According to Regulation EC No. 1907/2006

GP 12 B / Hardener

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1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance

or preparation: GP 12 B / Hardener

1.2 Use of the substance/preparation: 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
Internet: 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 Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319: Causes serious eye irritation.
Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, H412: Harmful to aquatic life with long lasting effects.

Category 3

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word: Warning

Hazard statements

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing mist or vapours.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

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

Hazardous components which must be listed on the label:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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3. Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EG-No. INDEX-No. Registration no.	Classification	Concentration (% w/w)
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	10563-29-8 234-148-4 01-2119970376-29	Acute Tox. 4; H302 Skin Corr. 1A; H314 Skin Sens. 1B; H317	>= 1 - < 3
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2 202-013-9 01-2119560597-27	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318	>= 1 - < 3

For explanation of abbreviations see section 16.

4. First aid measures

4.1 Description of first aid measures

General advice

Move out of dangerous area.

Consult a physician.

Show this safety data sheet to the doctor in attendance.

Treat symptomatically.

Get medical attention if symptoms occur.

If inhaled

If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact

If on skin, rinse well with water.

In case of eye contact

Immediately flush eye(s) with plenty of water.

Remove contact lenses.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed

Induce vomiting immediately and call a physician.

Keep respiratory tract clear.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing:

High volume water jet media



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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting:

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products:

No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods:

No data is available on the product itself.

Further information:

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:

Use personal protective equipment.

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions:

Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13.,

See Section 1 for emergency contact information.,

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:

Do not breathe vapours/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes.

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the application area.

Dispose of rinse water in accordance with local and national regulations.

Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.



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Hygiene measures:

When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Keep in properly labelled containers.

Advice on common storage:

For incompatible materials please refer to Section 10 of this SDS.

Storage class (TRGS 510): 10, Combustible liquids

Further information on storage stability: Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s): No data available

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
N'-(3-aminopropyl)- N,N-dimethylpropane- 1,3-diamine	Workers	Inhalation	Long-term systemic effects	3,7 mg/m ³
	Workers	Inhalation	Acute systemic effects	7,5 mg/m ³
	Workers	Inhalation	Long-term local effects	3,7 mg/m ³
	Workers	Inhalation	Acute local effects	7,5 mg/m ³
	Workers	Dermal	Long-term systemic effects	0,67 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,65 mg/m ³
	Consumers	Inhalation	Long-term local effects	0,65 mg/m ³
	Consumers	Oral	Long-term systemic effects	0,2 mg/kg

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

Substance name		Environmental Compartment	Value
2,4,6- Tris(dimethylaminomethyl)phenol		Fresh water	0,084 mg/l
		Marine water	0,008 mg/l
Remarks: Assessment Factors			
		Sewage treatment plant	0,2 mg/l
	Assessment Factors		
		Freshwater - intermittent	0,84 mg/l
N'-(3-aminopropyl)-N,N- dimethylpropane-1,3-diamine		Fresh water	9,2 μg/l
	Assessment Factors		
		Marine water	0,92 μg/l
	Assessment Factors		
		Freshwater - intermittent	92 µg/l
	Assessment Factors		
		Sewage treatment plant	18,1 mg/l

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i			
	Assessment Factors		
		Fresh water sediment	0,0336 mg/kg
	Equilibrium method		
		Marine sediment	0,00336 mg/kg
	Equilibrium method		
		Soil	0,00132 mg/kg
	Equilibrium method		

8.2 Exposure controls

Personal protective equipment

Eye protection:

Eye wash bottle with pure water Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing problems.

Hand protection Material: butyl-rubber Break through time: > 8 h

Material: Neoprene

Break through time: 10 – 480 min

Material: Nitrile rubber

Break through time: 10 – 480 min

Remarks:

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection

Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection

Evaporation rate:

Burning rate:

Flammability (solid, gas):

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines

Filter type: Organic vapour type (A)

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:liquidColour:light yellowOdour:slight

Odour Threshold:No data is available on the product itself.pH:No data is available on the product itself.Freezing point:No data is available on the product itself.Melting point:No data is available on the product itself.

