

Safety Data Sheet

acc. to OSHA HCS




Printing date 12/26/2013

Reviewed on 12/26/2013

1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 7100 - HARDENER 2
- **Article number:** 14653(H2)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 -  **Harmful**
Harmful by inhalation and if swallowed.
 -  **Irritant**
Irritating to eyes.
 - **Information concerning particular hazards for human and environment:**
The product has to be labeled due to the calculation procedure of international guidelines.
 - **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
-
- **Label elements**
 - **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with directives on hazardous materials.
 - **Code letter and hazard designation of product:**
 -  **Harmful**
 - **Risk phrases:**
Harmful by inhalation and if swallowed.
Irritating to eyes.
 - **Safety phrases:**
Keep container in a well-ventilated place.
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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This material and its container must be disposed of as hazardous waste.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = 2
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

4913-13-7	N,N,3,5-TETRAMETHYLANILINE	2.5-10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
 - Dilute with plenty of water.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components 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.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

- **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.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 320 °C (608 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

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

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C (68 °F):** 1.15 g/cm³ (9.597 lbs/gal)

- **Relative density** Not determined.

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------------------------------------------------------|-----------------|
| · UN-Number | Void |
| · DOT, ADR, IMDG, IATA | Void |
| · UN proper shipping name | Void |
| · DOT, ADR, IMDG, IATA | Void |
| · Transport hazard class(es) | Void |
| · DOT, ADR, IMDG, IATA | Void |
| · Class | Void |
| · Packing group | Void |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

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· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful

· **Risk phrases:**

Harmful by inhalation and if swallowed.

Irritating to eyes.

· **Safety phrases:**

Keep container in a well-ventilated place.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

This material and its container must be disposed of as hazardous waste.

· **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.

Safety data sheet
according to 1907/2006/EC, Article 31




Printing date 26.12.2013

Revision: 26.12.2013

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

- **Product identifier**
- **Trade name:** TECHNOVIT 7100 - HARDENER 2
- **Article number:** 14653(H2)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 Harmful
Harmful by inhalation and if swallowed.
 -  Irritant
Irritating to eyes.
 - **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.
-
- **Label elements**
 - **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
 - **Code letter and hazard designation of product:**
 Harmful
 - **Risk phrases:**
Harmful by inhalation and if swallowed.

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Irritating to eyes.

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

- **Safety phrases:**

- Keep container in a well-ventilated place.

- Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- This material and its container must be disposed of as hazardous waste.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

4913-13-7	N,N,3,5-TETRAMETHYLANILINE	2.5-10%
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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**

- **General information:**

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

- **After inhalation:**

- Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

- **After skin contact:** Generally the product does not irritate the skin.

- **After eye contact:**

- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** Call for a doctor immediately.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

- No further relevant information available.

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

- CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

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- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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.
- **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.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
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.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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· **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.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 320 °C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure:** Not determined.

· Density at 20 °C:	1.15 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:**

Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**· **Dynamic:** Not determined.

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Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **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:
Harmful
Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

AU

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according to 1907/2006/EC, Article 31

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Revision: 26.12.2013

Trade name: **TECHNOVIT 7100 - HARDENER 2**

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADG, ADN, IMDG, IATA	Void
· UN proper shipping name	
· ADG, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADG, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· ADG, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

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

- **Australian Inventory of Chemical Substances**

None of the ingredients is listed.

- **Standard for the Uniform Scheduling of Drugs and Poisons**

None of the ingredients is listed.

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Harmful

- **Risk phrases:**

Harmful by inhalation and if swallowed.

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*Irritating to eyes.***· Safety phrases:***Keep container in a well-ventilated place.**Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.**This material and its container must be disposed of as hazardous waste.***· 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.

-AU-

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1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 7100 - HARDENER 2
- **Article number:** 14653(H2)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

H302 Harmful if swallowed.

H320 Causes eye irritation.

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



Harmful

Harmful by inhalation and if swallowed.



Irritant

Irritating to eyes.

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

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**



Harmful

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CA

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Printing date 12/26/2013

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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- **Risk phrases:**

Harmful by inhalation and if swallowed.
Irritating to eyes.

- **Safety phrases:**

Keep container in a well-ventilated place.
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
This material and its container must be disposed of as hazardous waste.

- **Hazard description:**

- **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects



- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

4913-13-7	N,N,3,5-TETRAMETHYLANILINE	2.5-10%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Generally the product does not irritate the skin.

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Trade name: TECHNOVIT 7100 - HARDENER 2

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- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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Reviewed on 12/26/2013

Trade name: **TECHNOVIT 7100 - HARDENER 2**

(Contd. of page 3)

- **Control parameters**
- **Components 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.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odour threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** Not applicable.

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

(Contd. of page 4)

· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	320 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C:	1.15 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** Irritating effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful

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Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

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

- **Uncleaned packagings:**

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

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**

- **DOT, TDG, ADN, IMDG, IATA** Void

- **UN proper shipping name**

- **DOT, TDG, ADN, IMDG, IATA** Void

- **Transport hazard class(es)**

- **DOT, TDG, ADN, IMDG, IATA**

- **Class** Void

- **Packing group**

- **DOT, TDG, IMDG, IATA** Void

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- | | |
|----------------------------------------------------------------------------------|-----------------|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

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· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful

· **Risk phrases:**

Harmful by inhalation and if swallowed.

Irritating to eyes.

· **Safety phrases:**

Keep container in a well-ventilated place.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

This material and its container must be disposed of as hazardous waste.

· **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.

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

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

- **Product identifier**
- **Trade name:** TECHNOVIT 7100 - HARDENER 2
- **Article number:** 14653(H2)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

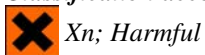
- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

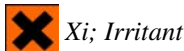
Acute Tox. 4 H302 Harmful if swallowed.

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



Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.



Xi; Irritant

R36: Irritating to eyes.

- **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.

- **Label elements**

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**



Xn Harmful

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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- **Risk phrases:**
 - 20/22 Harmful by inhalation and if swallowed.
 - 36 Irritating to eyes.
- **Safety phrases:**
 - 9 Keep container in a well-ventilated place.
 - 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 60 This material and its container must be disposed of as hazardous waste.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 4913-13-7 EINECS: 225-539-0	N,N,3,5-TETRAMETHYLANILINE ✘ Xn R20/21/22; ✘ Xi R36/37/38 R33 <hr style="border-top: 1px dashed black;"/> ⚠ STOT RE 2, H373; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2.5-10%
-------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------

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

4 First aid measures

- **Description of first aid measures**
- **General information:**
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
 - Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
 - In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
 - Most important symptoms and effects, both acute and delayed No further relevant information available.
 - Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.

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Trade name: **TECHNOVIT 7100 - HARDENER 2**

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
 - Dilute with plenty of water.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
 - Requirements to be met by storerooms and receptacles:** No special requirements.
 - Information about storage in one common storage facility:** Not required.
 - Further information about storage conditions:** Keep container tightly sealed.
 - 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.
- **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.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.

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- **Respiratory protection:**

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.

