

#### SAFETY DATA SHEET

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

Revision date: 3 January 2024 Date of previous issue: 29 November 2021 SDS No. 235A-17

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

#### 1.1. Product identifier

ARC 858 (Part A), ARC 5 (Part A)

Unique Formula Identifier (UFI): SY4F-FU36-W803-YN7E

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

Relevant identified uses: ARC Polymer Composite. Repair damage caused by impact, abrasion, erosion or corrosion;

rebuild worn areas; fill holes and cracks; provide abrasion resistant surfaces.

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: Supplier:

A.W. CHESTERTON COMPANY

860 Salem Street

Groveland, MA 01834-1507, USA

Tel. +1 978-469-6446 Fax: +1 978-469-6785

(Mon. - Fri. 8:30 - 5:00 PM EST) SDS requests: <u>www.chesterton.com</u>

E-mail (SDS questions): ProductSDSs@chesterton.com

E-mail: customer.service@chesterton.com

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 Skin sensitization, Category 1, H317

Eye irritation, Category 2, H319

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

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Hazard statements:	H315 H317 H319 H411	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
Precautionary statements:	P261 P264 P272 P273 P280 P302/352 P305/351/338 P333/313 P337/313 P362/364 P391 P501	Avoid breathing vapours.  Wash skin thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment.  Wear protective gloves and eye/face protection.  IF ON SKIN: Wash with plenty of soap and water.  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  If skin irritation or rash occurs: Get medical advice/attention.  If eye irritation persists: Get medical advice/attention.  Take off contaminated clothing and wash it before reuse.  Collect spillage.  Dispose of contents/container to an approved waste disposal plant.
Supplemental information:	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>	% <b>W</b> t.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification	SCL, M-factor, ATE
Epoxy resin (number average molecular weight <= 700)	30 - 40	1675-54-3 * 216-823-5	NA	Skin Irrit. 2, H315 Eye Irrit. 2, H319 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 - 20	9003-36-5 ** 500-006-8	NA	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE (oral): 5,000 mg/kg ATE (dermal): > 2,000 mg/kg
Other ingredients:					
Silicon carbide <sup>a</sup>	15 - 20	409-21-2 206-991-8	NA	Not classified	NA
Titanium dioxide <sup>a b</sup>	1-2	13463-67-7 236-675-5	NA	Not classified	ATE (oral): > 10,000 mg/kg ATE (dermal): > 10,000 mg/kg ATE (inhalation, dust): > 6.82 mg/l

<sup>\*</sup>Alternative CAS No: 25068-38-6. \*\*Alternative CAS No: 28064-14-4.

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

<sup>&</sup>lt;sup>a</sup> Substance with a workplace exposure limit.

<sup>&</sup>lt;sup>b</sup> Contains less than 1 % of particles with aerodynamic diameter ≤ 10 μm.

¹ Classified according to: • 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F)

<sup>• 1272/2008/</sup>EC, GHS, REACH

<sup>•</sup> WHMIS 2015

<sup>·</sup> Safe Work Australia

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#### **SECTION 4: FIRST AID MEASURES**

### 4.1. Description of first aid measures

Inhalation: Remove person to fresh air and keep comfortable for breathing. Call a physician if you feel unwell.

**Skin contact:** Remove contaminated clothing. Wash clothing before reuse. Wash skin with soap and water. Consult physician

if irritation develops.

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. May cause skin sensitization as evidence by rashes or hives.

### 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: None known

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

Hazardous combustion products: Carbon monoxide, carbon dioxide.

Other hazards: Container may rupture from gas generation when exposed to intense heat. 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

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

Contain spill to a small area. Pick up with absorbent material (sand, sawdust, clay, etc.) and place in 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

Wash skin thoroughly after handling. Utilize exposure controls and personal protection as specified in Section 8. Remove contaminated clothing immediately. Wash clothing 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.

### 7.3. Specific end use(s)

No special precautions.

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### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### 8.1. Control parameters

### Occupational exposure limit values

Ingredients		NPEL <sup>1</sup> mg/m <sup>3</sup>	ACGII	HTLV <sup>2</sup> mg/m <sup>3</sup>	UK \ ppm	NEL³ mg/m³	AUSTR ppm	ALIA ES <sup>4</sup> mg/m <sup>3</sup>
	ppm	mg/m	ppiii	mg/m	ppiii	ilig/ili	ppiii	mg/m
Epoxy resin (number average molecular weight <= 700)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silicon carbide	(total) (resp.)	15 5	(total) (resp.)	10 3	(total) (resp.)	10 4	N/A	10
Titanium dioxide	N/A	15	N/A	10	(total) (resp.)	10 4	N/A	10

### **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,	no data available
		systemic	
		Chronic effects, local	no data available
		Chronic effects, systemic	4.93 mg/m³ (GESTIS)
Epoxy resin (CAS no. 9003-36-5)	Inhalation	Acute effects, local / Acute effects,	no data available
		systemic	
		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	no data available
		Chronic effects, local	
		Chronic effects, systemic	104.15 mg/kg bw/day
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
	Soil (agricultural)	0.237 mg/kg
Titanium dioxide	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

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

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

<sup>&</sup>lt;sup>3</sup> EH40 Workplace exposure limits, Health & Safety Executive

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

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#### 8.2. Exposure controls

### 8.2.1. Engineering measures

No special requirements. If exposure limits are exceeded, provide adequate ventilation. 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: Not normally needed. If exposure limits are exceeded, use a half or full-face respirator with

combined dust/organic vapour filter (e.g., EN filter type A-P2).

