

**SAFETY DATA SHEET**

in accordance with 29 CFR 1910.1200, WHMIS 2022 and Safe Work Australia

**Revision date:** 20 November 2024      **Date of previous issue:** 17 December 2018      **SDS No.** 374B-12a

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

ARC CS2 (Part B)

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

**Relevant identified uses:** For use as a coating on properly prepared surfaces where mild chemical and abrasion exposures are anticipated.

**Uses advised against:** No information available

**Reason why uses advised against:** Not applicable

**1.3. Details of the supplier of the safety data sheet**

**Company:**

A.W. CHESTERTON COMPANY  
860 Salem Street  
Groveland, MA 01834-1507, USA  
Tel. +1 978-469-6446  
(Mon. - Fri. 8:30 - 5:00 PM EST)  
SDS requests: [www.chesterton.com](http://www.chesterton.com)  
E-mail (SDS questions): [ProductSDSs@chesterton.com](mailto:ProductSDSs@chesterton.com)  
E-mail: [customer.service@chesterton.com](mailto:customer.service@chesterton.com)

**Supplier:**

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,  
Unit 105, Burlington, Ontario L7L 4X8 – Tel. 905-335-5055

**1.4. Emergency telephone number**

24 hours per day, 7 days per week  
Call Infotrac: 1-800-535-5053  
Outside N. America: +1 352-323-3500 (collect)  
NSW Poisons Information Centre (Australia): 13 11 26

**SECTION 2: HAZARDS IDENTIFICATION**

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

**2.1.1. Classification according to 29 CFR 1910.1200 / WHMIS 2022 / Safe Work Australia / GHS**

Acute toxicity, Category 4, H302  
Acute toxicity, Category 3, H331 (mist)  
Skin irritation, Category 2, H315  
Serious eye damage, Category 1, H318  
Skin sensitization, Category 1, H317  
Reproductive toxicity, Category 1B, H360F  
Reproductive toxicity, Category 2, H361d  
Specific target organ toxicity – repeated exposure, Category 2, H373 (oral)  
Hazardous to the aquatic environment, Chronic, Category 1, H410

**2.1.2. Additional information**

For full text of H-statements: see SECTIONS 2.2 and 16.

**2.2. Label elements**

**Labeling according to 29 CFR 1910.1200 / WHMIS 2022 / Safe Work Australia / GHS**

**Hazard pictograms:**



**Signal word:**

Danger

<b>Hazard statements:</b>	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H318	Causes serious eye damage.
	H317	May cause an allergic skin reaction.
	H331	Toxic if inhaled.
	H360F	May damage fertility.
	H361d	Suspected of damaging the unborn child.
	H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
	H410	Very toxic to aquatic life with long lasting effects.
	<b>Precautionary statements:</b>	P201
P202		Do not handle until all safety precautions have been read and understood.
260		Do not breathe mist/spray.
P264		Wash hands thoroughly after handling.
P270		Do not eat, drink or smoke when using this product.
P271		Use only outdoors or in a well-ventilated area.
P272		Contaminated work clothing must not be allowed out of the workplace.
P273		Avoid release to the environment.
P280		Wear protective gloves/clothing and eye/face protection.
P302/352		IF ON SKIN: Wash with plenty of soap and water.
P304/340		IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305/351/338		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.
P308/313		IF exposed or concerned: Get medical advice/attention.
P363		Wash contaminated clothing before reuse.
P391	Collect spillage.	
P405	Store locked up.	
P501	Dispose of contents/container to an approved waste disposal plant.	
<b>Supplemental information:</b>	None	

**2.3. Other hazards**

Bisphenol A, 4-Nonylphenol, branched: substances identified as having endocrine disrupting properties.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

Hazardous Ingredients <sup>1</sup>	% Wt.	CAS No.	GHS Classification
Methyleneoxide, polymer with benzenamine, hydrogenated	10-40	135108-88-2	Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 3, H412
Diethylenetriamine*	5-10	111-40-0	Acute Tox. 2, H330 Acute Tox. 4, H302/312 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Skin Sens. 1, H317
Bisphenol A	3-7	80-05-7	Repr. 1B, H360F STOT SE 3, H335 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
4-Nonylphenol, branched	1-5	84852-15-3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M-factor acute/chronic: 10)

Tetraethylenepentamine	1-5	112-57-2	Acute Tox. 4, H312/H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 2, H411
N-(3-(trimethoxysilyl)propyl)ethylenediamine	0.1-0.9	1760-24-3	Acute Tox. 4, H332 Acute Tox. 5, H303 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 (respiratory system, inhalation)

## Other ingredients:

Silica (Quartz)	1-3	14808-60-7	Not classified**
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For full text of H-statements: see SECTION 16.