- **Protection of hands:**

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

- **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.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 320 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

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

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapour pressure:** Not determined.

- **Density at 20 °C:** 1.15 g/cm³

- **Relative density** Not determined.

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· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
· Solids content:	5.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **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:
Harmful
Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 6)

GB

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Revision: 26.12.2013

Trade name: **TECHNOVIT 7100 - HARDENER 2**

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- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

15 Regulatory information

- **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.

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· Relevant phrases

- H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R33 Danger of cumulative effects.
R36/37/38 Irritating to eyes, respiratory system and skin.

· Abbreviations and acronyms:

- 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)
VOC: Volatile Organic Compounds (USA, EU)

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

1 Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **Productidentificatie**
- **Handelsnaam:** TECHNOVIT 7100 - HARDENER 2
- **Artikelnummer:** 14653(H2)
- **Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Identificatie van de gevaren

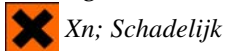
- **Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS07

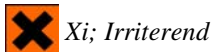
Acute Tox. 4 H302 Schadelijk bij inslikken.

- **Indeling overeenkomstig Richtlijn 67/548/EEG of Richtlijn 1999/45/EG**



Xn; Schadelijk

R20/22: Schadelijk bij inademing en opname door de mond.



Xi; Irriterend

R36: Irriterend voor de ogen.

- **Speciale gevaarsomschrijving voor mens en milieu:**

Het product moet een markering krijgen op basis van het berekeningsproces van de "Algemene classificatierichtlijn voor bereidingen in de EG", laatste editie.

- **Classificatiesysteem:**

De Classificatie komt overeen met de actuele EG-lijsten, maar is aangevuld met gegevens uit de vakliteratuur en van de onderneming.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)

· Etiketteringselementen
· Kentekening volgens EEG-richtlijnen:

Het produkt is volgens de EG-richtlijnen/GefStoffV (de verordening inzake gevaarlijke stoffen) geclassificeerd en gekenmerkt.

· Kenletter en gevaaromschrijving van het produkt:


Xn Schadelijk

· R-zinnen:

20/22 Schadelijk bij inademing en opname door de mond.

36 Irriterend voor de ogen.

· S-zinnen:

9 Op een goed eventileerde plaats bewaren.

23 Gas/rook/damp/spuitnevel niet inademen (toepasselijke term(en) aan te geven door de fabrikant).

26 Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen.

60 Deze stof en de verpakking als gevaarlijk afval afvoeren.

· Andere gevaren
· Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

3 Samenstelling en informatie over de bestanddelen

· Chemische karakterisering: Mengsels

· **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

· Gevaarlijke inhoudstoffen:

CAS: 4913-13-7 EINECS: 225-539-0	N,N,3,5-TETRAMETHYLANILINE Xn R20/21/22; Xi R36/37/38 R33 STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
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· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

4 Eerstehulpmaatregelen

· Beschrijving van de eerstehulpmaatregelen
· Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

· Na het inademen:

Frisse lucht toedienen, eventueel beademing, warmte. Wanneer de klachten niet ophouden, een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Over het algemeen is het produkt niet prikkelend voor de huid

· Na oogcontact:

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

- **Na inslikken:** Onmiddellijk arts raadplegen.
- **Informatie voor de arts:**
- **Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**
Geen verdere relevante informatie verkrijgbaar.

5 Brandbestrijdingsmaatregelen

- **Blusmiddelen**
- **Geschikte blusmiddelen:**
CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- **Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

6 Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.
- **Milieuvoorzorgsmaatregelen:**
Met veel water verdunnen.
Niet in de riolering/het oppervlaktewater/het grondwater laten terecht komen.
- **Insluitings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
Voor voldoende ventilatie zorgen.
- **Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

7 Hantering en opslag

- **Handling:**
- **Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

8 Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

- **Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**
Het produkt bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **Aanvullende gegevens:** *Als basis dienden lijsten die bij opstelling geldig waren.*
- **Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
*Verwijderd houden van eet- en drinkwaren.
 Verontreinigde kleding onmiddellijk uittrekken.
 Vóór de pauze en aan het einde van werktijd handen wassen.
 Aanraking met de ogen vermijden.
 Aanraking met de ogen en de huid vermijden.*
- **Ademhalingsbescherming:**
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**
*Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
 Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.
 Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.*
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.
- **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

9 Fysische en chemische eigenschappen

- **Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**

Vorm:	Vloeibaar
Kleur:	Kleurloos
Reuk:	Reukloos
Geurdrempelwaarde:	Niet bepaald.
- **pH-waarde:** Niet bepaald.
- **Toestandsverandering**

Smelpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	Niet bepaald.
- **Vlampunt:** Niet bruikbaar.

(Vervolg op blz. 5)

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(Vervolg van blz. 4)

· Ontvlambaarheid (vast, gasvormig):	Niet bruikbaar.
· Ontstekingstemperatuur:	320 °C
· Ontbindingstemperatuur:	Niet bepaald.
· Zelfontsteking:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingsgevaar:	Het produkt is niet ontploffingsgevaarlijk.
· Ontploffingsgrenzen:	
Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.
· Dampspanning:	Niet bepaald.
Dichtheid bij 20 °C:	1,15 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingssnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Volledig mengbaar.
· Verdelingscoëfficiënt (n-octanol/water):	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	0,0 %
VOC (EG)	0,00 %
Gehalte aan vaste bestanddelen:	5,0 %
· Overige informatie	Geen verdere relevante informatie verkrijgbaar.

10 Stabiliteit en reactiviteit

- **Reactiviteit**
- **Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **Mogelijke gevaarlijke reacties:** Geen gevaarlijke reacties bekend.
- **Te vermijden omstandigheden:** Geen verdere relevante informatie verkrijgbaar.
- **Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

11 Toxicologische informatie

- **Informatie over toxicologische effecten**
- **Acute toxiciteit:**
- **Primaire aandoening:**
- **op de huid:** Geen prikkelend effect.
- **aan het oog:** Prikkeling
- **Overgevoeligheid:** Geen effect van overgevoeligheid bekend.

(Vervolg op blz. 6)

NL

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(Vervolg van blz. 5)

- **Aanvullende toxicologische informatie:**
Het produkt vertoont op grond van het berekeningsprocédé van de algemene classificatie-richtlijnen van de EG voor toebereidingen in de laatste geldige redactie de volgende gevaren:
Schadelijk
Irriterend

12 Ecologische informatie

- **Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **Gedrag in milieu-compartmenten:**
- **Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

13 Instructies voor verwijdering

- **Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

14 Informatie met betrekking tot het vervoer

- | | |
|-------------------------------------------------------------------------|---------------------|
| · VN-nummer | |
| · ADR, ADN, IMDG, IATA | Niet van toepassing |
| · Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR, ADN, IMDG, IATA | Niet van toepassing |
| · Transportgevarenklasse(n) | |
| · ADR, ADN, IMDG, IATA | |
| · klasse | Niet van toepassing |
| · Verpakkingsgroep: | |
| · ADR, IMDG, IATA | Niet van toepassing |
| · Milieugevaren: | |
| · Marine pollutant: | Neen |

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

- | | |
|------------------------------------------------------------------------------------|-----------------|
| · Bijzondere voorzorgen voor de gebruiker | Niet bruikbaar. |
| · Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code | Niet bruikbaar. |
| · VN "Model Regulation": | - |

15 Regelgeving

- **Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**

- **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

- **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

geen der bestanddelen staat op de lijst.

