sensitisation	Calculation method			
Mutagenicity	Calculation method			
Carcinogenicity	Calculation method			
Reproductive toxicity	Calculation method			
STOT - single exposure	Calculation method			
STOT - repeated exposure	Calculation method			
Acute aquatic toxicity	Calculation method			
Chronic aquatic toxicity	Calculation method			
Aspiration hazard	Calculation method			
Ozone	Calculation method			

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)

EPA (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)

Japan GHS Classification

Australian 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)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date 04-29-2022

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 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