Boiling point: $> 200 \, ^{\circ}\text{C}$ Flash point: $> 100 \, ^{\circ}\text{C}$

Method: Pensky-Martens closed cup
No data is available on the product itself.
No data is available on the product itself.
No data is available on the product itself.

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Upper explosion limit / No data is available on the product itself.

Upper flammability limit

Lower explosion limit /No data is available on the product itself.

Lower flammability limit

Vapour pressure: < 0,01 hPa (20 °C)

Relative vapour density:No data is available on the product itself.

Relative density: 1,165 (25 °C) **Density:** 1,165 g/cm³ (25 °C)

Solubility(ies)

Water solubility: practically insoluble (20 °C)

Solubility in other solvents:

Partition coefficient: n- octanol/water:

Auto-ignition temperature:

No data is available on the product itself.

No data is available on the product itself.

Decomposition temperature: > 200 °C

Viscosity

Viscosity, dynamic: 20.000 – 40.000 mPa.s (25 °C)

Explosive properties:No data is available on the product itself. **Oxidizing properties:**No data is available on the product itself.

9.2 Other information No data available

10. Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid: None known.

10.5 Incompatible materials

Materials to avoid: None known.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity – Product:

Acute toxicity estimate : > 2 000 mg/kg

Method: Calculation method Acute inhalation toxicity:

No data available

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Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Acute dermal toxicity:

LD50 (Rat):

Assessment: The substance or mixture has no acute dermal toxicity

2,4,6-Tris(dimethylaminomethyl)phenol:

Acute dermal toxicity: LD50 (Rat, male): > 1 ml/kg

Assessment: The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration):

No data available

Skin corrosion/irritation

Product:

Assessment: Not irritating when applied to human skin.

Serious eye damage/eye irritation

Product:

Result: Irritation to eyes, reversing within 7 days

Respiratory or skin sensitisation

Product:

Result: May cause sensitisation by skin contact.

Assessment: No data available

Germ cell mutagenicity

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Genotoxicity in vitro:

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

2,4,6-Tris(dimethylaminomethyl)phenol:

Genotoxicity in vitro:

Concentration: 5000 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Concentration: 2500 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative Genotoxicity in vivo: No data available



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Carcinogenicity

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Species: Mouse, male Application Route: Dermal Exposure time: 20 month(s) Frequency of Treatment: 3 daily

Result: negative

Carcinogenicity – Assessment:

No data available

Reproductive toxicity

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Effects on fertility:

Species: Rat, male and female Application Route: Oral

Method: OECD Test Guideline 422

Result: Animal testing did not show any effects on fertility.

2,4,6-Tris(dimethylaminomethyl)phenol:

Species: Rat, male and female Application Route: Oral

Application Route. Oral

Method: OECD Test Guideline 422

Remarks: No significant adverse effects were reported

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Effects on foetal development: Species: Rat, male and female Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

15 mg/kg body weight

Developmental Toxicity: No observed adverse effect level:

15 mg/kg body weight

Embryo-foetal toxicity: No observed adverse effect level:

15 mg/kg body weight

Method: OECD Test Guideline 422

Result: No effects on fertility and early embryonic development were detected.

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Reproductive toxicity – Assessment:

No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine: Species: Rat, male and female

NOEC: 550

Application Route: Inhalation Test atmosphere: vapour Exposure time: 3 Weeks Number of exposures: 7 d Method: Subchronic toxicity



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Species: Mouse, male NOAEL: >= 56,3

Application Route: Skin contact

Exposure time: 20 h Number of exposures: 3 d Method: Chronic toxicity

2,4,6-Tris(dimethylaminomethyl)phenol:

Species: Rat, male and female

NOEL: 15 mg/kg

Application Route: Ingestion Exposure time: 1 032 h Number of exposures: 7 d Method: Subacute toxicity

Repeated dose toxicity - Assessment:

No data available **Aspiration toxicity**No data available

Experience with human exposure

General Information: No data available Inhalation: No data available Skin contact: No data available Eye contact: No data available Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information Ingestion: No data available

12. Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Chronic aquatic toxicity:

Harmful to aquatic life with long lasting effects.

