

**SAFETY DATA SHEET**

in accordance with 2020/878/EU (REACH, Annex II) 29 CFR 1910.1200, WHMIS 2015 and Safe Work Australia

**Revision date:** 12 March 2024**Date of previous issue:** 30 April 2022**SDS No.** 482A-2**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

ARC S3 (Part A) (WH, BLU)

**Unique Formula Identifier (UFI):** Not available**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses:** Mixed with Part B as a barrier coating to repair damage caused by erosion or corrosion. Compliant with 21CFR 175.300.**Uses advised against:** No data 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

EU: Chesterton International GmbH, Am Lenzenfleck 23,

D85737 Ismaning, Germany – Tel. +49-89-996-5460

**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 Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS**

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

Skin sensitization, Category 1, H317

Hazardous to the aquatic environment, Chronic, Category 2, H411

**2.1.2. Additional information**

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

**2.2. Label elements****Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / Safe Work Australia / GHS****Hazard pictograms:****Signal word:**

Warning

<b>Hazard statements:</b>	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H317	May cause an allergic skin reaction.
	H411	Toxic to aquatic life with long lasting effects.
<b>Precautionary statements:</b>	P261	Avoid breathing mist.
	P264	Wash skin thoroughly after handling.
	P272	Contaminated work clothing must not be allowed out of the workplace.
	P273	Avoid release to the environment.
	P280	Wear protective gloves and eye/face protection.
	P302/352	IF ON SKIN: Wash with plenty of soap and water.
	P333/313	If skin irritation or rash occurs: Get medical advice/attention.
	P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337/313	If eye irritation persists: Get medical advice/attention.
	P362/364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
	P501	Dispose of contents/container to an approved waste disposal plant.
<b>Supplemental information:</b>	None	

### 2.3. Other hazards

The safety and health hazards are detailed separately for Part A and Part B. The final cured material is considered nonhazardous. Upon machining, refer to the precautions in the safety data sheets for Part A and Part B.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

Hazardous Ingredients <sup>1</sup>	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification	SCL, M-factor, ATE
Epoxy resin (number average molecular weight <= 700)	20 - 30	1675-54-3* 216-823-5	NA	Eye Irrit. 2A, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Eye Irrit. 2A, H319: C ≥ 5 % Skin Irrit. 2, H315: C ≥ 5 % ATE (oral): 5,000 mg/kg ATE (dermal): > 2,000 mg/kg
Epoxy resin (number average molecular weight <= 700)	10 - 15	9003-36-5** 500-006-8	NA	Skin Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE (oral): 5,000 mg/kg ATE (dermal): > 2,000 mg/kg
Other ingredients <sup>1</sup> :					
Aluminum oxide	20 - 30	1344-28-1 215-691-6	NA	Not classified***	ATE (oral): 5,000 mg/kg
Titanium dioxide	1 - 5	13463-67-7 236-675-5	NA	Not classified*** a	ATE (oral): 10,000 mg/kg ATE (dermal): > 10,000 mg/kg ATE (inhalation, dust): > 6.82 mg/l
Amorphous silica	1 - 5	112945-52-5, 7631-86-9 231-545-4	NA	Not classified***	ATE (oral): 5,000 mg/kg

\* Alternative CAS No: 25068-38-6. \*\* Alternative CAS No: 28064-14-4.

\*\*\* Substance with a workplace exposure limit.

<sup>a</sup> Contains less than 1 % of particles with aerodynamic diameter ≤ 10 µm.

For full text of H-statements: see SECTION 16.

<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)  
• 1272/2008/EC, GHS, REACH  
• WHMIS 2015  
• Safe Work Australia

**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:** Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Contact physician.
- Eye contact:** Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.
- Ingestion:** Wash out mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. 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. See section 8.2.2 for recommendations on personal protective equipment.

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

Moderate eye and skin irritant. Moderate sensitizer as evidenced by rashes, hives and other allergic reactions.

