

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 22.04.2010

Revision: 20.04.2010

1 Identification of substance:

- **Product details:**
- **Trade name:** VECTOR HTR
- **Application of the substance / the preparation:**
Chemicals for various applications
Washing liquid
- **Manufacturer / Supplier:**
N. Bucher AG
Pfadackerstraße 9
CH-8957 Spreitenbach
Switzerland
Tel.: ++41-56 418 19 90
Fax: ++41-56 418 19 99
- **E-mail address of the competent person responsible for the Safety Data Sheet:** info@nbucherag.com
- **Informing department:** Sales
- **Emergency information:** As above or next toxicological information centre

2 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment** void

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Aqueous mixture

· **Dangerous components:**

CAS: 102-71-6	Triethanolamine	< 30%
EINECS: 203-049-8		

4 First aid measures

- **General information:**
Remove contaminated clothing.
Take affected persons into the open air.
Do not leave affected persons unsupervised.
Personal protection for the person providing first aid.
- **After inhalation:** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact:**
Wash with soap and water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 22.04.2010

Revision: 20.04.2010

Trade name: VECTOR HTR

(Contd. of page 1)

- **For safety reasons unsuitable extinguishing agents none**
- **Special hazards caused by the material, its products of combustion or flue gases:**
Carbon monoxide (CO) and Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
Ammonia (NH₃)
Nitrosamines
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.

6 Accidental release measures

- **Person-related safety precautions:**
Ensure adequate ventilation.
Avoid skin and eye contact.
Do not breathe vapours.
Use breathing protection against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Damp down gases/fumes/haze with water spray jet.
Do not allow to enter drainage system, surface or ground water.
Inform respective authorities in case product reaches water or sewage system.
- **Measures for cleaning/collecting:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Avoid mixing with acids/materials containing acids under any circumstances.
Send for recovery or disposal in suitable containers.
Dispose of the material collected according to regulations.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Keep away from heat and direct sunlight.
Do not inhale vapours/aerosols.
Make sure that all applicable workplace limits are observed.
Avoid mixing with acids/materials containing acids under any circumstances.
Avoid contact with eyes.
Avoid prolonged or repeated skin contact.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
- **Further information about storage conditions:**
Store container in a well ventilated position.
Keep container tightly sealed.
Protect from heat and direct sunlight.
Protect from frost.

GB

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 22.04.2010

Revision: 20.04.2010

Trade name: VECTOR HTR

(Contd. of page 2)

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with critical 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.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Instantly remove any contaminated garments.
Do not eat, drink or smoke while working.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
Wash hands during breaks and at the end of the work.
Use skin protection cream for preventive skin protection.
- **Breathing equipment:**
Use breathing protection when aerosol or mist is formed.
If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.
- **Protection of hands:**
Protective gloves
To avoid skin problems reduce the wearing of gloves to the required minimum.
Check the permeability prior to each renewed use of the glove.
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.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- **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.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Protective gloves should be replaced at first signs of wear.
- **Eye protection:** Safety glasses
- **Body protection:**
Protective work clothing
Protective clothing should be selected specifically for the working place.

9 Physical and chemical properties:

· General Information

Form:	liquid
Colour:	blue
Smell:	mild ammonia-like

· Change in condition

Melting point/Melting range: not determined
Boiling point/Boiling range: not determined

(Contd. on page 4)

GB

Safety Data Sheet

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Revision: 20.04.2010

Trade name: VECTOR HTR

(Contd. of page 3)

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| · Flash point: | not applicable |
| · Self-inflammability: | Product is not selfigniting. |
| · Danger of explosion: | Product is not explosive. |
| · Density at 20°C: | 1.025 g/cm ³ |
| · Solubility in / Miscibility with Water: | soluble |
| · pH-value at 20°C: | 9.8 |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
 - Strong oxidizing agents
 - Reducing agents
 - Acids
 - Nitrites
 - Nitrosating agents
- **Dangerous reactions** Strong exothermic reaction with acids.
- **Dangerous products of decomposition:**
 - Carbon monoxide (CO) and Carbon dioxide (CO₂)
 - Nitrogen oxides (NO_x)
 - Ammonia (NH₃)
 - Nitrosamines

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

102-71-6 Triethanolamine

Oral	LD50	9000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

- **Primary irritant effect:**
 - **on the skin:** Slightly irritating
 - **on the eye:** Short time, reversible irritating effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
 - The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version.
 - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

102-71-6 Triethanolamine

EC50/16 h	> 5000 mg/l (pseudomonas putida)
EC50/24 h	1920 mg/l (daphnia)

(Contd. on page 5)

GB

Safety Data Sheet

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Trade name: VECTOR HTR

(Contd. of page 4)

LC50/96 h > 10000 mg/l (leuciscus idus)

- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water

13 Disposal considerations

- **Product:**
- **Recommendation**
Disposal must be made according to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border):**
- **ADR/RID Class:** -
- **Maritime transport IMDG-Code:**
- **IMDG Class:** -
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.
Observe all safety regulations when handling chemicals.
- **National regulations**
- **Decree to be applied in case of technical fault:** -
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for changes:**
The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by *.
- **Department issuing MSDS:**
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D-47829 Krefeld
Germany
- *** Data compared to the previous version altered.**