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

Identification of the substance or preparation

TIP TOP 648 I GROUT HARDENER

Art.-No.:

590 1159

Use of the substance/preparation

Hardener

Company/undertaking identification

TIP TOP Oberflächenschutz Elbe GmbH
Heuweg 4
D-06886 Wittenberg
Telephone ++49(0)3491/635-50
Telefax ++49(0)3491/ 635-552

Responsible Department
Emergency telephone :++49 (0) 6132 / 84463 (GBK Gefahrgut Buero GmbH, Ingelheim)
Responsible for the safety data sheet: sds@gbk-ingelheim.de

2. Hazards identification

Classification

Indications of danger : Corrosive
R-phrases :
Harmful in contact with skin.
Causes burns.
May cause sensitization by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients

Chemical characterization (Mixture)

Polyamine

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
292-588-2	90640-67-8	Triethylenetetramine	> 90 %	C, Xn, Xi R21-34-43-52-53

Full text of each relevant R phrase can be found in heading 16.

4. First aid measures

General information

Remove contaminated soaked clothing immediately.
Call a physician immediately.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

After contact with skin

In case of contact with skin wash off immediately with plenty of water.
Consult a doctor if skin irritation persists.

After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult (eye) doctor immediately.

After ingestion
Drink plenty of water or milk.
Never give anything by mouth to an unconscious person.
Do not induce vomiting.
Summon a doctor immediately.

5. Fire-fighting measures

Suitable extinguishing media
Alcohol-resistant foam, dry chemical, carbon dioxide (CO2), water-spray.

Extinguishing media which must not be used for safety reasons
Full water jet

Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases
Fire may produce:
Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx).

Special protective equipment for fire-fighters
Use breathing apparatus with independent air supply.
Protective suit

Additional information
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

Personal precautions
In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.

Environmental precautions
Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the subsoil/soil.

Methods for cleaning up/taking up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.
Clean contaminated surface thoroughly.

7. Handling and storage

Handling

Advice on safe handling
Keep container tightly closed.
Handle and open container with care.
Use only in thoroughly ventilated areas.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion
No special protective measures against fire required.

Storage

Requirements for storage rooms and vessels
Keep container tightly closed in a dry, cool and well-ventilated place.

Advice on storage compatibility
Incompatible with:
Acids and oxidizing agents.
Halogenated compounds.
Acrylates, aldehydes, ketones, copper and copper alloys.

Further information on storage conditions
Keep away from food, drink and animal feeding stuffs.

Storageclass (VCI) 8 A

8. Exposure controls/personal protection

Exposure limit values

Exposure controls

Occupational exposure controls
Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures
Do not inhale vapours.
Wash hands before breaks and immediately after handling the product.
When using, do not eat, drink or smoke.
Avoid contact with skin, eyes and clothing.
Remove and wash contaminated clothes before re-use.

Respiratory protection
In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A).

Hand protection
Chemical protective glove made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.
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.
Pls. find examples in the protective gloves database under: http://bestglove.com/site/chemrest/

Eye protection
Eye wash bottle with pure water.
Tightly fitting goggles

Skin protection
Long sleeved clothing.

9. Physical and chemical properties

General information

Physical state	Liquid
Colour	Yellow
Odour	Similar to amine

Important health, safety and environmental information

			Test method
pH-Value :		> 12	
Changes in the physical state			
Melting point		< 0 °C	
Boiling point		260 °C	
Flash point		118 °C	PMCC
Flammability			
Lower explosion limits		1 vol. %	180°C
Upper explosion limits		3,6 vol. %	180°C
Ignition temperature		294 °C	
Vapour pressure : at (20 °C)		< 1 hPa	
Density (at 25 °C) :		0,973 - 0,981 g/cm³	
Water solubility : at (20 °C)		Completely miscible	
Partition coefficient	- 1,4		
Vapour density :		5	

10. Stability and reactivity

Conditions to avoid
To avoid thermal decomposition, do not overheat.

Materials to avoid
Acids and oxidizing agents.
Halogenated compounds.
Acrylates, aldehydes, ketones, copper and copper alloys.

Hazardous decomposition products
Carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx)

Additional information
No decomposition if stored and applied as directed.

11. Toxicological information

Acute toxicity
LD50/oral/rat: = 4340 mg/kg
LD50/dermal/rabbit: = 800 mg/kg

Carcinogenic/mutagenic/toxic effects for reproduction
Mutagenicity: In vitro test Positive

Empirical data on effects on humans

The product causes burns of eyes, skin and mucous membranes.
Harmful in contact with skin.
Sensitization through skin contact possible.
Ingestion causes burns of the upper digestive and respiratory tracts.
Components of the product may be absorbed into the body through the skin.
Contact with eyes may cause corneal injury.
May cause sensitization of susceptible persons by inhalation.

12. Ecological information

Ecotoxicity
LC50/Pimephales promelas = 495 mg/l
EC50/Daphnia magna = 12 mg/l

Persistence and degradability
Biodegradable (OECD): 5 - 11 % (20d) (Closed-bottles-test)

Further information
Do not flush into surface water or sanitary sewer system.
Hazard to waters
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

Advice on disposal
Where possible recycling is preferred to disposal.
Can be incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances
Classified as hazardous waste.

Contaminated packaging
Contaminated packagings are to be treated like the product itself.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

14. Transport information

Land transport (ADR/RID)

ADR/RID class	8
Classification code :	C7
Hazard-no.	80
UN number	2259
Hazard label	8
ADR/RID packing group	II
Limited quantity	LQ 22

Description of the goods
Triethylenetetramine

Other applicable information (land transport)
LQ 22: combination packaging: 1 l / 30 kg (total gross mass); trays: 0,5 l / 20 kg (total gross mass).
Tunnel restriction code: D/E
Transport category: 2

Inland waterways transport

Marine transport

IMDG code	8

UN number	2259
Marine pollutant	No
EmS	F-A; S-B
IMDG packing group	II
Limited quantity :	1 L / 30 kg
Hazard label	8

Description of the goods

TRIETHYLENETETRAMINE

Other applicable information (marine transport)

Limited quantities (chapter 3.4): combination packaging: 1 l / 30 kg (total gross mass); trays: 1 l / 20 kg (total gross mass)

Air transport

ICAO/IATA-DGR	8
UN/ID number	2259
Hazard label	8
IATA-packing instructions - Passenger	808
IATA-max. quantity - Passenger	1 L
IATA-packing instructions - Cargo	812
IATA-max. quantity - Cargo	30 L
ICAO packing group	II
Limited quantity Passenger	Y808 / 0,5 L

Description of the goods

TRIETHYLENETETRAMINE

15. Regulatory information

Labelling

Additional advice on labelling	According to EC-regulations the product is to be labelled as follows:
Indication of danger	C - Corrosive

Hazardous component(s) to be indicated on label

Triethylenetetramine

R phrases

21	Harmful in contact with skin.
34	Causes burns.
43	May cause sensitization by skin contact.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S phrases

26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
35	This material and its container must be disposed of in a safe way.
36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
61	Avoid release to the environment. Refer to special instructions / Safety data sheets.

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
1999/13/EC (VOC)	0 %

16. Other information

Full text of R-phrases referred to under sections 2 and 3

21	Harmful in contact with skin.
34	Causes burns.
43	May cause sensitization by skin contact.
52	Harmful to aquatic organisms.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53	May cause long-term adverse effects in the aquatic environment.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
"(n.a. = not applicable; n.d. = not determined)"

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