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**

geen der bestanddelen staat op de lijst.

- **Nationale voorschriften:**

- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A

- **Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

16 Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van producteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Relevante zinnen**

H302 Schadelijk bij inslikken.

H312 Schadelijk bij contact met de huid.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

H332 Schadelijk bij inademing.

H335 Kan irritatie van de luchtwegen veroorzaken.

H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.

R20/21/22 Schadelijk bij inademing, opname door de mond en aanraking met de huid.

R33 Gevaar voor cumulatieve effecten.

R36/37/38 Irriterend voor de ogen, de ademhalingswegen en de huid.

- **Afkortingen en acroniemen:**

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)

VOC: Volatile Organic Compounds (USA, EU)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

1 Identification de la substance/du mélange et de la société/l'entreprise

- **Identificateur de produit**
- **Nom du produit:** TECHNOVIT 7100 - HARDENER 2
- **Code du produit:** 14653(H2)
- **Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Identification des dangers

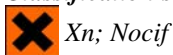
- **Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS07

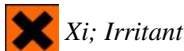
Acute Tox. 4 H302 Nocif en cas d'ingestion.

- **Classification selon la directive 67/548/CEE ou directive 1999/45/CE**



Xn; Nocif

R20/22: Nocif par inhalation et par ingestion.



Xi; Irritant

R36: Irritant pour les yeux.

- **Indications particulières concernant les dangers pour l'homme et l'environnement:**

Le produit est à étiqueter, conformément au procédé de calcul de la "Directive générale de classification pour les préparations de la CE", dans la dernière version valable.

- **Système de classification:**

La classification correspond aux listes CEE actuelles et est complétée par des indications tirées de publications spécialisées et des indications fournies par l'entreprise.

- **Éléments d'étiquetage**

- **Marquage selon les directives CEE:**

Le produit est classé et identifié suivant les directives de la Communauté Européenne/la "GefStoffV" = la Réglementation sur les Produits dangereux.

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Nom du produit: TECHNOVIT 7100 - HARDENER 2

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· **Lettre d'identification et caractérisation de danger du produit:**



Xn Nocif

· **Phrases R:**

- 20/22 Nocif par inhalation et par ingestion.
- 36 Irritant pour les yeux.

· **Phrases S:**

- 9 Conserver le récipient dans un endroit bien ventilé.
- 23 Ne pas respirer les gaz/fumées/vapeurs/aérosols [terme(s) approprié(s) à indiquer par le fabricant].
- 26 En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste.
- 60 Éliminer le produit et son récipient comme un déchet dangereux.

· **Autres dangers**

· **Résultats des évaluations PBT et vPvB**

- **PBT:** Non applicable.
- **vPvB:** Non applicable.

3 Composition/informations sur les composants

· **Caractérisation chimique: Mélanges**

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

CAS: 4913-13-7 EINECS: 225-539-0	N,N,3,5-TETRAMETHYLANILINE Xn R20/21/22; Xi R36/37/38 R33 STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
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· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

4 Premiers secours

· **Description des premiers secours**

· **Remarques générales:**

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **Après inhalation:**

Donner de l'air frais. Assistance respiratoire si nécessaire. Tenir le malade au chaud. Si les troubles persistent, consulter un médecin.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.

· **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.

· **Après ingestion:** Consulter immédiatement un médecin.

· **Indications destinées au médecin:**

· **Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

(suite page 3)

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(suite de la page 2)

- **Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
- Pas d'autres informations importantes disponibles.

5 Mesures de lutte contre l'incendie

- **Moyens d'extinction**
- **Moyens d'extinction:**
CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **Dangers particuliers résultant de la substance ou du mélange** Pas d'autres informations importantes disponibles.
- **Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

6 Mesures à prendre en cas de dispersion accidentelle

- **Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **Précautions pour la protection de l'environnement:**
Diluer avec beaucoup d'eau.
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **Méthodes et matériel de confinement et de nettoyage:**
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).
Évacuer les matériaux contaminés en tant que déchets conformément au point 13.
Assurer une aération suffisante.
- **Référence à d'autres sections**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

7 Manipulation et stockage

- **Manipulation:**
- **Précautions à prendre pour une manipulation sans danger**
Veiller à une bonne ventilation/aspiration du poste de travail.
Éviter la formation d'aérosols.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

8 Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

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(suite de la page 3)

- **Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

Le produit ne contient pas en quantité significative des substances présentant des valeurs-seuil à surveiller par poste de travail.

- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

- **Contrôles de l'exposition**

- **Equipement de protection individuel:**

- **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Eviter tout contact avec les yeux.

Eviter tout contact avec les yeux et avec la peau.

- **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

- **Protection des mains:**

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

- **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

- **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

- **Protection des yeux:**



Lunettes de protection hermétiques

9 Propriétés physiques et chimiques

- **Informations sur les propriétés physiques et chimiques essentielles**

- **Indications générales**

- **Aspect:**

Forme: Liquide

Couleur: Incolore

- **Odeur:** *Inodore*

- **Seuil olfactif:** *Non déterminé.*

- **valeur du pH:** *Non déterminé.*

- **Changement d'état**

Point de fusion: Non déterminé.

Point d'ébullition: Non déterminé.

- **Point d'éclair** *Non applicable.*

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· Inflammabilité (solide, gazeux):	Non applicable.
· Température d'inflammation:	320 °C
· Température de décomposition:	Non déterminé.
· Auto-inflammation:	Le produit ne s'enflamme pas spontanément.
· Danger d'explosion:	Le produit n'est pas explosif.
· Limites d'explosion:	
Inférieure:	Non déterminé.
Supérieure:	Non déterminé.
· Pression de vapeur:	Non déterminé.
· Densité à 20 °C:	1,15 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur.	Non déterminé.
· Vitesse d'évaporation	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Entièrement miscible
· Coefficient de partage (n-octanol/eau):	Non déterminé.
· Viscosité:	
Dynamique:	Non déterminé.
Cinématique:	Non déterminé.
· Teneur en solvants:	
Solvants organiques:	0,0 %
VOC (CE)	0,00 %
Teneur en substances solides:	5,0 %
· Autres informations	Pas d'autres informations importantes disponibles.

10 Stabilité et réactivité

- **Réactivité**
- **Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **Conditions à éviter** Pas d'autres informations importantes disponibles.
- **Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

11 Informations toxicologiques

- **Informations sur les effets toxicologiques**
- **Toxicité aiguë:**
- **Effet primaire d'irritation:**
- **de la peau:** Pas d'effet d'irritation.
- **des yeux:** Effet d'irritation.
- **Sensibilisation:** Aucun effet de sensibilisation connu.

