

**Safety Data Sheet**

According to Regulation (EC) No 1907/2006

**GP 14 / Hardener**

Date of issue/Date of revision: 27.06.2019

en / GB - Version 1.2

**1. Identification of the substance/preparation and of the company/undertaking****1.1 Identification of the substance or preparation:**

GP 14

**1.2 Use of the substance/preparation:**

Model building material / hardener

**1.3 Company/undertaking identification**

Company name: Gößl + Pfaff GmbH  
 Street: Münchener Str. 13  
 Place: 85123 Karlskron/Brautlach  
 Telephone: +49 (0) 8450 / 932-0  
 Fax.: +49 (0) 8450 / 932-13  
 Contact person: Management: Mr. Gößl, Mr. Pfaff  
 E-Mail: [info@goessl-pfaff.de](mailto:info@goessl-pfaff.de)  
 Internet: [www.goessl-pfaff.de](http://www.goessl-pfaff.de)  
 Responsible Department: Management

**1.4 Emergency telephone****Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0) 6132-84463****2. Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

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

Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine;

2-piperazin-1-ylethylamine;

Triethylenetetramine

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

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

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**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.  
 Rinse skin with water/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.  
 P501 Dispose of contents/container to an appropriate recycling or disposal facility.

**2.3. Other hazards**

No information available

**3. Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Amine hardener

**Hazardous components**

CAS-No.	Chemical name			Quantity
	EC No	Index-No	REACH-No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine			35 – <40 %
	500-191-5		01-2119972320-44	
	Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H315 H318 H317 H411			
140-31-8	2-piperazin-1-ylethylamine			1 – <5 %
	205-411-0	612-105-00-4	01-2119471486-30	
	Repr. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3; H361fd H311 H302 H314 H318 H317 H372 H412			
90640-67-8	Triethylenetetramine			1 – <5 %
	292-588-2		01-2119457919-13	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H318 H317 H412			

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

**Further Information**

None

**4. First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated soaked clothing immediately.  
 Remove affected person from the danger area and lay down.

**After inhalation**

Move to fresh air in case of accidental inhalation of vapours or decomposition products.  
 In case of respiratory tract irritation, consult a physician.

**After contact with skin**

Wash with plenty of soap and water.  
 If skin irritation or rash occurs: Get medical advice/attention.

**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.



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**After ingestion**

Rinse mouth immediately and drink plenty of water.

Never give anything by mouth to an unconscious person or a person with cramps.

Call a physician immediately.

Do NOT induce vomiting.

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

There are no data available on the mixture itself.

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

There are no data available on the mixture itself.

**5. Fire-fighting measures****5.1. Extinguishing media****Suitable extinguishing media**

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

Foam, Carbon dioxide (CO<sub>2</sub>), Dry extinguishing powder, Water spray jet**Unsuitable extinguishing media**

Full water jet

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

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)**5.3. Advice for firefighters**

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

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

In case of vapour formation use respirator.

Provide adequate ventilation.

Keep away from sources of ignition - No smoking.

**6.2. Environmental precautions**

Clean contaminated surface thoroughly.

Do not allow to enter into surface water or drains.

Local authorities should be advised if significant spillages cannot be contained.

**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).

Take up mechanically, placing in appropriate containers for disposal.

**6.4. Reference to other sections**

Wear personal protection equipment (refer to section 8).

**7. Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Keep container tightly closed.

Provide adequate ventilation.

Avoid contact with skin, eyes and clothes.

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**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**

Store in original container.

Keep container tightly closed in a cool, well-ventilated place.

Protect against direct sunlight.

**Further information on storage conditions**

Keep away from food, drink and animal feedingstuffs.

**7.3. Specific end use(s)**

There are no data available on the mixture itself.

**8. Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m3	fibres/ml	Category	Origin
7727-43-7	Barium sulphate, inhalable dust	-	10		TWA (8 h)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine			
Worker DNEL, long-term		dermal	systemic	1,1 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	0,97 mg/m3
140-31-8	2-piperazin-1-ylethylamine			
Worker DNEL, acute		dermal	local	0,04 mg/cm2
Worker DNEL, long-term		dermal	local	0,006 mg/cm2
Worker DNEL, acute		dermal	systemic	20 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	3,3 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	21,4 mg/m3
Worker DNEL, long-term		inhalation	systemic	3,6 mg/m3

**PNEC values**

CAS No	Substance	Value
Environmental compartment		
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	
Freshwater		0,00434 mg/l
Freshwater (intermittent releases)		0,0434 mg/l
Marine water		0,00043 mg/l
Freshwater sediment		434,02 mg/kg
Marine sediment		43,4 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,84 mg/l
Soil		88,78 mg/kg
140-31-8	2-piperazin-1-ylethylamine	
Freshwater		0,058 mg/l
Marine water		0,0058 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 inhale vapours.

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Wash hands before breaks and after work.  
Do not eat, drink or smoke when using this product.  
Avoid contact with skin, eyes and clothes.  
Remove and wash contaminated clothes before re-use.

**Eye/face protection**

Tightly fitting goggles

**Hand protection**

Protective gloves resistant to chemicals made off nitrile, Minimum coat thickness 0.4 mm, Permeation resistance (wear duration) approx. 480 minutes, butyl rubber (Butyl) - = 0.7 mm thickness  
This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.  
Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

**Skin protection**

Wear suitable protective clothing.  
Safety shoes.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.  
If product is sprayed, use fresh-air breathing apparatus or (only short-term use) a combination filter A2-P2.

