

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hardener P 25

Revision date: 23.09.2020

Product code: 115163

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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

Curing agent

1.3. Details of the supplier of the safety data sheet

Company name:	R&G Faserverbundwerkstoffe GmbH	
Street:	Im Meißel 7 - 13	
Place:	D-71111 Waldenbuch	
Post-office box:	1145	
	D-71107 Waldenbuch	
Telephone:	+49-7157-530460	Telefax: +49-7157-530470
e-mail:	info@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	

1.4. Emergency telephone number: Vergiftungs-Informations-Zentrale Freiburg
Tel: +49 (0)761 19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

Amines, polyethylenepoly-, triethylenetetramine fraction

Phenol, styrenated

m-phenylenebis(methylamine)

2,4,6-tris(dimethylaminomethyl)phenol

Signal word: Danger**Pictograms:****Hazard statements**

H302

Harmful if swallowed.

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H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	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/doctor.
P405	Store locked up.
P501	Dispose of waste according to applicable legislation.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	GHS Classification	
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	50 - 75 %
	292-588-2	01-2119487919-13
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H318 H317 H412	
61788-44-1	Phenol, styrenated	10 - 25 %
	262-975-0	01-2119980970-27
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411	
1477-55-0	m-phenylenebis(methylamine)	10 - 25 %
	216-032-5	01-2119480150-50
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H332 H302 H314 H318 H317 H412	
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	10 - 25 %
	202-013-9	603-069-00-0
	01-2119560597-27	
	Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1; H302 H314 H318 H317	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Take off immediately all contaminated clothing and wash it before reuse.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Put victim at rest, cover with a blanket and keep warm. In case of respiratory tract irritation, consult a physician. If unconscious place in recovery position and seek medical advice.

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After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

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

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Call a physician 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 jet.

In case of major fire and large quantities: Water spray jet alcohol resistant foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: 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.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protection equipment. Remove persons to safety. Provide adequate ventilation as well as local exhaustion at critical locations.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Provide adequate ventilation. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). 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 ventilation as well as local exhaustion at critical locations. Do not breathe gas/vapour/aerosol. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

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Further information on handling

Do not allow to enter into soil/subsoil.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place. Keep container tightly closed. Keep locked up. Provide for retaining containers, eg. floor pan without outflow.

Hints on joint storage

Do not store together with: Oxidizing agents, strong.
Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Store in a cool dry place.

7.3. Specific end use(s)

Curing agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol			
Worker DNEL,		inhalation		0,31 mg/m ³

PNEC values

CAS No	Substance	Environmental compartment	Value
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	Freshwater	0,19 mg/l
		Marine water	0,038 mg/l
1477-55-0	m-phenylenebis(methylamine)	Freshwater	0,094 mg/l
		Marine water	0,0094 mg/l
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Freshwater	0,84 mg/l

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.
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, drink, smoke, sniff.

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Eye/face protection

Tightly sealed safety glasses.

Hand protection

Wear suitable gloves.

Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber). Thickness of glove material: $\geq 0,5$ mm.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Filter type: A-P2 (short-term)

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	light yellow	
Odour:	like: Amines	
Odour threshold:	not determined	
pH-Value:		not determined

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	> 100 °C
Flash point:	> 100 °C

Flammability

Solid:	not determined
Gas:	not determined

Explosive properties

The product is not: Explosive.

Lower explosion limits:	1,3 vol. %
Upper explosion limits:	13,0 vol. %
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	not determined
Gas:	not determined

Decomposition temperature:	not determined
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Oxidizing properties

Not oxidising.

Vapour pressure:	not determined
Density:	not determined
Water solubility:	practically insoluble

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Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:

not determined

Viscosity / kinematic:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

9.2. Other information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, toxic. Gases/vapours, corrosive.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1257,7 mg/kg

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction				
	oral	LD50 mg/kg	1716	Rat	Manufacturer
	dermal	LD50 mg/kg	1465	Rabbit	Manufacturer
61788-44-1	Phenol, styrenated				
	oral	LD50 mg/kg	> 2000	Rat	Manufacturer
	dermal	LD50 mg/kg	> 2000	Rabbit	Manufacturer
1477-55-0	m-phenylenebis(methylamine)				
	oral	LD50 mg/kg	930	Rat	Manufacturer
	dermal	LD50 mg/kg	3100	Rabbit	Manufacturer
	inhalation vapour	ATE	11 mg/l		
	inhalation aerosol	ATE	1,5 mg/l		
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol				
	oral	ATE mg/kg	500		

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (Amines, polyethylenepoly-, triethylenetetramine fraction; Phenol, styrenated; m-phenylenebis(methylamine); 2,4,6-tris(dimethylaminomethyl)phenol)

Carcinogenic/mutagenic/toxic effects for reproduction

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.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction					
	Acute fish toxicity	LC50	330 mg/l	96 h	fish	Manufacturer
	Acute bacteria toxicity	(3,7 mg/l)			Scenedesmus subspicatus	
61788-44-1	Phenol, styrenated					
	Acute algae toxicity	ErC50	3,14 mg/l	72 h	Scenedesmus subspicatus	Manufacturer
1477-55-0	m-phenylenebis(methylamine)					
	Acute fish toxicity	LC50	87,6 mg/l	96 h	Oryzias latipes (Ricefish)	Manufacturer
	Acute algae toxicity	ErC50	20,3 mg/l	72 h	Selenastrum capricornutum	Manufacturer
	Acute crustacea toxicity	EC50	15,2 mg/l	48 h	Daphnia magna	Manufacturer
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol					
	Acute fish toxicity	LC50	175 mg/l	96 h	Cyprinus carpio (Common Carp)	Manufacturer

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available.

Further information

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (Amines, polyethylenepoly-, triethylenetetramine fraction, m-phenylenebis(methylamine))

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

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Hazard label: 8



Classification code: C7
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 80
 Tunnel restriction code: E

Inland waterways transport (ADN)**14.1. UN number:** UN 2735**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Amines, polyethylenepoly-, triethylenetetramine fraction, m-phenylenebis(methylamine))**14.3. Transport hazard class(es):** 8**14.4. Packing group:** II

Hazard label: 8



Classification code: C7
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)**14.1. UN number:** UN 2735**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Amines, polyethylenepoly-, triethylenetetramine fraction, m-phenylenebis(methylamine))**14.3. Transport hazard class(es):** 8**14.4. Packing group:** II

Hazard label: 8



Marine pollutant: no
 Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B
 Segregation group: alkalis

Air transport (ICAO-TI/IATA-DGR)**14.1. UN number:** UN 2735**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Amines, polyethylenepoly-, triethylenetetramine fraction, m-phenylenebis(methylamine))**14.3. Transport hazard class(es):** 8**14.4. Packing group:** II

Hazard label: 8

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Special Provisions:	A3 A803	
Limited quantity Passenger:	0.5 L	
Passenger LQ:	Y840	
Excepted quantity:	E2	
IATA-packing instructions - Passenger:		851
IATA-max. quantity - Passenger:		1 L
IATA-packing instructions - Cargo:		855
IATA-max. quantity - Cargo:		30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning! The product is: corrosive.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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: Härter P 72

2004/42/EC (VOC): 0 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

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**Abbreviations and acronyms**

CLP: 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%

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ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 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>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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