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· **Indications toxicologiques complémentaires:**

Selon le procédé de calcul de la dernière version en vigueur de la directive générale CEE sur la classification des préparations, le produit présente les dangers suivants:

*Nocif
Irritant*

12 Informations écologiques

· **Toxicité**

· **Toxicité aquatique:** Pas d'autres informations importantes disponibles.

· **Persistance et dégradabilité** Pas d'autres informations importantes disponibles.

· **Comportement dans les compartiments de l'environnement:**

· **Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.

· **Mobilité dans le sol** Pas d'autres informations importantes disponibles.

· **Autres indications écologiques:**

· **Indications générales:**

Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant

Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.

· **Résultats des évaluations PBT et VPVB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

· **Autres effets néfastes** Pas d'autres informations importantes disponibles.

13 Considérations relatives à l'élimination

· **Méthodes de traitement des déchets**

· **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.

· **Emballages non nettoyés:**

· **Recommandation:** Evacuation conformément aux prescriptions légales.

· **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

14 Informations relatives au transport

· **No ONU**

· **ADR, ADN, IMDG, IATA** néant

· **Nom d'expédition des Nations unies**

· **ADR, ADN, IMDG, IATA** néant

· **Classe(s) de danger pour le transport**

· **ADR, ADN, IMDG, IATA**

· **Classe** néant

· **Groupe d'emballage**

· **ADR, IMDG, IATA** néant

· **Dangers pour l'environnement:**

· **Marine Pollutant:** Non

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· **Précautions particulières à prendre par l'utilisateur** Non applicable.

· **Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC** Non applicable.

· **"Règlement type" de l'ONU:** -

15 Informations réglementaires

· **Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

16 Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· **Phrases importantes**

H302 Nocif en cas d'ingestion.

H312 Nocif par contact cutané.

H315 Provoque une irritation cutanée.

H319 Provoque une sévère irritation des yeux.

H332 Nocif par inhalation.

H335 Peut irriter les voies respiratoires.

H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.

R20/21/22 Nocif par inhalation, par contact avec la peau et par ingestion.

R33 Danger d'effets cumulatifs.

R36/37/38 Irritant pour les yeux, les voies respiratoires et la peau.

· **Acronymes et abréviations:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

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)

VOC: Volatile Organic Compounds (USA, EU)

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1 Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

- **Produktidentifikator**
- **Handelsname:** TECHNOVIT 7100 - HARDENER 2
- **Artikelnummer:** 14653(H2)
- **Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Science Services
Goerzer Strasse 70
81549 München Germany
Tel: +49(0)89 159802 80
safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org
- **Auskunftgebender Bereich:** Product safety department
- **Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Mögliche Gefahren

- **Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

- **Einstufung gemäß Richtlinie 67/548/EWG oder Richtlinie 1999/45/EG**



Xn; Gesundheitsschädlich

R20/22: Gesundheitsschädlich beim Einatmen und Verschlucken.



Xi; Reizend

R36: Reizt die Augen.

- **Besondere Gefahrenhinweise für Mensch und Umwelt:**
Das Produkt ist kennzeichnungspflichtig auf Grund des Berechnungsverfahrens der "Allgemeinen Einstufungsrichtlinie für Zubereitungen der EG" in der letztgültigen Fassung.
- **Klassifizierungssystem:**
Die Klassifizierung entspricht den aktuellen EG-Listen, ist jedoch ergänzt durch Angaben aus der Fachliteratur und durch Firmenangaben.

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· Kennzeichnungselemente
· Kennzeichnung nach EWG-Richtlinien:

Das Produkt ist nach EG-Richtlinien/GefStoffV eingestuft und gekennzeichnet.

· Kennbuchstabe und Gefahrenbezeichnung des Produktes:


Xn Gesundheitsschädlich

· R-Sätze:

20/22 Gesundheitsschädlich beim Einatmen und Verschlucken.

36 Reizt die Augen.

· S-Sätze:

9 Behälter an einem gut gelüfteten Ort aufbewahren.

23 Gas/Rauch/Dampf/Aerosol nicht einatmen (geeignete Bezeichnung(en) vom Hersteller anzugeben).

26 Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren.

60 Dieses Produkt und sein Behälter sind als gefährlicher Abfall zu entsorgen.

· Sonstige Gefahren
· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

3 Zusammensetzung/Angaben zu Bestandteilen

· Chemische Charakterisierung: Gemische

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

· Gefährliche Inhaltsstoffe:

CAS: 4913-13-7 EINECS: 225-539-0	N,N,3,5-TETRAMETHYLANILINE Xn R20/21/22; Xi R36/37/38 R33 STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
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· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

4 Erste-Hilfe-Maßnahmen

· Beschreibung der Erste-Hilfe-Maßnahmen
· Allgemeine Hinweise:

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

· Nach Einatmen:

Frischlufzufuhr, gegebenenfalls Atemspende, Wärme. Bei anhaltenden Beschwerden Arzt konsultieren.

Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

· Nach Hautkontakt: Im allgemeinen ist das Produkt nicht hautreizend.

· Nach Augenkontakt:

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

· Nach Verschlucken: Sofort Arzt aufsuchen.

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- **Hinweise für den Arzt:**
- **Wichtigste akute und verzögert auftretende Symptome und Wirkungen**
Keine weiteren relevanten Informationen verfügbar.
- **Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung** Keine weiteren relevanten Informationen verfügbar.

5 Maßnahmen zur Brandbekämpfung

- **Löschmittel**
- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **Besondere vom Stoff oder Gemisch ausgehende Gefahren** Keine weiteren relevanten Informationen verfügbar.
- **Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

6 Maßnahmen bei unbeabsichtigter Freisetzung

- **Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.
- **Umweltschutzmaßnahmen:**
Mit viel Wasser verdünnen.
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **Methoden und Material für Rückhaltung und Reinigung:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
- **Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

7 Handhabung und Lagerung

- **Handhabung:**
- **Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

8 Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

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- **Zu überwachende Parameter**
- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**
Das Produkt enthält keine relevanten Mengen von Stoffen mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten.
- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Beschmutzte, getränkte Kleidung sofort ausziehen.
Vor den Pausen und bei Arbeitsende Hände waschen.
Berührung mit den Augen vermeiden.
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**
Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein.
Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.
Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.
- **Handschuhmaterial**
Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.
- **Durchdringungszeit des Handschuhmaterials**
Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.
- **Augenschutz:**



Dichtschließende Schutzbrille

9 Physikalische und chemische Eigenschaften

- **Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**
- **Allgemeine Angaben**
- **Aussehen:**

Form:	Flüssig
Farbe:	Farblos
- **Geruch:** Geruchlos
- **Geruchsschwelle:** Nicht bestimmt.
- **pH-Wert:** Nicht bestimmt.
- **Zustandsänderung**

Schmelzpunkt/Schmelzbereich:	Nicht bestimmt.
Siedepunkt/Siedebereich:	Nicht bestimmt.
- **Flammpunkt:** Nicht anwendbar.

