

LANITZ-PRENA FOLIEN FACTORY GmbH

issuing date: 18 August 2009

last updated on: 18 August 2009

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product: **ORATEX® SPECIAL THINNER FOR HOTMELT ADHESIVE**

1. Identification of the substance and supplier

Product's name:

Name: **ORATEX® SPECIAL THINNER FOR HOTMELT ADHESIVE**

Art.-no.:0969 (250ml), 0973 (1 litre), 0971 (5 litres), 0972 (10 litres)

Supplier:

LANITZ-PRENA FOLIEN FACTORY GmbH

Am Ritterschlösschen 20

04179 Leipzig

Phone: +49-341 / 44 23 05-0

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E-mail: Info@oracover.de

Responsible department: laboratory phone: +49-341/44230534
Emergency phone: poisoning emergency number Berlin/Germany phone: +49-30/30686790
(consultation in English and German)

2. Composition / Information on ingredients

Chemical characteristics: dissolvent
State of aggregation: liquid
Colour: colourless
Odour: characteristic

Dangerous ingredients:

Tetrahydrofuran
CAS-No.: 109-99-9
EC-No.: 203-726-8
Danger: F; Xi
Classification: R11,R19,R36/37
Concentration: 100 %

3. Hazards identification

Highly flammable. Can produce potentially explosive peroxides. Irritates the eyes and the respiratory system.

4. First Aid Measures

General advices:

Bring affected persons out of the hazard zone, respecting your own safety. When unconscious, apply recovery position.

After inhalation:

Move to fresh air. Get the person affected into rest position and keep warm. Artificial respiration in case of fitful breathing or apnoea and seek medical advice.

After contact with Skin:

Remove immediately contaminated clothes. Clean wetted skin thoroughly with soap and water. When irritation persists, seek medical advice.

After contact with Eyes:

Keep eyelids open and rinse with plenty of clean and running water for at least 10 minutes. If necessary apply abacterial protective dressing. Seek medical advice!

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After Ingestion:

Rinse mouth with water, do not induce vomiting, do not drink anything. Keep affected person steady. Seek immediately medical advice.

5. Fire fighting measures

General advices:

Keep away from sources of ignition, do not smoke, take precautionary measures against static discharge. Cool down closed containers near the source of fire by water-jets to avoid explosions caused by increased inside pressure.

Extinguishing media:

Foam (alcohol resistant), CO₂, powder, atomised spray (water)

For safety reasons not adequate for extinguishing:

Water-jet

Special exposure hazards:

Can cause explosive gas-air mixtures. Due to the content of organic solvents for preparation, dense and black fume will be caused when burning. Combustion products or gases can be: carbon monoxide, CO₂, nitric oxides, water vapour.

Protective equipment:

Wear self contained breathing apparatus, if necessary full protection suit.

6. Accidental release measures

Personal protection:

Wear personal protective equipment. Keep persons away. Ensure adequate ventilation. Avoid breathing vapours, contact with skin and eyes. Keep ignition or heat sources away.

Environmental precautions:

Keep away from drains and surface water. Do not let it get into the underground or soil.

If not possible contact responsible authorities.

Methods of clean-up:

Collect released material with non-inflammable, absorbent material (e.g. sand, vermiculite, universal absorbent) and dispose contaminated material according to local regulations.

7. Handling and Storage

Handling:

Handling precautions:

Observe general safety advices when handling with chemicals. Avoid contact with skin and eyes.

Keep container well closed. Ensure good aspiration and ventilation at the workplace.

Ensure also good ventilation near to the bottom (vapours are heavier than air).

Fire and explosion prevention:

Keep away from sources of ignition; take precautionary measures against static discharge. Do not smoke. Vapours of solvents are heavier than air and spread on the ground. Vapours mixed with air produce an explosive mixture.

Storage:

Requirements for storerooms:

Electrical devices at the storeroom must be explosion proof according to technical standards. Floors must be conductive. Close open containers carefully and store them upright to avoid leakage.

Instructions on storage alongside other materials:

Store according to national legal regulations. Keep away from strongly acidic and alkaline materials as well as from oxidants.

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Further information on storage:

Keep only in well closed containers. Store in a dry, well ventilated place. Do not expose to heat or direct solar radiation.

Keep away from ignition sources.

Respect storage regulations on storage of flammable materials.

Additionally, storage conditions in compliance with regulations according to the Water Management Act and the federal state regulations concerning the storage of water hazardous substances (VawS) must be observed.

8. Exposure control/personal protection

Additional advises for designing technical devises:

Assure good ventilation. Assure, if necessary, observation of maximum allowable concentration by technical measures (aspiration).

Ingredients with workplace-related limit values to observe:

(MAC – maximum allowable concentration according to TRGS 900)

| CAS-No. | Denotation of the substance | MAC | Max. exposure limit |
|----------|-----------------------------|------------------------------|---------------------|
| 109-99-9 | Tetrahydrofuran | 150mg/m ³ , 50ppm | 2(ÜF) |

Remark Y – When observing the MAC there is no risk of damage to fruits.

Danger of absorption by skin (H)

Personal protection equipment

Respiratory protection:

Avoid inhalation of vapours, atomised sprays and aerosols. In case of limit value violation wear respiratory protection (full face mask/half mask) with adequate filter (type A).

