

**1 Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
  - **Trade name:** *Haftstahl Härter / Mastic acier Durcisseur (YACHTCARE Steelbond B-Komponente)*
  - **1.2 Relevant identified uses of the substance or mixture and uses advised against** *Not determined*
  - **Application of the substance / the mixture**  
*Hardening agent/ Curing agent*  
*Epoxy curing agent*
  - **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
*A.Förster & Co.KG*  
*Esinger Steinweg 50*  
*25436 Uetersen*  
*Phone: +49 (0) 4122-3682; e-mail: info@foerster-co.de*
  - **Further information obtainable from:** *Phone: +49 (0) 4122-3682; e-mail: info@foerster-co.de*
  - **1.4 Emergency telephone number:**  
*Giftinformationszentrum (GIZ)-Nord, Goettingen, Deutschland*  
*Phone: +49 (0)551 19240, +49 (0)551 383180*
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**2 Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

*GHS05 corrosion**Skin Corr. 1A H314 Causes severe skin burns and eye damage.*  
.....*GHS07**Skin Sens. 1 H317 May cause an allergic skin reaction.*  
.....

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

*C; Corrosive**R35: Causes severe burns.*

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**Xi; Sensitising**

R43: May cause sensitisation by skin contact.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**



GHS05 GHS07

**Signal word Danger**

**Hazard-determining components of labelling:**

trimethylhexane-1,6-diamine

**Hazard statements**

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

**Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### 3 Composition/information on ingredients

**3.2 Chemical characterization: Mixtures**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 25513-64-8	trimethylhexane-1,6-diamine	10-25%
EINECS: 247-063-2	C R35;  Xn R22;  Xi R43	
Reg.nr.: 01-2119560598-25	R52/53	
	Skin Corr. 1A, H314;  Acute Tox. 4, H302;  Skin Sens. 1, H317; Aquatic Chronic 3, H412	

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CAS: 6192-52-5

EINECS: 203-180-0

Reg.nr.: 01-2119538811-39

toluene-4-sulphonic acid

 Xi R36/37/38 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

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1.0-2.5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

### · 4.1 Description of first aid measures

#### · General information:

Involve doctor immediately.

Personal protection for the First Aider.

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### · After inhalation:

Take affected persons into fresh air and keep quiet.

Call a doctor immediately.

In case of unconsciousness place patient stably in side position for transportation.

#### · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Call a doctor immediately.

#### · After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

Call a doctor immediately.

#### · After swallowing:

Rinse mouth.

Do not induce vomiting; call for medical help immediately.

A person vomiting while laying on their back should be turned onto their side.

### · 4.2 Most important symptoms and effects, both acute and delayed

 No further relevant information available.

### · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## 5 Firefighting measures

### · 5.1 Extinguishing media

· **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray.· **For safety reasons unsuitable extinguishing agents:** Water with full jet

### · 5.2 Special hazards arising from the substance or mixture

Carbon monoxide (CO)

Nitrogen oxides (NO<sub>x</sub>)

Formation of toxic gases is possible during heating or in case of fire.

### · 5.3 Advice for firefighters

#### · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

#### · Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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## 6 Accidental release measures

### · 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Avoid contact with the eyes and skin.

Ensure adequate ventilation

Do not inhale gases / fumes / aerosols.

Use suitable respiratory protective device in case of insufficient ventilation.

### · 6.2 Environmental precautions:

Do not allow to penetrate the ground/soil.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### · 6.3 Methods and material for containment and cleaning up:

Collect with an inert, non-combustible, absorbent material (i.e. sand, diatomaceous earth, acid binder, universal binder).

Dispose contaminated material as waste according to item 13.

### · 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### · 7.1 Precautions for safe handling

Keep receptacles tightly sealed.

Open and handle receptacle with care.

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

### · Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

### · 7.2 Conditions for safe storage, including any incompatibilities

#### · Storage:

#### · Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Prevent any seepage into the ground.

#### · Information about storage in one common storage facility: Store away from foodstuffs.

#### · Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Keep ignition sources away - Do not smoke.

#### · Recommended storage temperature: +15 °C - +25 °C

### · 7.3 Specific end use(s) No further relevant information available.

## 8 Exposure controls/personal protection

### · Additional information about design of technical facilities: No further data; see item 7.

### · 8.1 Control parameters

### · Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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**· DNELs**
**25513-64-8 trimethylhexane-1,6-diamine**
**Oral** Long-term exposure - systemic effects 0.05 mg/kg bw/day (general population)

**· PNECs**
**25513-64-8 trimethylhexane-1,6-diamine**

PNEC STP	72 mg/l (-)
PNEC aqua	0.0295 mg/l (freshwater)
	0.00295 mg/l (marine water)
	0.295 mg/l (intermittent releases)
PNEC sediment	0.18 mg/kg (freshwater)
	0.018 mg/kg (marine water)
PNEC soil	0.019 mg/kg (-)

**· Additional information:** The lists valid during the making were used as basis.

**· 8.2 Exposure controls**
**· Personal protective equipment:**
**· General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Do not eat, drink, smoke or sniff while working.

Store protective clothing separately.

Contaminated work clothing should not be allowed out of the workplace.

Immediately remove all soiled and contaminated clothing

Wash contaminated clothing before reuse.

Wash hands before breaks and at the end of work.

Use skin protection cream for skin protection.

Avoid contact with the eyes and skin.

After contact with skin, wash immediately with plenty of soap and water.