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· Entzündlichkeit (fest, gasförmig):	Nicht anwendbar.
· Zündtemperatur:	320 °C
· Zersetzungstemperatur:	Nicht bestimmt.
· Selbstentzündlichkeit:	Das Produkt ist nicht selbstentzündlich.
· Explosionsgefahr:	Das Produkt ist nicht explosionsgefährlich.
· Explosionsgrenzen:	
Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.
· Dampfdruck:	Nicht bestimmt.
· Dichte bei 20 °C:	1,15 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht bestimmt.
· Verdampfungsgeschwindigkeit	Nicht bestimmt.
· Löslichkeit in / Mischbarkeit mit Wasser:	Vollständig mischbar.
· Verteilungskoeffizient (n-Octanol/Wasser):	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.
· Lösemittelgehalt:	
Organische Lösemittel:	0,0 %
VOC (EU)	0,00 %
· Festkörpergehalt:	5,0 %
· Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

10 Stabilität und Reaktivität

- **Reaktivität**
- **Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

11 Toxikologische Angaben

- **Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität:**
- **Primäre Reizwirkung:**
- **an der Haut:** Keine Reizwirkung.
- **am Auge:** Reizwirkung.
- **Sensibilisierung:** Keine sensibilisierende Wirkung bekannt.

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· Zusätzliche toxikologische Hinweise:

Das Produkt weist aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie der EG für Zubereitungen in der letztgültigen Fassung folgende Gefahren auf:

Gesundheitsschädlich
Reizend

12 Umweltbezogene Angaben

· Toxizität

· **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.

· **Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.

· Verhalten in Umweltkompartimenten:

· **Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.

· **Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.

· Weitere ökologische Hinweise:

· Allgemeine Hinweise:

Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend

Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.

· **Ergebnisse der PBT- und vPvB-Beurteilung**

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

· **Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

13 Hinweise zur Entsorgung

· Verfahren der Abfallbehandlung

· **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.

· Ungereinigte Verpackungen:

· **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

· **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

14 Angaben zum Transport

· UN-Nummer

· **ADR, ADN, IMDG, IATA** entfällt

· Ordnungsgemäße UN-Versandbezeichnung

· **ADR, ADN, IMDG, IATA** entfällt

· Transportgefahrenklassen

· **ADR, ADN, IMDG, IATA**

· **Klasse** entfällt

· Verpackungsgruppe

· **ADR, IMDG, IATA** entfällt

· Umweltgefahren:

· **Marine pollutant:** Nein

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

Handelsname: TECHNOVIT 7100 - HARDENER 2

(Fortsetzung von Seite 6)

- **Besondere Vorsichtsmaßnahmen für den Verwender** Nicht anwendbar.
- **Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code** Nicht anwendbar.
- **UN "Model Regulation":** -

15 Rechtsvorschriften

- **Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Nationale Vorschriften:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung):** schwach wassergefährdend.
- **Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

16 Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

· **Relevante Sätze**

H302 Gesundheitsschädlich bei Verschlucken.

H312 Gesundheitsschädlich bei Hautkontakt.

H315 Verursacht Hautreizungen.

H319 Verursacht schwere Augenreizung.

H332 Gesundheitsschädlich bei Einatmen.

H335 Kann die Atemwege reizen.

H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition.

R20/21/22 Gesundheitsschädlich beim Einatmen, Verschlucken und Berührung mit der Haut.

R33 Gefahr kumulativer Wirkungen.

R36/37/38 Reizt die Augen, die Atmungsorgane und die Haut.

· **Abkürzungen und Akronyme:**

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)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VOC: Volatile Organic Compounds (USA, EU)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

1 Identificazione della sostanza o della miscela e della società/impresa

- **Identificatore del prodotto**
- **Denominazione commerciale:** TECHNOVIT 7100 - HARDENER 2
- **Articolo numero:** 14653(H2)
- **Usi pertinenti identificati della sostanza o miscela e usi sconsigliati** Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Società Italiana Chimici**
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **Numero telefonico di emergenza:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Identificazione dei pericoli

- **Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

- **Classificazione secondo la direttiva 67/548/CEE o direttiva 1999/45/CE**



Xn; Nocivo

R20/22: Nocivo per inalazione e ingestione.



Xi; Irritante

R36: Irritante per gli occhi.

- **Indicazioni di pericolosità specifiche per l'uomo e l'ambiente:**

Il prodotto ha l'obbligo di classificazione in base al metodo di calcolo della "direttiva generale della Comunità sulla classificazione dei preparati" nella sua ultima versione valida.

- **Sistema di classificazione:**

La classificazione corrisponde alle attuali liste della CEE, è tuttavia integrata da dati raccolti da bibliografia specifica e da dati forniti dall'impresa.

- **Elementi dell'etichetta**

- **Classificazione secondo le direttive CEE:**

Il prodotto è classificato e codificato conformemente alle direttive CEE/norme sulle sostanze pericolose

(continua a pagina 2)

Scheda di dati di sicurezza
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Denominazione commerciale: TECHNOVIT 7100 - HARDENER 2

(Segue da pagina 1)

· **Sigla ed etichettatura di pericolosità del prodotto:**



Xn Nocivo

· **Natura dei rischi specifici (frasi R):**

20/22 Nocivo per inalazione e ingestione.
36 Irritante per gli occhi.

· **Consigli di prudenza (frasi S):**

9 Conservare il recipiente in luogo ben ventilato.
23 Non respirare i gas/fumi/vapori/aerosoli [termine(i) appropriato(i) da precisare da parte del produttore].
26 In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico.
60 Questo materiale e il suo contenitore devono essere smaltiti come rifiuti pericolosi.

· **Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.
· **vPvB:** Non applicabile.

3 Composizione/informazioni sugli ingredienti

· **Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

· **Sostanze pericolose:**

CAS: 4913-13-7	N,N,3,5-TETRAMETHYLANILINE	2,5-10%
EINECS: 225-539-0	Xn R20/21/22; Xi R36/37/38 R33	
	STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

4 Misure di primo soccorso

· **Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare in zona ben areata, praticare eventualmente la respirazione artificiale, tenere al caldo. Se i disturbi persistono consultare il medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.

· **Ingestione:** Chiamare subito il medico.

· **Indicazioni per il medico:**

· **Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

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- **Indicazione della eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

5 Misure antincendio

- **Mezzi di estinzione**
- **Mezzi di estinzione idonei:**
CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.
- **Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Indossare il respiratore.

6 Misure in caso di rilascio accidentale

- **Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **Precauzioni ambientali:**
Diluire abbondantemente con acqua.
Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **Metodi e materiali per il contenimento e per la bonifica:**
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
- **Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

7 Manipolazione e immagazzinamento

- **Manipolazione:**
- **Precauzioni per la manipolazione sicura**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **Condizioni per l'immagazzinamento sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **Usi finali specifici** Non sono disponibili altre informazioni.

8 Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **Parametri di controllo**
- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**
Il prodotto non contiene quantità rilevanti di sostanze i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro.