\*This component is toxic by inhalation if sprayed or if aerosol/mist is created. Refer to section 11 for additional toxicity information.

\*\*Substance with a workplace exposure limit.

<sup>1</sup> Classified according to: 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F), WHMIS 2022, Safe Work Australia, GHS

**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures****Inhalation:** Remove to fresh air. If not breathing, administer artificial respiration. Contact physician.**Skin contact:** Wash skin with soap and water. Remove contaminated clothing and wash before reuse. Consult physician.**Eye contact:** Flush eyes for at least 30 minutes with large amounts of water. Contact physician immediately.**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If person is conscious, rinse mouth with water and give small quantities of water to drink. Contact physician immediately.**Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. Avoid contact with the product while providing aid to the victim. Do not breathe mist. See section 8.2.2 for recommendations on personal protective equipment.**4.2. Most important symptoms and effects, both acute and delayed**

Risk of serious damage to eyes. Irritating to skin. High vapor concentrations and mist can cause severe eye and respiratory tract irritation, headache, dizziness, nausea and possibly shortness of breath. Product is readily absorbed through the skin and may cause nausea, headache and general discomfort. Prolonged or repeated contact may cause asthma, skin sensitization and other allergic responses.

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

Treat symptoms.

**SECTION 5: FIRE-FIGHTING MEASURES****5.1. Extinguishing media****Suitable extinguishing media:** Carbon dioxide, dry chemical, foam or water fog**Unsuitable extinguishing media:** Water jets**5.2. Special hazards arising from the substance or mixture****Hazardous combustion products:** May generate: ammonia gas, toxic nitrogen oxide gases. Incomplete combustion may form carbon monoxide.**Other hazards:** Use of water may result in the formation of very toxic aqueous solutions. Do not allow runoff from firefighting to enter drains or water courses.**5.3. Advice for firefighters**

Cool exposed containers with water. Recommend Firefighters wear self-contained breathing apparatus.

**Australian HAZCHEM Emergency Action Code:** 2 Z**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Provide adequate ventilation. Utilize exposure controls and personal protection as specified in Section 8.

**6.2. Environmental Precautions**

Keep out of sewers, streams and waterways.

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

Scoop up and transfer to a suitable container for disposal. Flush final traces of spill with water.

**6.4. Reference to other sections**

Refer to section 13 for disposal advice.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Do not handle until all safety precautions have been read and understood. Do not breathe spray. Utilize exposure controls and personal protection as specified in Section 8. Do not contaminate with sodium nitrite or other nitrosating agents, which could cause the formation of cancer-causing nitrosamine. Do not eat, drink or smoke when using this product. Remove contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. Contaminated leather including shoes cannot be decontaminated and should be discarded. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

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

Store in a cool, dry area. Do not store near acids.

**7.3. Specific end use(s)**

No special precautions.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limit values**

Ingredients	OSHA PEL <sup>1</sup>		ACGIH TLV <sup>2</sup>		AUSTRALIA ES <sup>3</sup>	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Methyleneoxide, polymer with benzenamine, hydrogenated	N/A	N/A	N/A	N/A	N/A	N/A
Diethylenetriamine	N/A	N/A	1 (skin)	4.2	1 (skin)	4.2
Bisphenol A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nonylphenol, branched	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethylenepentamine	N/A	N/A	N/A	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	N/A	N/A	N/A	N/A	N/A	N/A
Silica (Quartz)	(resp.) (total)	0.05 0.3	(resp.)	0.025	(resp.)	0.1

<sup>1</sup> United States Occupational Health & Safety Administration permissible exposure limits

<sup>2</sup> American Conference of Governmental Industrial Hygienists threshold limit values

<sup>3</sup> Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

<sup>1</sup> United States Occupational Health & Safety Administration permissible exposure limits

<sup>2</sup> American Conference of Governmental Industrial Hygienists threshold limit values

<sup>3</sup> Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

**Biological limit values**

Not available

**8.2. Exposure controls****8.2.1. Engineering measures**

Provide sufficient ventilation to keep the concentrations below the exposure limits. If it is necessary to alter the final cured product such that dust may be generated, use adequate dust extraction or damp down.