**· Respiratory protection:**

Ensure good ventilation/exhaustion at the workplace.

Adhere to the workplace limit values and / or other threshold values.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter A/P2

**· Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Check the permeability prior to each renewed use of the glove.

Preventive skin protection by use of skin-protecting agents is recommended.

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, BR

 Empfohlene Materialstärke:  $\geq 0.5$  mm

**· Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Value for the permeation: Level  $\leq 6$ 

- Eye protection:



Tightly sealed goggles

- Body protection: Protective work clothing

## 9 Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Pasty

Colour: Red-brown

- Odour: Amine-like

- pH-value at 20 °C: 11 (1:1 H<sub>2</sub>O)

- Change in condition

Boiling point/Boiling range: Undetermined.

- Flash point: 101 °C

- Ignition temperature: Not determined

- Decomposition temperature: >200 °C

- Self-igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.

- Vapour pressure at 20 °C: < 4 Pa

- Density at 20 °C: 2.51 g/cm<sup>3</sup>

- Solubility in / Miscibility with

water: Partly soluble.

- 9.2 Other information No further relevant information available.

## 10 Stability and reactivity

- 10.1 Reactivity No decomposition if used according to specifications.

- 10.2 Chemical stability No decomposition if used and stored according to specifications.

- 10.3 Possibility of hazardous reactions

Exothermic polymerization.

Reacts with acids, alkalis and oxidizing agents.

- 10.4 Conditions to avoid No further relevant information available.

- 10.5 Incompatible materials: Reacts with acids, alkalis and oxidizing agents.

- 10.6 Hazardous decomposition products:

Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide

Nitrogen oxides (NO<sub>x</sub>)

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## 11 Toxicological information

### · 11.1 Information on toxicological effects

#### · Acute toxicity:

#### · LD/LC50 values relevant for classification:

**25513-64-8 trimethylhexane-1,6-diamine**

Oral LD50 910 mg/kg (rat)

**6192-52-5 toluene-4-sulphonic acid**

Oral LD50 2480 mg/kg (rat)

#### · Primary irritant effect:

· **on the skin:** Caustic effect on skin and mucous membranes.

· **on the eye:** Strong irritant with the danger of severe eye injury.

#### · Subacute to chronic toxicity:

No further relevant information available.

**25513-64-8 trimethylhexane-1,6-diamine**

Oral NOAEL 10 mg/kg (rat) (90d)

#### · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· **Sensitisation** May cause sensitisation by skin contact.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

No further relevant information available.

## 12 Ecological information

### · 12.1 Toxicity

#### · Aquatic toxicity:

**25513-64-8 trimethylhexane-1,6-diamine**

EC10 72 mg/l (*pseudomonas putida*) (DIN38412, 17h)

EC50 31.5 mg/l (*daphnia magna*) (DIN 38412, 24h)

89 mg/l (*pseudomonas putida*) (DIN 38412 (17 h))

EC50/72h 29.5 mg/l (*scenedesmus subspicatus*)

LC50 174 mg/l (*leuciscus idus*) (DIN 38412, 48h)

### · 12.2 Persistence and degradability

**25513-64-8 trimethylhexane-1,6-diamine**

Biodegradation 7 % (-) (92/69/EWG Part C.4-A)

### · 12.3 Bioaccumulative potential

**25513-64-8 trimethylhexane-1,6-diamine**

log Pow -0.3 (-) (OECD 117)

#### · Behaviour in environmental systems:

· **12.4 Mobility in soil** No further relevant information available.

#### · Additional ecological information:

#### · General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

### · 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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 · **12.6 Other adverse effects** No further relevant information available.

### 13 Disposal considerations

 · **13.1 Waste treatment methods**

 · **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

 · **Waste disposal key:**

The waste codes given above are to be considered recommendations; because of regional and industrial sector specific features, application of different waste codes is possible.

 · **European waste catalogue**

16 05 06*	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
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 · **Uncleaned packaging:**

 · **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

 · **14.1 UN-Number**

 · **ADR, IMDG, IATA**

UN1760

 · **14.2 UN proper shipping name**

 · **ADR**

1760 CORROSIVE LIQUID, N.O.S. (toluene-4-sulphonic acid, TRIMETHYLHEXAMETHYLENEDIAMINES)

 · **IMDG, IATA**

CORROSIVE LIQUID, N.O.S. (toluene-4-sulphonic acid, TRIMETHYLHEXAMETHYLENEDIAMINES)

 · **14.3 Transport hazard class(es)**

 · **ADR, IMDG, IATA**

 · **Class**

8 Corrosive substances.

 · **Label**

8

 · **14.4 Packing group**

 · **ADR, IMDG, IATA**

III

 · **14.5 Environmental hazards:**

Not applicable.

 · **14.6 Special precautions for user**

Warning: Corrosive substances.

 · **Danger code (Kemler):**

80

 · **EMS Number:**

F-A,S-B

 · **Segregation groups**

Acids

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

Not applicable.

 · **Transport/Additional information:**

 · **ADR**

 · **Limited quantities (LQ)**

5L

 · **Transport category**

3

 · **Tunnel restriction code**

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**15 Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Information about limitation of use:**
  - Employment restrictions concerning juveniles must be observed.
  - Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant phrases**

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H412 Harmful to aquatic life with long lasting effects.
- R22 Harmful if swallowed.
- R35 Causes severe burns.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R43 May cause sensitisation by skin contact.
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- 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 (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3