

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 1 of 14

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

1.1. Product identifier

Hardener S

UFI: 5GAX-N8XV-F00Q-8VCU

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

Use of the substance/mixture

epoxy resin hardener

1.3. Details of the supplier of the safety data sheet

Company name: R&G Faserverbundwerkstoffe GmbH

Composite Technology

Street: Im Meißel 7 - 13
Place: D-71111 Waldenbuch

Post-office box: 1145

D-71107 Waldenbuch

Telephone: +49 (0)7157 5304-60 Telefax: +49 (0)7157 5304-70

E-mail: info@r-g.de
Contact person: Michael Groß
Internet: www.r-g.de
Responsible Department: Management

<u>1.4. Emergency telephone</u> Vergiftungs-Informations-Zentrale Freiburg

number: Tel: +49 (0)761 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Repr. 2; H361d

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

1,3-Benzoldimethanamine

salicylic acid

2,2,4-trimethylhexane-1,6-diamine

Reaction products of the oligomerization andalkylation of 2-phenylpropene and phenol

Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols

Signal word: Danger

Pictograms:









Hazard statements

H302 Harmful if swallowed.



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 2 of 14

H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H361d Suspected of damaging the unborn child.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen /nationalen/

internationalen Vorschriften.

P405 Store locked up.

P362+P364 Take off contaminated clothing and wash it before reuse.

P310 Immediately call a POISON CENTER/doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

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

water.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols: List II

Salicvlic acid: List II: III

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (GB CLP Regu	lation)		
	Reaction mass of (1-phenylet	hyl)phenols andbis-(1-phenyle	thyl)phenols	>25–50%
	701-443-9		01-2119980970-27	
	Skin Irrit. 2, Skin Sens. 1A, A	quatic Chronic 2; H315 H317 H		
1477-55-0	1,3-Benzoldimethanamine			>10-=25%
	216-032-5		01-2119480150-50	
	Acute Tox. 4, Acute Tox. 4, S H317 H412 EUH071			
25513-64-8	2,2,4-trimethylhexane-1,6-dia	>10-=25%		
	247-063-2		01-2119560598-25	
	Acute Tox. 4, Skin Corr. 1B, S			
	Reaction products of the oligo	=2,5-=10%		
	700-960-7		01-2119555274-38	
	Skin Irrit. 2, Skin Sens. 1, Aqu			
69-72-7	salicylic acid	=2,5-=10%		
	200-712-3	607-732-00-5	01-2119486984-17	
	Repr. 2, Acute Tox. 4, Eye Da			
9046-10-0	Polyoxypropylenediamine	=2,5-=10%		
	618-561-0		01-2119557899-12	
	Skin Corr. 1C, Eye Dam. 1, A			

Full text of H and EUH statements: see section 16.



according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 3 of 14

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity			
	Specific Conc. Limits, M-factors and ATE					
	701-443-9	Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)phenols	>25–50%			
	dermal: LD5	0 = >2000 mg/kg; oral: LD50 = >2000 mg/kg				
1477-55-0	216-032-5	1,3-Benzoldimethanamine	>10-=25%			
	1	TE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = oral: LD50 = 930 mg/kg				
25513-64-8	247-063-2	2,2,4-trimethylhexane-1,6-diamine	>10-=25%			
	oral: LD50 = 910 mg/kg					
	700-960-7	Reaction products of the oligomerization and alkylation of 2-phenylpropene and phenol	=2,5-=10%			
	dermal: LD5	0 = >2000 mg/kg; oral: LD50 = >2000 mg/kg				
69-72-7	200-712-3	salicylic acid	=2,5-=10%			
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 891 mg/kg					
9046-10-0	618-561-0	Polyoxypropylenediamine	=2,5-=10%			
	dermal: LD50 = 2090 mg/kg; oral: LD50 = 475 mg/kg					

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing immediately. Pay attention to self-protection.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

Immediately with water and soap and rinse thoroughly. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Drink plenty of water and fresh air. Call a doctor immediately

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2), Extinguishing powder, Water spray.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire: Formation of: Gases/vapours, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 4 of 14

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid contact with skin, eyes and clothes. Wearing a personal protective clothing. Keep unprotected persons at a safe distance.

For non-emergency personnel

No information available.

For emergency responders

No information available.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter the soil or subsoil. Notify the responsible authority when the substance enters open water, the soil, or sewerage system.

6.3. Methods and material for containment and cleaning up

For containment

No information available.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information

Provide adequate ventilation. Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate room ventilation, if necessary with vapour extraction at the workplace. Avoid aerosol formation.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container. Provide for retaining containers, eg. floor pan without outflow.

Hints on joint storage

Store separately from foodstuffs.

Further information on storage conditions

Keep receptacles tightly sealed.

