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**After Inhalation:**

The product is low volatility and hence of low inhalation risk under normal operating conditions. If fumes or vapour are generated by excessive heat, immediately remove from exposure. If a person is overcome by fumes obtain Emergency Medical Attention. If required, give artificial respiration.

**After Eye Contact:**

Immediately flush eyes with water for 15 minutes, while holding the eye open. If irritation persists, seek Medical Attention.

**After Ingestion:**

Immediately obtain Medical Attention, if a significant quantity had been ingested. Give lukewarm water, if completely conscious, but do not induce vomiting.

**Notes for Physician:**

Treat according to the symptoms (decontamination and vital functions), possible administration of ethanol.

## **05. FIRE FIGHTING MEASURES:**

**Extinguishing Media:**

Dry powder, alcohol resistant foam, sand, carbon dioxide (CO<sub>2</sub>) and water spray / fog.

**Exposure Hazards:**

In case of a fire, gases and vapour may be given off. The degree of risk is governed by the burning substance and the fire conditions.

**Protective Equipment:**

In case of a fire wear a self-contained breathing apparatus.

**Further Information:**

The contaminated extinguishing water must be disposed in accordance with the local authority regulations.

## **06. ACCIDENTAL RELEASE MEASURES:**

**Human Related Precautions:**

Avoid breathing of steam / aerosols.

**Environmental Precautions:**

The gelled nature of the product will minimise any flow. Prevent the entry into drains or sewers. Do not discharge the product into natural waters without pre-treatment (biological treatment plant).

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Methods for Cleaning-Up:

Scrape up any spilled material. Contain with absorbent material (e. g. sand, sawdust or granules) and dispose in accordance with the local authority regulations. Finally wash spillage area with water.

## 07. HANDLING AND STORAGE:

Handling:

Ensure a good ventilation of storage and working areas. Avoid the contact with eyes and skin by using protective equipment.

Fire-/Explosion-Protection:

No special measures required, except for Germany, where electrical equipment must be suitable for Temperature Class T2 (VDE 0165).

Storage:

Keep tightly sealed and store cool.

## 08. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Additional information for the design and layout of the technical equipment can be seen in section 07. of this document.

Personal Protective Equipment:

Respiratory Protection:

Not required under normal conditions of use, but avoid the breathing of vapour and aerosol.

Hand Protection:

Protective Gloves

Eye Protection:

Protective Goggles are required during aircraft de-icing/anti-icing (without closed basket system) and recommended for all other operations.

Skin Protection:

Normal work wear long-sleeved overalls are recommended. When aircraft de-icing/anti-icing is performed (without closed basket system) use an impervious suit.

As general precautionary and hygienically measures the usual precautions for the handling of chemicals must be observed.



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## 11. TOXICOLOGICAL INFORMATION:

Daphnia Magna (48hr LC<sub>50</sub>) ..... 3.650 mg/l  
Pimephales Promelas (96hr LC<sub>50</sub>) ..... 10.225 mg/l

LD<sub>50</sub> / oral / rat ..... > 2000 mg/kg  
Primary Skin Irritation / Rabbit ..... non-irritant  
Primary Mucous Membrane Irritation / Rabbit ..... non-irritant

The lethal doses by ingestion for humans is approx. with 1,5 g per kg of body weight. This calculates to a lethal doses of 90 to 100 g for an adult, respectively less with children. A smaller doses can lead to mental disorientation, damages to kidneys or damages to the central nerve system.

### Additional Data:

Some tests with mouse's and rates showed during oral ingestion of high doses damages to a developing embryo or fetus. In another study with rabbits this effect had been not seen. Out of the complete data available no identification of cancer supporting results can be seen.

## 12. ECOLOGICAL INFORMATION:

BOD<sub>5</sub> (at 20° C) ..... 0,59 kg O<sub>2</sub> / kg  
COD (at 20° C) ..... 1,18 kg O<sub>2</sub> / kg

### Elimination Information:

Test Method ..... OECD 301E (DOC Reduction)  
Degree of Elimination ..... > 99 % (7 days)  
Evaluation ..... readily biodegradable

### Behaviour and Environmental Fate:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

This product contains no organically bound halogen, no phenols and no triazoles. This is valid for the final product as well as all single chemicals used.

## 13. DISPOSAL CONSIDERATIONS:

The product must be dumped or incinerated in accordance with the local authority regulations, e.g. approved deposit place, approved burning facility and so on.

### Packaging:

Cleaned (uncontaminated) packaging can be re-used. Packaging that cannot be cleaned should be disposed of in the same manner as the contents.

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#### 14. TRANSPORT INFORMATION:

The product is not classified as hazardous under transport regulations (ADR,RIG & IMDG).

#### 15. REGULATORY INFORMATION:

The classification was derived from the amount of the following substance: Ethylene-Glycol. The substance should be labelled as follows according to EEC “Hazardous Substances”

Xn – Harmful

R22 – Harmful if swallowed

S2 – Keep out of reach of children

S24/25 – Avoid contact with skin and eyes

S46 – If swallowed, seek medical advice immediately and show this container or label

Federal Republic of Germany:

TA Air: Class III, Number 3.1.7.

“Flammable Liquids“ Classification (VbF): Keine

Water Hazard Class: 1, according VwVwS, dated 17.05.1999, Annex 4

For all other countries:

Please contact the local health and environmental agencies for further information and approval for the usage of the product. Some countries have banned the open application of ethylene glycol.

#### 16. OTHER INFORMATION:

The information contained herein is based on the present state of our knowledge and on current EC and National Laws, as user’s working conditions are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 01. without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in local rules and legislation. The information in this Material Safety Data Sheet is meant as a description of the safety requirements of our product. However, although prepared with all due care, LNT Solutions provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. LNT Solutions assumes no responsibility for any injury to vendor, end user or third party and it is the sole responsibility of the user to determine its suitability for any purpose. It is not to be considered as a guarantee of the products properties.