**8.2.2. Individual protection measures**

**Respiratory protection:** In case of insufficient ventilation, use a self-contained breathing apparatus (SCBA), supplied air respirator (SAR) or air-purifying respirator (APR) with a suitable filter (e.g., EN filter type A-P2). During spraying, wear suitable respiratory equipment.

**Protective gloves:** Chemical resistant gloves (e.g., natural rubber or neoprene)

Diethylenetriamine:

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	neoprene	0.65 mm	> 480 min.
Splash	natural rubber	0.6 mm	> 60 min.

\*Determined according to EN374 standard.

**Eye and face protection:** Full face shield with goggles underneath.

**Other:** Impervious clothing as necessary to prevent skin contact.

### 8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical state</b>	paste	<b>pH</b>	not applicable
<b>Colour</b>	tan	<b>Kinematic viscosity</b>	6400 cSt @ 25°C
<b>Odour</b>	amine odor	<b>Solubility in water</b>	insoluble
<b>Odour threshold</b>	not determined	<b>Partition coefficient</b>	not applicable
		<b>n-octanol/water (log value)</b>	
<b>Boiling point or range</b>	not determined	<b>Vapour pressure @ 20°C</b>	not determined
<b>Melting point/freezing point</b>	not determined	<b>Density and/or relative density</b>	1.25 kg/l
<b>% Volatile (by volume)</b>	0%	<b>Weight per volume</b>	10.4 lbs/gal.
<b>Flammability</b>	not determined	<b>Vapour density (air=1)</b>	> 1
<b>Lower/upper flammability or explosion limits</b>	not determined	<b>Rate of evaporation (ether=1)</b>	< 1
<b>Flash point</b>	121°C (250°F)	<b>% Aromatics by weight</b>	0%
<b>Method</b>	PM Closed Cup	<b>Particle characteristics</b>	not applicable
<b>Autoignition temperature</b>	not determined	<b>Explosive properties</b>	not determined
<b>Decomposition temperature</b>	not determined	<b>Oxidising properties</b>	not determined

### 9.2. Other information

None

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Refer to sections 10.3 and 10.5.

### 10.2. Chemical stability

Stable

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

### 10.4. Conditions to avoid

Open flames and high temperatures.

### 10.5. Incompatible materials

Strong acids and strong oxidizers like liquid Chlorine and concentrated Oxygen. Reactive metals. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

### 10.6. Hazardous decomposition products

Nitric acid, NOx, Ammonia, Carbon Monoxide, Carbon Dioxide, aldehydes, flammable hydrocarbon fragments and other toxic fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

**Primary route of exposure under normal use:** Inhalation, skin and eye contact. Personnel with pre-existing allergies, eczema or skin conditions may be aggravated by exposure.

**Acute toxicity -**

**Oral:** Harmful if swallowed. ATE-mix: 998.6 mg/kg.

Substance	Test	Result
Formaldehyde, polymer with benzenamine, hydrogenated	LD50, rat	449 mg/kg
Diethylenetriamine	LD50, rat	1080 mg/kg
Bisphenol A	LD50, rat	3250 mg/kg
4-Nonylphenol, branched	LD50, rat	1300 mg/kg
Tetraethylenepentamine	LD50, rat	2100 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rat	2413 mg/kg

**Dermal:** Product is readily absorbed through the skin and may cause nausea, headache and general discomfort. May be harmful in contact with skin. ATE-mix: 2922 mg/kg.

Substance	Test	Result
Formaldehyde, polymer with benzenamine, hydrogenated	LD50, rat	2673 mg/kg
Diethylenetriamine	LD50, rabbit	1045 mg/kg
Bisphenol A	LD50, rabbit	3600 mg/kg
4-Nonylphenol, branched	LDLo, rabbit	3160 mg/kg
Tetraethylenepentamine	LD50, rabbit	660 mg/kg (RTECS)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rat	20009 mg/kg

**Inhalation:** Toxic if inhaled (aerosol/mist). High vapor concentrations and mist can cause severe eye and respiratory tract irritation, headache, dizziness, nausea and possibly shortness of breath. ATE-mix: 0.76 mg/l (mist).