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

Treat symptoms.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media**

**Suitable extinguishing media:** Carbon dioxide, dry chemical, foam or water fog

**Unsuitable extinguishing media:** No data available

**5.2. Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Carbon monoxide, carbon dioxide.

**Other hazards:** None known

**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**

Avoid skin contact. 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.

**6.4. Reference to other sections**

Refer to section 13 for disposal advice.

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

Remove contaminated clothing immediately. Wash clothing before reuse. Contaminated leather including shoes cannot be decontaminated and should be discarded. After handling, wash before eating, drinking or smoking. Utilize exposure controls and personal protection as specified in Section 8. Avoid breathing mist. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

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

Store between 10°C (50°F) and 32°C (90°F) in a dry area.

**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>		UK WEL <sup>3</sup>		AUSTRALIA ES <sup>4</sup>	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum oxide	(total)	15	(resp.)	1	(inhal.)	10	N/A	10
	(resp.)	5			(resp.)	4		
Titanium dioxide	(total)	15	N/A	10	(total)	10	N/A	10
					(resp.)	4		
Amorphous silica	20 mppcf	6	(total)	10*	(inhal.)	6	N/A	2
			(resp.)	3	(resp.)	2.4		

\*Particles Not Otherwise Specified (PNOS)

<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> EH40 Workplace exposure limits, Health & Safety Executive

<sup>4</sup> Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:****Workers**

Substance	Route of exposure	Potential health effects	DNEL
Epoxy resin (CAS no. 1675-54-3)	Inhalation	Acute effects, local / Acute effects, systemic	no data available
		Chronic effects, local	no data available
		Chronic effects, systemic	4.93 mg/m <sup>3</sup> (GESTIS)
Epoxy resin (CAS no. 9003-36-5)	Inhalation	Acute effects, local / Acute effects, systemic	no data available
		Chronic effects, local	no data available
		Chronic effects, systemic	29.39 mg/m <sup>3</sup>
	Dermal	Acute effects, local	0.0083 mg/cm <sup>2</sup>
		Acute effects, systemic Chronic effects, local	no data available
		Chronic effects, systemic	104.15 mg/kg bw/day
Aluminum oxide	Inhalation	Chronic effects, local, Chronic effects, systemic	15.63 mg/m <sup>3</sup>
Titanium dioxide	Inhalation	Chronic effects	10 mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:**

Substance	Environmental protection target	PNEC
Epoxy resin (CAS no. 9003-36-5)	Fresh water	0.003 mg/l
	Marine water	0.0003 mg/l
	Water, intermittent release	0.0254 mg/l
	Freshwater sediments	0.294 mg/kg
	Marine sediments	0.0294 mg/kg
	Microorganisms in sewage treatment	10 mg/l
Titanium dioxide	Soil (agricultural)	0.237 mg/kg
	Fresh water	0.184 mg/l
	Marine water	0.0184 mg/l
	Water	0.193 mg/l
	Freshwater sediments	1,000 mg/kg
	Marine sediments	100 mg/kg
	Microorganisms in sewage treatment	100 mg/l
	Soil (agricultural)	100 mg/kg

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

Good general mechanical ventilation and local exhaust. 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:** During spraying, wear suitable respiratory equipment.

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

**Eye and face protection:** Safety goggles.

**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>	viscous paste	<b>pH</b>	not applicable
<b>Colour</b>	white, light blue	<b>Kinematic viscosity</b>	≈ 28,000 cSt @ 25°C (calculated)
<b>Odour</b>	sweet	<b>Solubility in water</b>	insoluble
<b>Odour threshold</b>	not determined	<b>Partition coefficient n-octanol/water (log value)</b>	not applicable
<b>Boiling point or range</b>	not applicable	<b>Vapour pressure @ 20°C</b>	not determined
<b>Melting point/freezing point</b>	not applicable	<b>Density and/or relative density</b>	1.79 kg/l
<b>% Volatile (by volume)</b>	0%	<b>Weight per volume</b>	14.92 lbs/gal.
<b>Flammability</b>	no data available	<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>	> 200°C (> 392°F)	<b>% Aromatics by weight</b>	0%
<b>Method</b>	PM Closed Cup	<b>Particle characteristics</b>	not applicable
<b>Autoignition temperature</b>	not applicable	<b>Explosive properties</b>	not determined
<b>Decomposition temperature</b>	not determined	<b>Oxidising properties</b>	not determined

