

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hardener 285 (50 min./ Aero)

Print date: 27.02.2015

Product code: 110120-GHS-2013

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

1.1. Product identifier

Hardener 285 (50 min./ Aero)

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

Use of the substance/mixture

Hardener (Crosslinker)

1.3. Details of the supplier of the safety data sheet

Suter Kunststoffe AG
Aeffligenstrasse 3
CH-3312 Fraubrunnen
Tel. (+41)31 763 60 60
Fax. (+41)31 763 60 61
e-mail: info@swiss-composite.ch
www.swiss-composite.ch

Auskunftgebender Bereich:

1.4 Notrufnummer:

Tox Info Suisse Tel.-Nr. 145

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: C - Corrosive, Xn - Harmful

R phrases:

Harmful in contact with skin and if swallowed.

Causes burns.

May cause sensitisation by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory/skin sensitization: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed or in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazardous components which must be listed on the label

3-aminomethyl-3,5,5-trimethylcyclohexylamine

benzyl alcohol

nonylphenol

Signal word:

Danger

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Pictograms:

GHS05-GHS07

**Hazard statements**

- | | |
|-----------|--|
| H302+H312 | Harmful if swallowed or in contact with skin. |
| 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. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. |
| P330 | Rinse mouth. |
| P331 | Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P321 | Specific treatment (see Hazard statements on this label). |
| P333 | If skin irritation or rash occurs: |
| P352 | Wash with plenty of water. |
| P363 | Wash contaminated clothing before reuse. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| 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. |
| P310 | Immediately call a POISON CENTER/doctor. |
| P405 | Store locked up. |
| P501 | Dispose of waste according to applicable legislation. |

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine	
2855-13-2	C - Corrosive, Xn - Harmful R21/22-34-43-52-53	70 - 90 %
612-067-00-9	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H317 H412	
202-859-9	benzyl alcohol	
100-51-6	Xn - Harmful R20/22	7 - 10 %
603-057-00-5	Acute Tox. 4, Acute Tox. 4; H332 H302	
246-672-0	nonylphenol	1 - 2 %
25154-52-3	Repr. Cat. 3, C - Corrosive, Xn - Harmful, N - Dangerous for the environment R62-63-22-34-50-53	
601-053-00-8	Repr. 2, Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H361fd H302 H314 H400 H410	

Full text of R-, H- and EUH-phrases: 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.

After inhalation

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

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

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. Potential hazards: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Gastrointestinal complaints. Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

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

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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5.2. Special hazards arising from the substance or mixture

The product itself does not burn. Heating causes rise in pressure with risk of bursting.

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**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

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**

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

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

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SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.2. Exposure controls**

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Appropriate engineering controls

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

Protective and hygiene measures

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.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

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

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: clear

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: > 200 °C

Flash point: > 100 °C

Flammability

Solid: not applicable

Gas: not applicable

Lower explosion limits: not determined

Upper explosion limits: not determined

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: not determined

Density: not determined

Water solubility: easily soluble

Solubility in other solvents

not determined

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Partition coefficient: not determined
 Viscosity / dynamic: 50 - 100 mPa·s ISO 9371
 (at 25 °C)
 Vapour density: not determined
 Evaporation rate: not determined

9.2. Other information

Solid content: not determined

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

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

ATEmix calculated

ATE (oral) 1015,2 mg/kg; ATE (dermal) 1857,7 mg/kg

Acute toxicity

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine				
	oral	LD50	1030 mg/kg	Rat	OECD 401
	dermal	LD50	1840 mg/kg	Rabbit	Manufacturer
	inhalative (4 h) aerosol	LC50	> 5,01 mg/l	Rat	OECD 403
100-51-6	benzyl alcohol				
	oral	LD50	1620 mg/kg	Rat	IUCLID
	inhalative vapour	ATE	11 mg/l		
	inhalative (4 h) aerosol	LC50	> 4178 mg/l	Rat	OECD 403
25154-52-3	nonylphenol				
	oral	LD50	580 mg/kg	Rat	GESTIS
	dermal	LD50	1990 mg/kg	Rabbit	GESTIS

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

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SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine					
	Acute fish toxicity	LC50	110 mg/l	96 h	Leuciscus idus (golden orfe)	Regulation (EC) No. 440/2008, Annex, C.1
	Acute algae toxicity	ErC50	> 50 mg/l	72 h	Scenedesmus subspicatus	Regulation (EC) No. 440/2008, Annex, C.3
	Acute crustacea toxicity	EC50	388 mg/l	48 h	Chaetogammarus marinus	IUCLID
25154-52-3	nonylphenol					
	Acute fish toxicity	LC50	0,116 mg/l	96 h		GESTIS
	Acute crustacea toxicity	EC50	0,14 mg/l	48 h		GESTIS

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	8 %	28	IUCLID
	Not readily biodegradable (according to OECD criteria)			
100-51-6	benzyl alcohol			
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	92-96 %	14	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,8
100-51-6	benzyl alcohol	1,05

BCF

CAS No	Chemical name	BCF	Species	Source
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	3,16	Quantitative structure-activity relationship (QSAR)	IUCLID

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

Results of PBT assessment: not persistent.

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

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13.1. Waste treatment methods**Advice on disposal**

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

Non-contaminated packages may be recycled. 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:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C7
Special Provisions:	274
Limited quantity:	5 L
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Other applicable information (land transport)

E1

Inland waterways transport (ADN)

14.1. UN number:	UN 2735
14.2. UN proper shipping name:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C7
Special Provisions:	274
Limited quantity:	5 L

Other applicable information (inland waterways transport)

E1

Marine transport (IMDG)

14.1. UN number:	UN 2735
14.2. UN proper shipping name:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)

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14.3. Transport hazard class(es): 8**14.4. Packing group:** III

Hazard label: 8



Special Provisions: 223, 274

Limited quantity: 5 L

EmS: F-A, S-B

Other applicable information (marine transport)

E1

Air transport (ICAO)**14.1. UN number:** UN 2735**14.2. UN proper shipping name:** POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine)**14.3. Transport hazard class(es):** 8**14.4. Packing group:** III

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 1 L

IATA-packing instructions - Passenger: 852

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 856

IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

E1

Passenger-LQ: Y841

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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**

2004/42/EC (VOC): 100 %

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - water contaminating

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

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15.2. Chemical safety assessment

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

SECTION 16: Other information**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant R-phrases (Number and full text)

20/22 Harmful by inhalation and if swallowed.
21/22 Harmful in contact with skin and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
43 May cause sensitisation by skin contact.
50 Very toxic to aquatic organisms.
52 Harmful to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.
62 Possible risk of impaired fertility.
63 Possible risk of harm to the unborn child.

Relevant H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.
H302+H312 Harmful if swallowed or in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
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.

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.)