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Toxicity to fish

LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l

Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 9,2 mg/l

Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202



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Toxicity to algae/aquatic plants:

ErC50 (Selenastrum capricornutum (green algae)): 21 mg/l

Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

Toxicity to microorganisms:

EC50 (Pseudomonas putida): 181 mg/l

Exposure time: 16 h Test Type: static test Test substance: Fresh water Method: DIN 38 412 Part 8

2,4,6-Tris(dimethylaminomethyl)phenol:

Toxicity to fish:

LC50 (Cyprinus carpio (Carp)): 175 mg/l

Exposure time: 96 h
Test Type: static test
Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates: LC50 (Palaeomonetes vulgaris (Grass shrimp)): 718 mg/l

End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Test substance: Marine water

Toxicity to algae/aquatic plants:

ErC50 (Desmodesmus subspicatus (green algae)): 84 mg/l

Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 6,25 mg/l

Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201

12.2 Persistence and degradability

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Biodegradability:

Result: Readily biodegradable.

Biodegradation: 100 % Exposure time: 28 d Method: ISO Method, other

2,4,6-Tris(dimethylaminomethyl)phenol:

Biodegradability: Test Type: aerobic

Inoculum: activated sludge, non-adapted

Concentration: 2 mg/l Result: Not biodegradable Biodegradation: 4 %



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Exposure time: 28 d

Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Components:

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine:

Partition coefficient: n-octanol/water:

log Pow: 0,5

log Pow: -0,56 (25 °C)

pH: 11,6

Method: OECD Test Guideline 107 2,4,6-Tris(dimethylaminomethyl)phenol: Partition coefficient: n-octanol/water:

Pow: >= 0,219 (21,5 °C) log Pow: -0,66 (21,5 °C) Method: OPPTS 830.7550

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological information:

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

13. Disposal considerations

13.1 Waste treatment methods

Product

The product should not be allowed to enter drains, water courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and national regulations.

Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging:

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

14. Transport information

IATA:

Not regulated as dangerous goods

IMDG:

Not regulated as dangerous goods

ADR:

Not regulated as dangerous goods



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RID:

Not regulated as dangerous goods

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

Not applicable for product as supplied.

15. Regulatory information

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

REACH - List of substances subject to authorisation (Annex XIV): Not applicable.

REACH - List of substances subject to authorisation - Future sunset date: Not applicable.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable.

Water contaminating class (Germany):

WGK 1 slightly hazardous to water

Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany): Total dust: Not applicable

Inorganic substances in powdered form: Not applicable

Inorganic substances in vapour or gaseous form: Not applicable

Organic Substances: Not applicable Carcinogenic substances: Not applicable

Mutagenic: Not applicable Toxic to reproduction: Not applicable Other regulations:

Date of last issue: -

Date of first issue: 29.11.2019

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

DSL: This product contains one or several components that are not on the Canadian DSL nor NDSL.

AICS: On the inventory, or in compliance with the inventory NZIoC: On the inventory, or in compliance with the inventory ENCS: On the inventory, or in compliance with the inventory KECI: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory IECSC: On the inventory, or in compliance with the inventory

TCSI: On the inventory, or in compliance with the inventory

TSCA: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.



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16. Other information

Full text of H-Statements

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

Full text of other abbreviations

Acute Tox. Acute toxicity
Eye Dam. Serious eye damage
Skin Corr. Skin corrosion
Skin Sens. Skin sensitisation

Further information

Classification of the mixture: Classification procedure:

Eye Irrit. 2 H319 Based on product data or assessment Skin Sens. 1 H317 Based on product data or assessment Aquatic Chronic 3 H412 Based on product data or assessment

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 SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.