**9.2. Other information**

Dynamic viscosity: 50,000 cPs @ 25°C (measured)

**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**

Excessive heat

**10.5. Incompatible materials**

Strong acids/bases and strong oxidizers like liquid Chlorine and concentrated Oxygen.

**10.6. Hazardous decomposition products**

Carbon Monoxide, Carbon Dioxide and other toxic fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 / GHS**

**Primary route of exposure under normal use:** Skin and eye contact. Personnel with pre-existing skin and eye disorders and skin allergies may be aggravated by exposure.

**Acute toxicity -****Oral:**

Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Epoxy resin (number average molecular weight $\leq$ 700)	LD50, rat	> 5,000 mg/kg
Titanium dioxide	LD50, rat	> 10,000 mg/kg
Aluminum oxide	LD50, rat	> 5,000 mg/kg

**Dermal:**

Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Epoxy resin (number average molecular weight $\leq$ 700)	LD50, rabbit	> 2,000 mg/kg
Titanium dioxide	LD50, rabbit	> 10,000 mg/kg

**Inhalation:**

Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	LC0, rat, 5-8 hours	No mortality at vapor saturation level
Titanium dioxide	LC50, rat, 4 hours	> 6.82 mg/l (dust)

**Skin corrosion/irritation:**

Causes skin irritation.

Substance	Test	Result
Epoxy resin (number average molecular weight $\leq$ 700)	Skin irritation, rabbit	Moderate irritation
Titanium dioxide	Skin irritation, rabbit	Not irritating

**Serious eye damage/irritation:**

Causes serious eye irritation.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	Eye irritation, rabbit	Moderate irritation
Epoxy resin (CAS no. 9003-36-5)	Eye irritation, rabbit	Not irritating
Titanium dioxide	Eye irritation, rabbit	Not irritating

**Respiratory or skin sensitisation:**

May cause an allergic skin reaction.

Substance	Test	Result
Epoxy resin (number average molecular weight $\leq$ 700)	Skin sensitization, guinea pig	Sensitizing
Titanium dioxide	Skin sensitization, guinea pig	Not sensitizing

**Germ cell mutagenicity:**

Epoxy resin (number average molecular weight  $\leq$  700), Aluminum oxide, Titanium dioxide: based on available data, the classification criteria are not met.

**Carcinogenicity:**

The International Agency for Research on Cancer (IARC) has designated inhaled titanium dioxide as possibly carcinogenic to humans (group 2B). The titanium dioxide 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.

**Reproductive toxicity:** Epoxy resin (number average molecular weight  $\leq 700$ ), Aluminum oxide, Titanium dioxide: based on available data, the classification criteria are not met.

**STOT – single exposure:** Epoxy resin (number average molecular weight  $\leq 700$ ), Aluminum oxide, Titanium dioxide: based on available data, the classification criteria are not met.

**STOT – repeated exposure:** Epoxy resin (number average molecular weight  $\leq 700$ ), Aluminum oxide, Titanium dioxide: based on available data, the classification criteria are not met.

Substance	Test	Result
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	50 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, rat, male / female (OECD 411)	10 mg/kg bw/day
Epoxy resin (CAS no. 1675-54-3)	Sub-chronic NOAEL, dermal, 90 days, mouse, male (OECD 411)	100 mg/kg bw/day
Epoxy resin (CAS no. 9003-36-5)	Sub-chronic NOAEL, oral, 90 days, rat, male / female (OECD 408)	250 mg/kg bw/day

**Aspiration hazard:** Based on available data, the classification criteria are not met.

#### 11.2. Information on other hazards

None

### 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

Epoxy resin (number average molecular weight  $\leq 700$ ): moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species.); chronic NOEC, 21 days, Daphnia magna (OECD 211) 0.3 mg/l.