**Environmental exposure controls**

There are no data available on the mixture itself.

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

Physical state:

Colour:	Paste
Odour:	grey
pH-Value:	not determined

**Changes in the physical state**

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

**Flammability**

Solid:	not applicable
Gas:	not applicable

**Explosive properties**

Product does not present an explosion hazard.	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not applicable
Decomposition temperature:	not applicable

**Oxidizing properties**

Not applicable	
Vapour pressure (at 20 °C):	not determined
Density (at 20 °C):	1,6 g/cm <sup>3</sup>
Water solubility (at 20 °C):	Immiscible
Partition coefficient:	not determined
Viscosity / dynamic:	160.000 mPa·s
Vapour density:	not determined
Evaporation rate:	not determined

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**9.2 Other information**

There are no data available on the mixture itself.

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

The product is stable under storage at normal ambient temperatures.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Exothermic reaction with: Acids

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

Protect against direct sunlight.

**10.5. Incompatible materials**

Oxidising agent, strong, Acids, Alkali (lye)

**10.6. Hazardous decomposition products**Ammonia, Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide, Carbon dioxide**Further information**

The product is stable under storage at normal ambient temperatures.

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

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine				
	oral	LD50 >2.000 mg/kg	Rat		
	dermal	LD50 >2.000 mg/kg	Rat		
140-31-8	2-piperazin-1-ylethylamine				
	oral	LD50 >1.000 mg/kg	Rat		
	dermal	LD50 866 mg/kg	Rabbit		
90640-67-8	Triethylenetetramine				
	oral	LD50 1.716 mg/kg			
	dermal	LD50 1.465 mg/kg			

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

**Sensitising effects**

May cause an allergic skin reaction. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine; 2-piperazin-1-ylethylamine; Triethylenetetramine)

**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**

May cause damage to organs through prolonged or repeated exposure. (2-piperazin-1-ylethylamine)

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**Aspiration hazard**

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

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience****Observations relevant to classification**

There are no data available on the mixture itself.

**Other observations**

There are no data available on the mixture itself.

**12. Ecological information****12.1. Toxicity**

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine					
	Acute fish toxicity	LC50 1–10 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute crustacea toxicity	EC50 7,07 mg/l	48 h	Daphnia magna (Big water flea)		
140-31-8	2-piperazin-1-ylethylamine					
	Acute fish toxicity	LC50 368 mg/l	96 h	Leuciscus idus (golden orfe)		
	Acute algae toxicity	ErC50 495mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 32 mg/l	48 h	Daphnia magna (Big water flea)		
90640-67-8	Triethylenetetramine					
	Acute fish toxicity	LC50 330 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 20 mg/l	72 h	algae		
	Acute crustacea toxicity	EC50 31,1 mg/l	48 h	Daphnia magna (Big water flea)		

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine			
	OECD 301 D	4 %	28	
	Poorly biodegradable.			
90640-67-8	Triethylenetetramine			
	OECD 302	0 %	28	
	Poorly biodegradable.			

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
68082-29-1	Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	10,34
140-31-8	2-piperazin-1-ylethylamine	-1,48
90640-67-8	Triethylenetetramine	-2,65

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**12.4. Mobility in soil**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment**

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

**12.6. Other adverse effects**

There are no data available on the mixture itself.

**Further information**

Do not allow to enter into surface water or drains.

**13. Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

It is not possible to give this product a waste code number according to the European waste catalogue because only the intended use of the user consents the assignment of a specific code number.

The waste code number must be agreed with the disposer / manufacturer / competent authority.

**Contaminated packaging**

Contaminated packagings are to be treated like the product itself.

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

Packing which cannot be properly cleaned must be disposed of.

**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. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine)

**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

Transport category:

2

Hazard no:

80

Tunnel restriction code:

E

**Marine transport (IMDG)****14.1. UN number:**

UN 2735

**14.2. UN proper shipping name:**

AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine)

**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II



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Hazard label:

8



Marine pollutant:

yes

Special Provisions:

274

Limited quantity:

1 L

Excepted quantity:

E2

EmS:

F-A, S-B

**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number:**

UN 2735

**14.2. UN proper shipping name:**

AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine)

**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II

Hazard label:

8



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:

yes

**14.6. Special precautions for user**

There are no data available on the mixture itself.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

There are no data available on the mixture itself.

**Other applicable information**

There are no data available on the mixture itself.

**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

**Additional information**

This product does not contain substances of very high concern &gt; 0,1% (Regulation (EC) No 1907/2006 (REACH), Article 57).

**National regulatory information**

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

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

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**16. Other information****Changes**

This data sheet contains changes from the previous version in section(s) 4, 8, 9, 12, 15

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

Classification	Classification procedure
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 2; H411	Calculation method

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

- H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
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.  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H372 Causes damage to organs (respiratory tracts) through prolonged or repeated exposure (inhalation, skin contact).  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**Further Information**

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

Key literature references and sources for data Regulation (EC) No 1907/2006; Regulation (EC) No. 1272/2008

The information of this MSDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this MSDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.