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 5 of 14

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance					
DNEL type		Exposure route	Effect	Value		
	Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)	ethyl)phenols				
Worker DNEL, long-term		dermal	systemic	2,87 mg/kg bw/day		
Worker DNEL, long-term		inhalation	systemic	1,21 mg/m³		
1477-55-0	1,3-Benzoldimethanamine					
Worker DNEL,		inhalation		20,1 mg/m³		
	Reaction products of the oligomerization andalkylation of 2-phenylpropene and phenol					
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day		
Worker DNEL, long-term		dermal	systemic	3,5 mg/kg bw/day		
Consumer DNEL, long-term		dermal	systemic	1,7 mg/kg bw/day		
Worker DNEL, long-term		inhalation	systemic	1,4 mg/m³		
Consumer DNI	EL, long-term	inhalation	systemic	0,35 mg/m³		

PNEC values

CAS No	Substance					
Environmental	Environmental compartment					
	Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)phenols					
Freshwater	0,0115 mg/l					
Marine water		0,00115 mg/l				
Freshwater see	diment	1,564 mg/kg				
Marine sedime	nt	0,456 mg/kg				
1477-55-0	1,3-Benzoldimethanamine					
Freshwater		0,094 mg/l				
Marine water	0,0094 mg/l					
25513-64-8	2,2,4-trimethylhexane-1,6-diamine					
Freshwater	0,0295 mg/l					
Marine water		0,00295 mg/l				
	Reaction products of the oligomerization andalkylation of 2-phenylpropene and phenol					
Freshwater		0,014 mg/l				
Marine water		0,0014 mg/l				
Freshwater sediment		1,064 mg/kg				
Marine sediment		106 mg/kg				
69-72-7	salicylic acid					
Freshwater		0,2 mg/l				
Marine water 0,02 mg/l						

Additional advice on limit values

1477-55-0, 1,3-benzenedimethanamine: MAK, as vapor and aerosol

8.2. Exposure controls



according to UK REACH Regulation

Hardener S

Product code: 100140 Revision date: 05.02.2024 Page 6 of 14





Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/sprav.

Individual protection measures, such as personal protective equipment

Eye/face protection

Protective goggles

Hand protection

The glove material must be impermeable and resistant to the product / substance / preparation. Selection of the glove material considering the breakthrough times, permeation rates and degradation. Before each new use of the glove, the tightness must be tested. Preventive skin protection by using skin protectant is recommended. The choice of a suitable glove is not only on the material depending but also on further quality characteristics depending and of manufacturer different to manufacturer. Please notice information from the glove supplier with respect to the permeability and by break time.

Glove material: Butyl rubber, Nitrile rubber. Recommended material thickness: = 0.4 mm. The selection of a suitable glove depends not only on the material, but also on further other quality characteristics and varies from manufacturer to manufacturer. Since the product is a preparation of several substances, the resistance of materials cannot be calculated in advance and must therefore be checked before use. be checked before use. Penetration time of the glove material: The exact penetration time must be obtained from the protective glove manufacturer and must be observed.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Filter type: A-P2

Respiratory protection only in case of aerosol or mist formation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid Colour: light yellow Odour: Amines

Melting point/freezing point: not determined Boiling point or initial boiling point and > 200 °C

boiling range:

Flammability: not applicable not applicable

not determined

Upper explosion limits: > 100 °C Flash point: Auto-ignition temperature: > 200 °C Decomposition temperature: not determined

pH-Value: not applicable Water solubility: **Immiscible**

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined Vapour pressure: 4 hPa

(at 20 °C)



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 7 of 14

Density (at 23 °C): 1,038 g/cm³
Relative vapour density: not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not explosive. The product is not self-igniting.

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Oxidizing properties Not oxidising.

Other safety characteristics

Evaporation rate: not determined

Further InformationNo information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

no decomposition when stored and handled properly

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

The product does not contain any relevant quantities of substances with workplace-related limit values to be monitored.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

In case of fire may be liberated: toxic and caustic gases and vapours

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1598 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 8 of 14

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
	Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)phenols						
	oral	LD50 mg/kg	>2000	rat			
	dermal	LD50 mg/kg	>2000	rat			
1477-55-0	1,3-Benzoldimethanamin	е					
	oral	LD50 mg/kg	930	Rat			
	dermal	LD50 mg/kg	3100	Rat			
	inhalation vapour	ATE	11 mg/l				
	inhalation dust/mist	ATE	1,5 mg/l				
25513-64-8	2,2,4-trimethylhexane-1,6	6-diamine					
	oral	LD50 mg/kg	910	Rat			
	Reaction products of the oligomerization andalkylation of 2-phenylpropene and phenol						
	oral	LD50 mg/kg	>2000	rat			
	dermal	LD50 mg/kg	>2000	rat			
69-72-7	salicylic acid						
	oral	LD50 mg/kg	891	Rat	Manufacturer		
	dermal	LD50 mg/kg	> 2000	Rat	Manufacturer		
9046-10-0	Polyoxypropylenediamine						
	oral	LD50 mg/kg	475	Rat			
	dermal	LD50 mg/kg	2090	Rabbit			

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)phenols;

1,3-Benzoldimethanamine; 2,2,4-trimethylhexane-1,6-diamine; Reaction products of the oligomerization and alkylation of 2-phenylpropene and phenol)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging the unborn child. (salicylic acid)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 9 of 14