#### 12.2. Persistence and degradability

Epoxy resin: not readily biodegradable. Titanium dioxide, Aluminum oxide: inorganic substances.

#### 12.3. Bioaccumulative potential

Epoxy resin: Octanol/water partition coefficient (log Kow) = 2.64 – 3.78; bioconcentration factor (QSAR)  $\leq 31$ , low potential for bioaccumulation.

#### 12.4. Mobility in soil

Viscous paste Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Epoxy resin: if product enters soil, it will be mobile and may contaminate groundwater (Log Koc  $\leq 3.65$ ).

#### 12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 12.6. Endocrine disrupting properties

None known

#### 12.7. 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 stabilized and solidified liquids with a properly licensed facility. Unreacted components are a special waste (classified as hazardous according to 2008/98/EC). May be incinerated at an appropriate facility. 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

**ADG/ADR/RID/ADN/IMDG/ICAO:** UN3082

**TDG:** UN3082

<b>US DOT:</b>	UN3082
<b>14.2. UN proper shipping name</b>	
<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
<b>TDG:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
<b>US DOT:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
<b>14.3. Transport hazard class(es)</b>	
<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	9
<b>TDG:</b>	9
<b>US DOT:</b>	9
<b>14.4. Packing group</b>	
<b>ADG/ADR/RID/ADN/IMDG/ICAO:</b>	III
<b>TDG:</b>	III
<b>US DOT:</b>	III
<b>14.5. Environmental hazards</b>	
MARINE POLLUTANT	
<b>14.6. Special precautions for user</b>	
NO SPECIAL PRECAUTIONS FOR USER	
<b>14.7. Maritime transport in bulk according to IMO instruments</b>	
NOT APPLICABLE	
<b>14.8. Other information</b>	
<b>US DOT:</b> 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))	
<b>IMDG:</b> 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)	
<b>ICAO/IATA:</b> 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)	
<b>ADR:</b> 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)	
<b>ADG HAZCHEM CODE:</b> ●3Z <b>HIN:</b> 90	

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU regulations****Authorisations under Title VII:** Not applicable**Restrictions under Title VIII:** None

**Other EU regulations:** Directive 94/33/EC on the protection of young people at work.  
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances  
(hazard category: E2, Hazardous to the Aquatic Environment in Category Chronic 2; qualifying quantities 200 t, 500 t)

**15.1.2. National regulations****US EPA SARA TITLE III**

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

Skin irritation  
Eye irritation  
Skin sensitization  
None

TSCA: All chemical components are listed or exempted.

**Other national regulations:** National implementation of the EC Directives referred to in section 15.1.1.**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.



**SECTION 16: OTHER INFORMATION**

**Abbreviations and acronyms:** 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  
CLP: Classification Labelling Packaging Regulation (1272/2008/EC)  
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  
PBT: Persistent, Bioaccumulative and Toxic substance  
(Q)SAR: Quantitative Structure-Activity Relationship  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)  
REL: Recommended Exposure Limit  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail  
SCL: Specific Concentration Limit  
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  
vPvB: very Persistent and very Bioaccumulative substance  
WEL: Workplace Exposure Limit  
WHMIS: Workplace Hazardous Materials Information System  
Other abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

**Key literature references and sources for data:** 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)  
Swedish Chemicals Agency (KEMI)  
U.S. National Library of Medicine Toxicology Data Network (TOXNET)

**Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP] / GHS:**

Classification	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 2, H411	Calculation method

**Relevant H-statements:** H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H411: Toxic to aquatic life with long lasting effects.

**Hazard pictogram names:** Exclamation mark, environment

**Further information:** None

**Date of last revision:** 12 March 2024

**Changes to the SDS in this revision:** Complete change to represent new formulation.

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.