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- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
 - Tenere lontano da cibo, bevande e foraggi.
 - Togliere immediatamente gli abiti contaminati.
 - Lavarsi le mani prima dell'intervallo o a lavoro terminato.
 - Evitare il contatto con gli occhi.
 - Evitare il contatto con gli occhi e la pelle.
- **Maschera protettiva:**
 - Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**
 - Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.
 - A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.
 - Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.
- **Materiale dei guanti**
 - La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego
- **Tempo di permeazione del materiale dei guanti**
 - Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.
- **Occhiali protettivi:**



Occhiali protettivi a tenuta

9 Proprietà fisiche e chimiche

- **Informazioni sulle proprietà fisiche e chimiche fondamentali**
- **Indicazioni generali**
- **Aspetto:**
 - Forma:** Liquido
 - Colore:** Incolore
- **Odore:** Inodore
- **Soglia olfattiva:** Non definito.
- **valori di pH:** Non definito.
- **Cambiamento di stato**
 - Temperatura di fusione/ambito di fusione:** Non definito.
 - Temperatura di ebollizione/ambito di ebollizione:** Non definito.
- **Punto di infiammabilità:** Non applicabile.
- **Infiammabilità (solido, gassoso):** Non applicabile.
- **Temperatura di accensione:** 320 °C
- **Temperatura di decomposizione:** Non definito.

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· Autoaccensione:	Prodotto non autoinfiammabile.
· Pericolo di esplosione:	Prodotto non esplosivo.
· Limiti di infiammabilità: Inferiore: Superiore:	Non definito. Non definito.
· Tensione di vapore:	Non definito.
· Densità a 20 °C: · Densità relativa · Densità del vapore · Velocità di evaporazione	1,15 g/cm ³ Non definito. Non definito. Non definito.
· Solubilità in/Miscibilità con acqua:	Completamente miscibile.
· Coefficiente di distribuzione (n-Octanol/acqua):	Non definito.
· Viscosità: Dinamica: Cinematica:	Non definito. Non definito.
· Tenore del solvente: Solventi organici: VOC (CE)	0,0 % 0,00 %
· Contenuto solido: · Altre informazioni	5,0 % Non sono disponibili altre informazioni.

10 Stabilità e reattività

- **Reattività**
- **Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **Condizioni da evitare** Non sono disponibili altre informazioni.
- **Materiali incompatibili:** Non sono disponibili altre informazioni.
- **Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

11 Informazioni tossicologiche

- **Informazioni sugli effetti tossicologici**
- **Tossicità acuta:**
- **Irritabilità primaria:**
- **sulla pelle:** Non ha effetti irritanti.
- **sugli occhi:** Irritante.
- **Sensibilizzazione:** Non si conoscono effetti sensibilizzanti.
- **Ulteriori dati tossicologici:**
Il prodotto, in base al metodo di calcolo della direttiva generale della Comunità sulla classificazione dei preparati nella sua ultima versione valida, presenta i seguenti rischi:
Nocivo

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Irritante

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12 Informazioni ecologiche

- **Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **Comportamento in compartimenti ecologici:**
- **Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **Altri effetti avversi** Non sono disponibili altre informazioni.

13 Considerazioni sullo smaltimento

- **Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

14 Informazioni sul trasporto

· Numero ONU	
· ADR, ADN, IMDG, IATA	non applicabile
· Nome di spedizione dell'ONU	
· ADR, ADN, IMDG, IATA	non applicabile
· Classi di pericolo connesso al trasporto	
· ADR, ADN, IMDG, IATA	
· Classe	non applicabile
· Gruppo di imballaggio	
· ADR, IMDG, IATA	non applicabile
· Pericoli per l'ambiente:	
· Marine pollutant:	No
· Precauzioni speciali per gli utilizzatori	Non applicabile.
· Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC	Non applicabile.
· UN "Model Regulation":	-

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Scheda di dati di sicurezza
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Revisione: 26.12.2013

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15 Informazioni sulla regolamentazione

- **Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

16 Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· Frasi rilevanti

- H302 Nocivo se ingerito.
H312 Nocivo per contatto con la pelle.
H315 Provoca irritazione cutanea.
H319 Provoca grave irritazione oculare.
H332 Nocivo se inalato.
H335 Può irritare le vie respiratorie.
H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.

R20/21/22 Nocivo per inalazione, contatto con la pelle e per ingestione.

R33 Pericolo di effetti cumulativi.

R36/37/38 Irritante per gli occhi, le vie respiratorie e la pelle.

· Abbreviazioni e acronimi:

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)

VOC: Volatile Organic Compounds (USA, EU)

안전지침서

제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: **TECHNOVIT 7100 - HARDENER 2**
- 상품 번호: 14653(H2)
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.
- 제품의 권고 용도와 사용상의 제한: 실험실 화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성.위험성

- 순물질 또는 혼합물의 분류



GHS07

- H302 삼키면 유해함
- H319 눈에 심한 자극을 일으킴

- 라벨표기 요소
- GHS 라벨 요소
본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 그림문자



GHS07

- 신호어 경고
- 상표상에 명확히 위험성이 표시된 성분:
N,N,3,5-TETRAMETHYLANILINE
- 유해.위험 문구
삼키면 유해함
눈에 심한 자극을 일으킴
- 예방조치 문구
(보호장갑·보호의·보안경·안면보호구)를(을) 착용 하시오.

(2 쪽 에 계 속)

안 전 지 침 서

제31조의 1907/2006/EC에 따라

기 압 점: 2013.12.26

개 정: 2013.12.26

제품명: TECHNOVIT 7100 - HARDENER 2

(1 쪽부터 계속)


취급 후에는 취급 부위를 철저히 씻으시오.
 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.
 삼켜서 불편함을 느끼면 의료기관(의사)의 진찰을 받으시오.
 눈에 자극이 지속되면 의학적인 조치·조언을 구하십시오.
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

- 기타 유해성
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

- 화학적 특성: 혼합물
- 설명: 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소:

4913-13-7	N,N,3,5-TETRAMETHYLANILINE	2.5-10%
		

4 응급조치요령

- 응급조치요령 내용
- 일반적 정보: 중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
- 흡입했을 때: 신선한 공기를 쐬고, 필요할 경우에는 산소 호흡기의 도움을 받는다. 환자를 따뜻하게 하고, 증상이 지속될 경우에는 의료진의 도움을 구한다. 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- 피부에 접촉했을 때: 일반적으로 이 제품은 피부에 자극적이지 않다.
- 눈에 들어갔을 때: 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다.
- 먹었을 때: 즉시 의사의 도움을 구한다.
- 기타 의사의 주의사항:
- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제: 이산화탄소, 진화용 석회가루 또는 물방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 필요없음.
- 환경 관련 예방조치: 많은 물로 희석 시킨다.

(3 쪽에 계속)

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하수도망/해수면위의 물/지하수로 도달하지 않게 한다.

· 밀폐 및 정화 방법과 소재:

액체가 혼합된 물질(모래, 구조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.

충분한 환기가 되도록 한다.

· 타 섹션 참조

안전관리에 대한 정보는 제7 장을 참고하십시오.

개인보호장비에 대한 정보는 제8 장을 참고하십시오.

쓰레기처리에 대한 정보는 제13 장을 참고하십시오.