Substance	Test	Result
Diethylenetriamine	LC50, rat, 4 h	> 0.07-<0.3 mg/l/4 h (mist)
Diethylenetriamine	LC50, rat, 4 h	No mortality at vapor saturation level
Bisphenol A	LC0, rat, 6 h	0.17 mg/l (mist, maximum attainable concentration)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50 Inhalation, rat	> 1.49 mg/l (mist)

**Skin corrosion/irritation:** Irritating to skin.

Substance	Test	Result
ARC CS2 (Part B)	Corrositex® (OECD 435)	Non-corrosive
Diethylenetriamine	Skin irritation, rabbit	Corrosive

**Serious eye damage/irritation:** Risk of serious damage to eyes.

Substance	Test	Result
Diethylenetriamine	Eye irritation	Corrosive

**Respiratory or skin sensitisation:** Prolonged or repeated contact may cause asthma, skin sensitization and other allergic responses.

Substance	Test	Result
Diethylenetriamine	Skin sensitization, guinea pig	Sensitizing

**Germ cell mutagenicity:** Diethylenetriamine: based on available data, the classification criteria are not met.

**Carcinogenicity:** Repeated inhalation of respirable free silica may cause scarring of the lungs with cough and shortness of breath. Silicosis, a delayed lung injury that is a disabling, progressive and sometimes fatal pulmonary fibrosis, may result. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified inhaled silica as a human carcinogen. The silica in this product does not separate from the mixture or in of itself become air-borne, therefore it does not present a hazard in normal use.

<b>Reproductive toxicity:</b>	Bisphenol A has produced effects on fertility in animal ingestion studies. 4-Nonylphenol, branched: has been shown to cause reproductive/teratogenic effects in laboratory animals. Diethylenetriamine: not expected to cause toxicity.
<b>STOT – single exposure:</b>	Diethylenetriamine, Bisphenol A: may cause respiratory irritation.
<b>STOT – repeated exposure:</b>	May cause damage to organs through prolonged or repeated exposure if swallowed.
<b>Aspiration hazard:</b>	Based on available data, the classification criteria are not met.
<b>Other information:</b>	None known

**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

**12.1. Toxicity**

Very toxic to aquatic life with long lasting effects. 4-Nonylphenol, branched: 48 h EC50 (for daphnia) = 0.0848 mg/l.

**12.2. Persistence and degradability**

Diethylenetriamine, Tetraethylenepentamine: expected to be resistant to biodegradation. Bisphenol A, 4-Nonylphenol, branched: inherently biodegradable. N-(3-(trimethoxysilyl)propyl)ethylenediamine: hydrolyzes in water or moist air, releasing methanol and organosilicon; biodegradation 50% (OECD 301A, 28 days).

**12.3. Bioaccumulative potential**

Diethylenetriamine, Tetraethylenepentamine, Bisphenol A: bioconcentration in aquatic organisms is not expected to be significant. 4-Nonylphenol, branched: may bioaccumulate in fish and aquatic organisms. N-(3-(trimethoxysilyl)propyl)ethylenediamine: not expected to bioaccumulate.

**12.4. Mobility in soil**

Paste. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Diethylenetriamine, Tetraethylenepentamine: expected to be highly mobile in soil. Bisphenol A: expected to have moderate to low mobility in soil. 4-Nonylphenol, branched: expected to be immobile in soil.

**12.5. Endocrine disrupting properties**

Bisphenol A, 4-Nonylphenol, branched: substances identified as having endocrine disrupting properties.

**12.6. Other adverse effects**

None known

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with a properly licensed facility. May be incinerated at an appropriate facility. Unreacted components are a special waste. Check local, state and national/federal regulations and comply with the most stringent requirement.

**SECTION 14: TRANSPORT INFORMATION****14.1. UN number or ID number**

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	UN3082
<b>TDG:</b>	UN3082
<b>US DOT:</b>	UN3082

**14.2. UN proper shipping name**

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TETRAETHYLENEPENTAMINE)
<b>TDG:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TETRAETHYLENEPENTAMINE)
<b>US DOT:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TETRAETHYLENEPENTAMINE)

**14.3. Transport hazard class(es)**

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	9
<b>TDG:</b>	9
<b>US DOT:</b>	9

**14.4. Packing group**

<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	III
<b>TDG:</b>	III
<b>US DOT:</b>	III

**14.5. Environmental hazards**

MARINE POLLUTANT

**14.6. Special precautions for user**

NO SPECIAL PRECAUTIONS FOR USER

**14.7. Maritime transport in bulk according to IMO instruments**

NOT APPLICABLE

**14.8. Other information****US DOT:** ERG NO.171,

MAY BE SHIPPED AS NON-RESTRICTED IN NON-BULK PACKAGINGS (119 GALLONS OR LESS) BY MOTOR VEHICLE, RAIL CAR OR AIRCRAFT.

