SAFETY DATA SHEET

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

Revision date: 4 November 2023 **Date of previous issue:** 26 May 2022 **SDS No.** 227B-16

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

1.1. Product identifier

ARC 5 (Part B)

Unique Formula Identifier (UFI): 5EMM-6E74-AQCD-UP0C

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

ARC Polymer Composite. Repair damage caused by impact, abrasion, erosion or corrosion; rebuild worn areas; fill holes and cracks; provide abrasion resistant surfaces.

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 Fax: +1 978-469-6785
(Mon. - Fri. 8:30 - 5:00 PM EST)
SDS requests: www.chesterton.com
E-mail (SDS questions): ProductSDSs@chesterton.com
E-mail: 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

Flammable liquid, Category 4, H227 (non-CLP)
Skin corrosion, Category 1B, H314
Serious eye damage, Category 1, H318
Skin sensitization, Category 1, H317
Hazardous to the aquatic environment, Acute, Category 1, H400
Hazardous to the aquatic environment, Chronic, Category 1, H410

2.1.2. Australian statement of hazardous nature

Hazardous according to criteria of Safe Work Australia.

2.1.3. 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: Danger

Hazard statements:

H227	Combustible liquid.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from flames and hot surfaces. – No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing and eye/face protection.
P301/330/331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303/361/353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P403/235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	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[1]	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification	SCL, M-factor, ATE
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	25 - 40	57214-10-5 500-137-0	NA	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M (acute/chronic): 1 ATE (oral): > 2,000 mg/kg ATE (dermal): > 2,020
m-Phenylenebis(methylamine) (Synonym: m-Xylene-alpha, alpha'-Diamine)	20 - 30	1477-55-0 216-032-5	NA	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1B, H317 Aquatic Chronic 3, H412	ATE (oral): 930 mg/kg ATE (dermal): > 2,000 mg/kg ATE (inhalation, vapour): 95.6 mg/l ATE (inhalation, mist): 1.34 mg/l
Nitric acid, ammonium calcium salt	5 - 10	15245-12-2 239-289-5	NA	Acute Tox. 4, H302 Eye Dam. 1, H318	ATE (oral): 500 mg/kg ATE (dermal): > 2,000 mg/kg
Ethanol	1 - 5	64-17-5 200-578-6	NA	Flam. Liq. 2, H225	ATE (oral): 6200 mg/kg ATE (dermal): > 20,000 mg/kg ATE (inhalation, vapour): 116.9 mg/l
Iron oxide	1 - 5	1317-61-9 215-277-5	NA	Self-Heat. 2, H252	ATE (oral): > 10,000 mg/kg

N-(3-(trimethoxysilyl)propyl)ethylenediamine	0.1 - 0.2	1760-24-3 217-164-6	NA	Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (respiratory system, inhalation)	ATE (oral): 2,413 mg/kg ATE (dermal): 2009 mg/kg ATE (inhalation, vapour): 95.6 mg/l ATE (inhalation, mist): 1.5 mg/l
Other ingredients:					
Silicon carbide	5 - 10	409-21-2 206-991-8	NA	Not classified*	NA

*Substance with a workplace exposure limit.
For full text of H-statements: see SECTION 16.

[1] 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: Flood area with water while removing 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.

Ingestion: Do not induce vomiting. If conscious, dilute stomach contents with large quantities of milk or water. 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

Direct contact will cause burns to skin, eyes and mucous membranes. May cause an allergic skin reaction. Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.

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, alcohol-resistant foam, water spray.

Unsuitable extinguishing media: No data available

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

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. Keep away from sources of ignition - No smoking. If removal of ignition sources is not possible, then flush material away with water.