7 취급 및 저장방법

· 취급:

· 안전 취급을 위한 예방조치

작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.

연무질이 형성되는 것을 피한다.

· 화재 및 폭발 사고 예방대책에 관한 정보: 특별한 조치가 필요없음.

· 혼합위험성 등 안전 저장 조건

· 보관:

· 안전한 저장 방법: 특별한 요구사항이 없음.

· 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음

· 보관 조건에 관한 추가적인 정보: 용기를 새지 않게 밀폐한 채 보관한다.

· 구체적인 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항목 7 을 참고하십시오.

· 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

본 제품에는 작업장에서 감시가 필요한 주요한 가치의 어떤 해당 재료의 양을 함유하고 있지 않다.

· 추가 정보: 제조할 당시에 유효한 목록을 기초로 사용했다.

· 노출 통제

· 개인 보호구

· 일반적 보호 조치 및 위생 조치:

식료품, 음료수와 사료로부터 멀리 떨어져 두는 다.

더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

휴식 전이나 작업이 끝날때마다 손을 씻는다.

눈과의 접촉을 피한다.

눈과 피부와의 접촉은 피한다.

· 호흡기 보호:

단시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· 손 보호:

장갑재질은 제품 / 원료 / 조제를 투과시키지 않아야 하고, 내구성이 있어야 한다.

테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· 장갑의 재료

적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크 되어져야 한다.

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- **장갑재료의 투과시간**
정확한 관통 시간은 보호장갑 제조자에 의하여 인지되고, 준수되어야 한다.
- **눈 보호:**



· **확조이는 보안경**

9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반 정보	
· 외형	
· 물리적 상태:	액체의
· 색:	색소가 없는
· 냄새:	무취의
· 후각역치	알맞지 않다.
· pH:	알맞지 않다.
· 상태 변화	
· 녹는점/어는점:	맞지 않는다.
· 초기 끓는점과 끓는점 범위:	맞지 않는다.
· 인화점:	해당사항 없음.
· 인화성(고체, 기체):	해당사항 없음.
· 점화 온도:	320 °C
· 분해 온도:	알맞지 않다.
· 자기점화:	이제 품은 자연발화성이 없다.
· 폭발 위험:	이제 품은 폭발 위험성이 없다.
· 인화 또는 폭발 범위의 상한/하한	
· 아래로:	알맞지 않다.
· 위로:	알맞지 않다.
· 증기압:	알맞지 않다.
· 밀도의 경우 20 °C:	1.15 g/cm ³
· 비중:	알맞지 않다.
· 증기밀도:	알맞지 않다.
· 증발 속도:	알맞지 않다.
· 용해도:	
· 물:	완전히 혼합할 수 있는
· n 옥탄올/물 분배계수:	알맞지 않다.
· 점도:	
· 역학성:	알맞지 않다.
· 동점성:	알맞지 않다.
· 용매 내용물	
· 유기용매:	0.0 %
· VOC (EU)	0.00 %

(5 쪽에 계속)

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- **고체의 함량:** 5.0 %
- **기타 정보** 추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- **반응성**
- **화학적 안정성**
- **화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건:** 규정에 따라 사용할 경우 해체는 없다
- **유해반응 가능성** 위험한 반응으로는 알려지지 않았다.
- **피해야 할 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 금지 물질:** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성 있는 분해물들은 알려지지 않았다.

11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**
- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 무 자극
- **심한 눈 손상 또는 자극성:** 자극
- **감각 화:** 민감한 영향이 없는 것으로 알려져 있다.

12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:**
수질오염등급 1(자체등급 분류): 약하게 수질오염이 된
희석시키지 않은 채 대량으로 지하수나, 하천으로 그리고 하수도망에도 달하지 않게 한다.
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.
- **비위생적 포장:**
- **권고:** 당국의 지침에 입각한 쓰레기 처리.

(6 쪽에 계속)

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· **추천세정제:** 경우에 따라서 세제가 첨가된 물

(5 쪽부터 계속)

14 운송에 필요한 정보

· 유엔 번호 · ADR, ADN, IMDG, IATA	누락되다
· UN 적정 선적명 · ADR, ADN, IMDG, IATA	누락되다
· 교통 위험 클래스 · ADR, ADN, IMDG, IATA · 등급	누락되다
· 용기등급 · ADR, IMDG, IATA	누락되다
· 환경적 유해물질: · 해양오염물질:	아니오
· 이용자 특별 예방조치	해당사항 없음.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· UN "모범 규제":	-

15 법적 규제현황

- 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률
- GHS 라벨 요소
본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 위험도표



GHS07

- 표지어 경고
- 상 표상에 명확히 위험성이 표시된 성분:
N,N,3,5-TETRAMETHYLANILINE

- 위험 문구
삼키면 유해함
눈에 심한 자극을 일으킴

- 주의 문구
(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.
취급 후에는 취급 부위를 철저히 씻으십시오.
눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오.
삼켜서 불편함을 느끼면 의료기관(의사)의 진찰을 받으십시오.
눈에 자극이 지속되면 의학적인 조치·조언을 구하십시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

(7 쪽에 계속)

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· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

(6 쪽부터 계속)

16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

- **최초 작성일자:** 2013.12.26
- **개정 횟수 및 최종 개정일자:** 1 / 2013.12.26
- **약어와 두문자어:**

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

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)

VOC: Volatile Organic Compounds (USA, EU)

KR

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

1 Identificación de la sustancia o la mezcla y de la sociedad o la empresa

- **Identificador del producto**
- **Nombre comercial:** TECHNOVIT 7100 - HARDENER 2
- **Número del artículo:** 14653(H2)
- **Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**
No existen más datos relevantes disponibles.
- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio
- **Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aname**
C/ Perez Galdos no. 2
28693 Quijorna
Madrid, Spain
Tel: +34.91.816.89.50
Fax: +34.91.816.85.94
email: ventas@aname.es
- **Área de información:** Product safety department
- **Teléfono de emergencia:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Identificación de los peligros

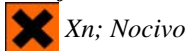
- **Clasificación de la sustancia o de la mezcla**
- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS07

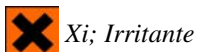
Acute Tox. 4 H302 Nocivo en caso de ingestión.

- **Clasificación con arreglo a la Directiva 67/548/CEE o Directiva 1999/45/CE**



Xn; Nocivo

R20/22: Nocivo por inhalación y por ingestión.



Xi; Irritante

R36: Irrita los ojos.

- **Indicaciones adicionales sobre los riesgos para personas y el medio ambiente:**

Es obligatorio identificar el producto según el procedimiento de cálculo de la última versión válida de la "Directiva general de clasificación de preparaciones de la UE".

- **Sistema de clasificación:**

La clasificación corresponde a las listas actuales de la CE, pero siempre completada por la literatura especializada y los informes de las empresas.

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- **Elementos de la etiqueta**

- **Distintivo según las directrices de la CEE:**

El producto está catalogado y etiquetado según las directrices de la CEE/Reglamento sobre sustancias peligrosas.