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

Eye and face protection: Safety glasses

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

Physical state pН not applicable paste Colour white Kinematic viscosity not determined Odour sweet odor Solubility in water insoluble not applicable **Odour threshold** not determined **Partition coefficient** 

n-octanol/water (log value)

Boiling point or range not applicable Vapour pressure @ 20°C not determined

Melting point/freezing point not determined Density and/or relative density 1.6 kg/l

Melting point/freezing pointnot determinedDensity and/or relative density1.6 kg/l% Volatile (by volume)< 1%</td>Weight per volume13.5 lbs/gal.

Flammability not determined Vapour density (air=1) > 1
Lower/upper flammability or not determined Rate of evaporation (ether=1) < 1

explosion limits

Flash point > 249°C (> 480°F) % Aromatics by weight 0%

MethodPM Closed CupParticle characteristicsnot applicableAutoignition temperaturenot determinedExplosive propertiesnot applicableDecomposition temperaturenot determinedOxidising propertiesnot applicable

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

Temperatures above 300°C (572°F).

### 10.5. Incompatible materials

Strong mineral acids and bases, strong organic 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 Skin and eye contact. Personnel with pre-existing skin and eye disorders and skin allergies may

**under normal use:** be aggravated by exposure.

Acute toxicity -

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Substance	Test	Result
Epoxy resin (number average	LD50, rat	> 5,000 mg/kg
molecular weight <= 700)		
Silicon carbide	NOAEL, rat	2,000 mg/kg
Titanium dioxide	LD50, rat	> 10,000 mg/kg

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

Substance	Test	Result
Epoxy resin (number average molecular weight <= 700)	LD50, rabbit	> 2,000 mg/kg
Silicon carbide	NOAEL, rat	2,000 mg/kg
Titanium dioxide	LD50, rabbit	> 10,000 mg/kg

Inhalation:

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

Skin corrosion/irritation: Causes skin irritation.

Substance	Test	Result
Epoxy resin	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	Skin sensitization, guinea pig	Sensitizing
Titanium dioxide	Skin sensitization, guinea pig	Not sensitizing

Germ cell mutagenicity:

Epoxy resin, Silicon carbide, 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. Epoxy resin: based on available data, the classification criteria are not

Reproductive toxicity:

Epoxy resin, Silicon carbide, Titanium dioxide: based on available data, the classification criteria are not met.

STOT - single exposure:

Not expected to cause toxicity. Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

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#### STOT - repeated exposure:

Epoxy resin (number average molecular weight <= 700), Titanium dioxide: based on available data, the classification criteria are not met.

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

#### Aspiration hazard:

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

#### 11.2. Information on other hazards

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

Epoxy resin (number average molecular weight <= 700) is toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment (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

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. Epoxy resin (number average molecular weight <= 700): not readily biodegradable (biodegradation, OECD 301F, 28 days: 5%). Titanium dioxide, Silicon carbide: inorganic substances.

### 12.3. Bioaccumulative potential

Epoxy resin (number average molecular weight <= 700): log Kow = 2.64 – 3.78, low to moderate potential for bioaccumulation.

### 12.4. Mobility in soil

Paste. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Epoxy resin (number average molecular weight <= 700): if product enters soil, it will be mobile and may contaminate groundwater (log Koc <= 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. Unreacted components are a special waste; classified as hazardous according to 2008/98/EC. Landfill sealed containers with stabilized and solidified liquids with a properly licensed facility. 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 US DOT: UN3082

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14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
TDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)
US DOT: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN)

14.3. Transport hazard class(es)

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

14.4. Packing group

ADG/ADR/RID/ADN/IMDG/ICAO: |||
TDG: |||
US DOT: |||

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)

ADG HAZCHEM CODE: ●3Z HIN: 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 None

Skin sensitization Eye irritation

TSCA: All chemical components are listed or exempted.

Other national regulations: National implementation of the EC Directive 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.

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### **SECTION 16: OTHER INFORMATION**

Abbreviations ADG: Australian Dangerous Goods Code

and acronyms: 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.

Key literature references

Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)

and sources for data: 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
Skin Sens. 1, H317	Calculation method
Eye Irrit. 2, H319	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: 3 January 2024

**Changes to the SDS in this revision:** Sections 1.1, 1.2, 2.1, 2.2, 3, 4.1, 5.2, 6.3, 8.1, 9.1, 10.6, 11.1, 12.2, 12.6, 15.1, 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.