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

Utilize exposure controls and personal protection as specified in Section 8. Wash hands thoroughly after handling. 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.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, 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[1]		ACGIH TLV[2]		UK WEL[3]		AUSTRALIA ES[4]	
	ppm	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
m-Phenylenebis(methylamine)	N/A	N/A	(skin)	0.018 (Ceiling)	N/A	N/A	(Peak)	0.1
Nitric acid, ammonium calcium salt	N/A	N/A	N/A	N/A	–	N/A	N/A	N/A
Ethanol	1,000	1,900	STEL: 1,000	N/A	1,000	1,920	1,000	1,880
Iron oxide	(total) (resp.)	15 5	(total) (resp.)	10 3	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	N/A	N/A
Silicon carbide	(total) (resp.)	15 5	(total) (resp.)	10 3	(total) (resp.)	10 4	N/A	10

[1] United States Occupational Health & Safety Administration permissible exposure limits
[2] American Conference of Governmental Industrial Hygienists threshold limit values
[3] EH40 Workplace exposure limits, Health & Safety Executive
[4] 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
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	Inhalation	Chronic effects, local	0.6 mg/m^3
		Acute effects, local	6 mg/m^3
		Acute effects, systemic	2 mg/m^3
		Chronic effects, systemic	0.02 mg/m^3
	Dermal	Acute effects, local	2.8 µg/kg bw/day
		Chronic effects, local	0.28 µg/cm^2
		Chronic effects, systemic	0.38 mg/kg bw/day
m-Phenylenebis(methylamine)	Inhalation	Chronic effects, systemic	1.2 mg/m^3
		Chronic effects, local	0.2 mg/m^3
	Dermal	Chronic effects, systemic	0.33 mg/kg bw/day
Nitric acid, ammonium calcium salt	Inhalation	Chronic effects, systemic	98 mg/m^3
	Dermal	Chronic effects, systemic	13.9 mg/kg bw/day
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Inhalation	Chronic effects, systemic	35.3 mg/m^3
		Chronic effects, local / Acute effects, local	No hazard identified
	Dermal	Chronic effects, systemic	5 mg/kg bw/day
		Acute effects, systemic	5 mg/kg bw/day

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

Substance	Environmental protection target	PNEC
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	Fresh water	20 µg/l
	Freshwater sediments	0.1 mg/kg
	Marine water	2 µg/l
	Marine sediments	0.01 mg/kg
	Microorganisms in sewage treatment	30 mg/l
	Soil (agricultural)	0.024 mg/kg
m-Phenylenebis(methylamine)	Fresh water	0.094 mg/l
	Freshwater sediments	0.43 mg/kg
	Water, intermittent release	0.152 mg/l
	Marine water	0.009 mg/l
	Marine sediments	0.043 mg/kg
	Microorganisms in sewage treatment	10 mg/l
	Soil (agricultural)	0.045 mg/kg
Nitric acid, ammonium calcium salt	Fresh water	0.45 mg/l
	Marine water	0.045 mg/l
	Water, intermittent release	4.5 mg/l
	Microorganisms in sewage treatment	18 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Fresh water	0.062 mg/l
	Freshwater sediments	0.048 mg/kg
	Water, intermittent release	0.62 mg/l
	Marine water	0.0062 mg/l
	Marine sediments	0.0048 mg/kg
	Microorganisms in sewage treatment	25 mg/l
	Soil (agricultural)	0.0075 mg/kg

8.2. Exposure controls

8.2.1. Engineering measures

Provide sufficient ventilation to keep the vapor concentrations below the exposure limits.

8.2.2. Individual protection measures

Respiratory protection:	Not normally needed. If exposure limits are exceeded, use an approved organic vapor respirator (e.g., EN filter type A/P).
Protective gloves:	Chemical resistant gloves (e.g., nitrile rubber, butyl rubber, neoprene, 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

Physical state	paste	**pH**	not applicable
Colour	black	**Kinematic viscosity**	not determined
Odour	ammonia/alcohol	**Solubility in water**	insoluble
Odour threshold	not determined	**Partition coefficient n-octanol/water**	not applicable
Boiling point or range	not determined	**Vapour pressure @ 20°C**	not determined
Melting point/freezing point	not determined	**Density and/or relative density**	1.478 kg/l
% Volatile (by volume)	6.05%	**Weight per volume**	12.3 lbs/gal.
Flammability	no data available	**Vapour density (air=1)**	> 1
Lower/upper flammability or explosion limits	not determined	**Rate of evaporation (ether=1)**	< 1
Flash point	70°C (170°F)	**% Aromatics by weight**	none
Method	PM Closed Cup	**Particle characteristics**	not applicable
Autoignition temperature	not determined	**Explosive properties**	not determined
Decomposition temperature	not determined	**Oxidising properties**	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

None

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, NOx, Ammonia and other toxic fumes (by combustion).