(49 CFR 171.4(C))

**IMDG:** EMS. F-A, S-F

MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS. (IMDG CODE AMENDMENT 37-14, 2.10.2.7)

**ICAO/IATA:** MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS. (IATA DANGEROUS GOODS REGULATION 56<sup>TH</sup> EDITION, 4.4 SPECIAL PROVISIONS A197)**ADR:** CLASSIFICATION CODE M6 TUNNEL RESTRICTION CODE (E)

MAY BE SHIPPED AS NON-RESTRICTED IN SINGLE OR COMBINATION PACKAGINGS CONTAINING A NET QUANTITY PER SINGLE OR INNER PACKAGING OF 5 L OR LESS. (ADR 2015 VOLUME 1, CHAPTER 3.3 SPECIAL PROVISIONS 375)

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. National regulations****US EPA SARA TITLE III****312 Hazards:**

Acute toxicity  
 Skin irritation  
 Serious eye damage  
 Skin sensitization  
 Reproductive toxicity  
 Specific target organ toxicity – repeated exposure

**Chemicals subject to reporting requirements of Section 313 of EPCRA and of 40 CFR 372:**

Bisphenol A	80-05-7	3-7%
4-Nonylphenol, branched	84852-15-3	1-5%

TSCA: All chemical components are listed or exempted.



**Other national regulations:** DSL: Included on Inventory

### SECTION 16: OTHER INFORMATION

<b>Abbreviations and acronyms:</b>	<p>ADG: Australian Dangerous Goods Code          ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways          ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road          ATE: Acute Toxicity Estimate          BCF: Bioconcentration Factor          cATpE: Converted Acute Toxicity point Estimate          ES: Exposure Standard          GHS: Globally Harmonized System          ICAO: International Civil Aviation Organization          IMDG: International Maritime Dangerous Goods          LC50: Lethal Concentration to 50 % of a test population          LD50: Lethal Dose to 50% of a test population          LOEL: Lowest Observed Effect Level          N/A: Not Applicable          NA: Not Available          NOEC: No Observed Effect Concentration          NOEL: No Observed Effect Level          OECD: Organization for Economic Co-operation and Development          (Q)SAR: Quantitative Structure-Activity Relationship          REL: Recommended Exposure Limit          RID: Regulations concerning the International Carriage of Dangerous Goods by Rail          SDS: Safety Data Sheet          STEL: Short Term Exposure Limit          STOT RE: Specific Target Organ Toxicity, Repeated Exposure          STOT SE: Specific Target Organ Toxicity, Single Exposure          TDG: Transportation of Dangerous Goods (Canada)          TWA: Time Weighted Average          US DOT: United States Department of Transportation          WHMIS: Workplace Hazardous Materials Information System          Other abbreviations and acronyms can be looked up at <a href="http://www.wikipedia.org">www.wikipedia.org</a>.</p>
<b>Key literature references and sources for data:</b>	<p>Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)          Chemical Classification and Information Database (CCID)          European Chemicals Agency (ECHA) - Information on Chemicals          Hazardous Chemical Information System (HCIS)          National Institute of Technology and Evaluation (NITE)          U.S. National Library of Medicine Toxicology Data Network (TOXNET)</p>

**Procedure used to derive the classification for mixtures according to GHS:**

Classification	Classification procedure
Acute Tox. 4, H302	Calculation method
Acute Tox. 3, H331 (mist)	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360F	Calculation method
Repr. 2, H361d	Calculation method
STOT RE 2, H373 (oral)	Calculation method
Aquatic Chronic 1, H410	Calculation method

**Relevant H-statements:**

H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H330: Fatal if inhaled.  
H332: Harmful if inhaled.  
H335: May cause respiratory irritation.  
H360F: May damage fertility.  
H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.  
H373: May cause damage to organs through prolonged or repeated exposure.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.  
H411: Toxic to aquatic life with long lasting effects.  
H412: Harmful to aquatic life with long lasting effects.

**Hazard pictogram names:**

Corrosion, skull and crossbones, health hazard, environment

**Further information:**

None

**Date of last revision:**

20 November 2024

**Changes to the SDS in this revision:**

Sections 1.2, 1.3, 2.1, 2.2, 3, 4.2, 5.2, 7.2, 8.1, 9.1, 11.1, 12.2-12.5, 13, 15, 16.

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.