11.2. Information on other hazards

Endocrine disrupting properties

Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols: List II

Salicylic acid: List II; III

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	lo Chemical name							
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method	
	Reaction mass of (1-phenylethyl)phenols andbis-(1-phenylethyl)phenols							
	Acute fish toxicity	LC50 mg/l	14,8	96 h	fish			
	Acute algae toxicity	ErC50 mg/l	3,14	72 h	algae			
	Acute crustacea toxicity	EC50 mg/l	1-10	48 h	Daphnia magna			
1477-55-0	1,3-Benzoldimethanamine	e						
	Acute fish toxicity	LC50 mg/l	87,6	96 h	Oryzias latipes (Ricefish)			
	Acute algae toxicity	ErC50 mg/l	20,3	72 h	Selenastrum capricornutum			
	Acute crustacea toxicity	EC50 mg/l	15,2	48 h	Daphnia magna			
25513-64-8	64-8 2,2,4-trimethylhexane-1,6-diamine							
	Acute algae toxicity	ErC50 mg/l	29,5	72 h	Desmodesmus subspicatus	IUCLID		
	Reaction products of the oligomerization andalkylation of 2-phenylpropene and phenol							
	Acute fish toxicity	LC50 mg/l	25,8	96 h	fish			
	Acute algae toxicity	ErC50	15 mg/l	72 h	algae			
	Acute crustacea toxicity	EC50	14 mg/l	48 h	Daphnia magna			
69-72-7	salicylic acid							
	Acute fish toxicity	LC50 mg/l	1370	96 h	Pimephales promelas (fathead minnow)	Manufacturer		
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Scenedesmus subspicatus	Manufacturer		
	Acute crustacea toxicity	EC50	870 mg/l	48 h	Daphnia magna	Manufacturer		
9046-10-0	Polyoxypropylenediamine							
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Piscis	Manufacturer		
	Acute algae toxicity	ErC50	135 mg/l	72 h	Scenedesmus sp.	Manufacturer		
	Acute crustacea toxicity	EC50	15 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer		

12.2. Persistence and degradability

No further relevant information available.



according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 10 of 14

CAS No	Chemical name							
	Method	Value	d	Source				
	Evaluation							
1477-55-0	1,3-Benzoldimethanamine							
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	C 92/69/V, C.4-C 49 %						
	Not readily biodegradable (according to OECD criteria)							
25513-64-8	2,2,4-trimethylhexane-1,6-diamine							
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	EC 92/69/V, C.4-A 7% 28						
	Not readily biodegradable (according to OECD criteria)							

12.3. Bioaccumulative potential

No further relevant information available.

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH. not applicable

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Toxic for Fish.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

Also toxic to fish and plankton in water.

Toxic to aquatic life.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

For disposal, comply with local regulations. Dispose of liquid component in a suitable incinerator. Product can be disposed of with household waste after curing.

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine),

Phenol, styrolisiert, Phenol, styrolized) ENVIRONMENTALLY

HAZARDOUS

14.3. Transport hazard class(es): 8

14.4. Packing group:

Hazard label:

8



Classification code: C7
Special Provisions: 274
Limited quantity: 1 L



according to UK REACH Regulation

Revision date: 05.02.2024 Product code: 100140 Page 11 of 14

Excepted quantity: E2
Transport category: 2
Hazard No: 80
Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine),

Phenol, styrolisiert, Phenol, styrolized) ENVIRONMENTALLY

HAZARDOUS

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8



Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-benzenedimethanamine,

phenol, styrolised)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8



Marine pollutant:

Limited quantity:

Excepted quantity:

EMS:

F-A, S-B

Segregation group:

Ja

1 L

E2

F-A, S-B

A S-B

A S-B

A S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-benzenedimethanamine,

phenol, styrolised)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8



Passenger LQ: E2

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: Phenol, styrolized

14.6. Special precautions for user

Warning: corrosive.



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 12 of 14

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Additional information

REGULATION (EC) No 1907/2006 ANNEX XVII Restriction conditions: 3

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II: None of the ingredients are included.

Annex I - RESTRICTED EXPORT SUBSTANCES FOR EXPLOSIVES (upper concentration limit for a permit pursuant to Article 5(3)): None of the ingredients are included.

Annex II - EXPLOSIVES REPORTABLE FOR EXPLOSIVES: None of the ingredients are included.

Regulation (EC) No 273/2004 on drug precursors: None of the ingredients are included.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug trade in drug substitutes between the Community and third countries: None of the ingredients are included.

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2.



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 13 of 14

Abbreviations and acronyms

LP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate LC50: Lethal concentration, 50%

LD50: Lethal dose, 50% LL50: Lethal loading, 50% EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules MFAG: Medical First Aid Guide

IATA: International Air Transport Association ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Dam: Eye damage Skin Sens: Skin sensitisation Repr: Reproductive toxicity

Aquatic Chronic: Chronic aquatic hazard

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

H332 Harmful if inhaled.

H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.



Safety Data Sheet

according to UK REACH Regulation

Hardener S

Revision date: 05.02.2024 Product code: 100140 Page 14 of 14

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)