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:	Inhalation, skin and eye contact. Personnel with pre-existing allergies and skin and eye disorders may be aggravated by exposure.

Acute toxicity -

Oral: ATE-mix > 3,243 mg/kg

Substance	Test	Result
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	LD50, rat	> 2,000 mg/kg
m-Phenylenebis(methylamine)	LD50, rat	930 mg/kg
Nitric acid, ammonium calcium salt	cATpE	500 mg/kg
Ethanol	LD50, rat	6,200 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rat	2,413 mg/kg

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

Substance	Test	Result
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol	LD50, rabbit	> 2,020 mg/kg
m-Phenylenebis(methylamine)	LD50, rabbit	> 2,000 mg/kg
Nitric acid, ammonium calcium salt	LD50, rat	> 2,000 mg/kg
Ethanol	LDLo, rabbit	20,000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50, rabbit	> 2,000 mg/kg

Inhalation: Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.

Substance	Test	Result
m-Phenylenebis(methylamine)	LC50, rat, 4 h	95.6 mg/l
Ethanol	LC50, rat, 4 h	116.9 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LC50 rat, mist	1.49 - 2.44 mg/l

Skin corrosion/irritation: May cause burns.

Substance	Test	Result
ARC 5 (Part B)	Corrositex® (OECD 435)	Non-corrosive

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

Respiratory or skin sensitisation: May cause an allergic skin reaction.

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

Carcinogenicity: This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or Regulation (EC) No 1272/2008. None known

Reproductive toxicity: Ethanol: based on available data, the classification criteria are not met. Other ingredients: data lacking.

STOT – single exposure: Excessive inhalation of vapors or mists can cause coughing, chest tightness and difficulty breathing.

STOT – repeated exposure: Ethanol, Silicon carbide, Nitric acid, ammonium calcium salt: based on available data, the classification criteria are not met. m-Phenylenebis(methylamine): data lacking.

Aspiration hazard: Not expected to be an aspiration toxicant based on viscosity.

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

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Unreacted components (Parts A and B), improperly released to the environment, can cause ground and water pollution. m-Phenylenebis(methylamine): biodegradation, OECD 301B (28 days) = 49%, not readily biodegradable. Ethanol: readily biodegradable; oxidizes rapidly by photochemical reactions in air.

12.3. Bioaccumulative potential

m-Phenylenebis(methylamine): low potential for bioaccumulation (BCF < 100). Ethanol: low potential for bioaccumulation (log Kow = –0.31).

12.4. Mobility in soil

Paste. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Nitric acid, ammonium calcium salt: expected to be highly mobile in soil. Ethanol: expected to have very high mobility in soils (Koc = 2.75).

12.5. Results of PBT and vPvB assessment

Not available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Unreacted components are a special waste (classified as hazardous according to 2008/98/EC). 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. 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

14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde polymer with 1,3-benzenedimethanamine and phenol)
TDG:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde polymer with 1,3-benzenedimethanamine and phenol)
US DOT:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde polymer with 1,3-benzenedimethanamine and phenol)

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:	III
TDG:	III
US DOT:	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 56th 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: E1, Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1; qualifying quantities: 100 t, 200 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:**
Flammable liquid Skin corrosion Serious eye damage Skin sensitization	None

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.

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.

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
Flam. Liq. 4, H227	On basis of test data
Skin Corr. 1B, H314	Calculation method
Eye Dam, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Relevant H-statements:

H225: Highly flammable liquid and vapour.
H252: Self-heating in large quantities; may catch fire.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Corrosion, exclamation mark, environment

Further information: None

Date of last revision: 4 November 2023

Changes to the SDS in this revision: Section 1.1.

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.