- **Letra indicadora y denominación de la peligrosidad del producto:**



Xn Nocivo

- **Frases-R:**

20/22 Nocivo por inhalación y por ingestión.

36 Irrita los ojos.

- **Frases-S:**

9 Consérvese el recipiente en lugar bien ventilado.

23 No respirar los gases/humos/vapores/aerosoles [denominación(es) adecuada(s) a especificar por el fabricante].

26 En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.

60 Elimínense el producto y su recipiente como residuos peligrosos.

- **Otros peligros**

- **Resultados de la valoración PBT y mPmB**

- **PBT:** No aplicable.

- **mPmB:** No aplicable.

3 Composición/información sobre los componentes

- **Caracterización química: Mezclas**

- **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

- **Componentes peligrosos:**

CAS: 4913-13-7 EINECS: 225-539-0	N,N,3,5-TETRAMETHYLANILINE Xn R20/21/22; Xi R36/37/38 R33 STOT RE 2, H373; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
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- **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

4 Primeros auxilios

- **Descripción de los primeros auxilios**

- **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

- **En caso de inhalación del producto:**

Suministrar aire fresco; eventualmente hacer respiración artificial, calor. Si los trastornos persisten, consultar al médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

- **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.

- **En caso de con los ojos:**

Limpiar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.

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- **En caso de ingestión:** Consultar inmediatamente un médico.
- **Indicaciones para el médico:**
- **Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**
No existen más datos relevantes disponibles.

5 Medidas de lucha contra incendios

- **Medios de extinción**
- **Sustancias extintoras apropiadas:**
CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.
- **Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** Colocarse la protección respiratoria.

6 Medidas en caso de vertido accidental

- **Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **Precauciones relativas al medio ambiente:**
Diluir con mucha agua.
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
Desechar el material contaminado como vertido según item 13.
Asegurar suficiente ventilación.
- **Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

7 Manipulación y almacenamiento

- **Manipulación:**
- **Precauciones para una manipulación segura**
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **Usos específicos finales** No existen más datos relevantes disponibles.

8 Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

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- **Parámetros de control**
- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**
El producto no contiene cantidades relevantes de sustancias con valores límite que exijan un control en el puesto de trabajo.
- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.
- **Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**
Mantener alejado de alimentos, bebidas y alimentos para animales.
Quitarse de inmediato la ropa ensuciada o impregnada.
Lavarse las manos antes de las pausas y al final del trabajo.
Evitar el contacto con los ojos.
Evitar el contacto con los ojos y la piel.
- **Protección respiratoria:**
Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.
- **Protección de manos:**
El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.
- **Material de los guantes**
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.
- **Tiempo de penetración del material de los guantes**
El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.
- **Protección de ojos:**



Gafas de protección herméticas

9 Propiedades físicas y químicas

- **Información sobre propiedades físicas y químicas básicas**
- **Datos generales**
- **Aspecto:**
- **Forma:** Líquido
- **Color:** Incoloro
- **Olor:** Inodoro
- **Umbral olfativo:** No determinado.
- **valor pH:** No determinado.
- **Cambio de estado**
- **Punto de fusión /campo de fusión:** Indeterminado.
- **Punto de ebullición /campo de ebullición:** Indeterminado.
- **Punto de inflamación:** No aplicable.

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· Inflamabilidad (sólido, gaseiforme):	No aplicable.
· Temperatura de ignición:	320 °C
· Temperatura de descomposición:	No determinado.
· Autoinflamabilidad:	El producto no es autoinflamable.
· Peligro de explosión:	El producto no es explosivo.
· Límites de explosión:	
Inferior:	No determinado.
Superior:	No determinado.
· Presión de vapor:	No determinado.
· Densidad a 20 °C:	1,15 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Velocidad de evaporación	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coefficiente de reparto (n-octanol/agua):	No determinado.
· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	0,0 %
VOC (CE)	0,00 %
Contenido de cuerpos sólidos:	5,0 %
· Información adicional	No existen más datos relevantes disponibles.

10 Estabilidad y reactividad

- **Reactividad**
- **Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **Posibilidad de reacciones peligrosas:** No se conocen reacciones peligrosas.
- **Condiciones que deben evitarse:** No existen más datos relevantes disponibles.
- **Materiales incompatibles:** No existen más datos relevantes disponibles.
- **Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

11 Información toxicológica

- **Información sobre los efectos toxicológicos**
- **Toxicidad aguda:**
- **Efecto estimulante primario:**
- **en la piel:** No produce irritaciones.
- **en el ojo:** Produce irritaciones.
- **Sensibilización:** No se conoce ningún efecto sensibilizante.

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· **Indicaciones toxicológicas adicionales:**

En conformidad con el procedimiento de cálculo contenido en la última versión de la Normativa General de Clasificación de la CE para Preparados, el producto tiene los siguientes riesgos:

Nocivo
Irritante

12 Información ecológica

· **Toxicidad**

· **Toxicidad acuática:** No existen más datos relevantes disponibles.

· **Persistencia y degradabilidad** No existen más datos relevantes disponibles.

· **Comportamiento en sistemas ecológicos:**

· **Potencial de bioacumulación** No existen más datos relevantes disponibles.

· **Movilidad en el suelo** No existen más datos relevantes disponibles.

· **Indicaciones medioambientales adicionales:**

· **Indicaciones generales:**

Nivel de riesgo para el agua 1 (autoclasificación): escasamente peligroso para el agua

En estado diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.

· **Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

· **Otros efectos adversos** No existen más datos relevantes disponibles.

13 Consideraciones relativas a la eliminación

· **Métodos para el tratamiento de residuos**

· **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.

· **Embalajes sin limpiar:**

· **Recomendación:** Eliminar conforme a las disposiciones oficiales.

· **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

14 Información relativa al transporte

· **Número UN**

· **ADR, ADN, IMDG, IATA** suprimido

· **Designación oficial de transporte de las Naciones Unidas**

· **ADR, ADN, IMDG, IATA** suprimido

· **Clase(s) de peligro para el transporte**

· **ADR, ADN, IMDG, IATA**

· **Clase** suprimido

· **Grupo de embalaje**

· **ADR, IMDG, IATA** suprimido

· **Peligros para el medio ambiente:**

· **Contaminante marino:** No

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· **Precauciones particulares para los usuarios** No aplicable.

· **Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC** No aplicable.

· **"Reglamentación Modelo" de la UNECE:** -

15 Información reglamentaria

· **Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

16 Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frases relevantes**

- H302 Nocivo en caso de ingestión.
- H312 Nocivo en contacto con la piel.
- H315 Provoca irritación cutánea.
- H319 Provoca irritación ocular grave.
- H332 Nocivo en caso de inhalación.
- H335 Puede irritar las vías respiratorias.
- H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.

R20/21/22 Nocivo por inhalación, por ingestión y en contacto con la piel.

R33 Peligro de efectos acumulativos.

R36/37/38 Irrita los ojos, la piel y las vías respiratorias.

· **Abreviaturas y acrónimos:**

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)

VOC: Volatile Organic Compounds (USA, EU)