Hand protection:

Wear suitable protective gloves (special laminates e.g. Barrier® from Ansell; penetration time > 480 min; observe specifications given by manufacturer). The gloves should be tested in any case for workplace-specific suitability (e. g. mechanical and thermal resistance, compatibility, antistatic). Worn out or damaged gloves must not be used.

When wearing protective gloves, it is advisable to wear under-gloves of cotton.

Eye protection:

As protection against spots of solvents, wear properly closed safety glasses with side protection.

Skin protection:

Wear suitable protective clothing (impermeable).

General advices:

Do not eat, drink or smoke at the workplace. Keep away from foods, drinks and animal feed.

9. Physical and chemical properties

State of aggregation: liquid
 Colour: colourless
 Odour: characteristic

| | Value / Field | Unit | Method |
|-------------------------------|---------------|---------------------|-----------|
| Flash point: | -20 | °C | DIN 51755 |
| Boiling range: | 64 - 67 | °C | DIN 51751 |
| Ignition point: | 230 | °C | DIN 51794 |
| Explosion limit: Lower limit: | 1.5 | Vol. % | |
| Upper limit: | 12.4 | Vol. % | |
| Density at 20 °C: | 0.8892 | g / cm ³ | |
| Vapour pressure at 20°C: | 200 | hPa | |

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Dynamic viscosity at 20°C: 0.47 mPas

Solubility in water at 15 °C: completely mixable

10. Stability and reactivity

This information is based on the data that is available on this product, its ingredients and similar materials.

Conditions to avoid:

When all recommended instructions on storage and handling are observed, no dangerous reactions are known.

Materials to avoid:

Keep away from strongly acidic and alkaline materials as well as from oxidants and oxygen.

Dangerous reactions:

Producing of peroxides with air oxygen.

Dangerous decomposition products:

Under high temperatures, dangerous decomposition products such as carbon monoxide, CO₂, smoke and nitric oxides can emerge.

When properly used and stored - **none!**

11. Toxicological information

This information is based on the data that is available on this product, its ingredients and similar materials.

| | |
|------------------------------------|--|
| Acute toxicity (LD 50) oral: | 3000 mg/kg (rat) |
| Acute toxicity (LD 50) dermal: | no information |
| Acute toxicity (LC 50) inhalation: | 55 - 60 mg/l (rat) |
| Contact with skin: | in case of long-term exposure irritation possible, not sensitising |
| Contact with eyes: | irritating |

When inhaled, the solvent vapours in high concentrations may have a narcotic effect and cause harms like irritation of the mucous membranes and the respiratory system as well as damages to the kidneys and the liver. Additionally, there might be disturbances of the central nervous system.

Indications and symptoms: headache, vertigo, fatigue, narcotic effect and rarely unconsciousness.

Longer and repeated contact with the product affects the natural greasing of the skin. The product can then penetrate the body by the skin.

Spots of the solvent can cause irritations of the eyes and reversible damages.

12. Ecological information

This information is based on the data that is available on this product, its ingredients and similar materials.

| | |
|------------------------|--|
| Biodegradability: | > 80 % easily degradable |
| Toxicity for fish: | LC50 > 2160 mg/l 96h (Pimephales promelas) |
| Toxicity for daphnia: | no information |
| Toxicity for algae: | no information |
| Toxicity for bacteria: | EC5 580 mg/l 16h (Pseudomonas putida) |

Additional ecological advices:

Keep away from drains, surface water, ground water and soil.

13. Disposal considerations

Do not dispose with household garbage. Avoid penetration into the sewerage system.

Product, absorbing material and packaging have to be disposed according to the local regulations.

Empty containers completely and dispose according to local regulations.

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Observe European garbage catalogue: the producer of the garbage is responsible for the correct codification and denotation of the litter.

14. Transport information

Road transport ADR, RID and GGVSE

| | |
|--------------------------|-----------------|
| UN – No | 2056 |
| Classification | F1 |
| Class | 3 |
| Hazard denotation number | 33 |
| Packing group | II |
| Hazard label | 3 |
| Limited quantity (LQ) | LQ6 |
| Exempted quantity (EQ) | E2 |
| Correct technical name | Tetrahydrofuran |

Sea transport IMDG, GGVSee

| | |
|-------------------------|-----------------|
| UN – No | 2056 |
| Class | 3 |
| EmS - Code | F-E, S-D |
| Marine Pollutant | No |
| Packing group | II |
| Hazard label | 3 |
| Exempted quantity (EQ) | E2 |
| Correct technical name: | Tetrahydrofuran |

Air transport ICAO/IATA

| | |
|------------------------|-----------------|
| UN – No | 2056 |
| Class | 3 |
| Packing group | II |
| PAX | 305 |
| CAO | 307 |
| Cargo IMP code | RFL |
| Limited quantity (LQ) | Y305 |
| Exempted quantity (EQ) | E2 |
| Correct technical name | Tetrahydrofuran |

15. Regulatory information

Designation according to EC-directives



F Highly flammable



Xi Irritant

Denotation according to Ordinance on Hazardous Substances for labelling:
Tetrahydrofuran

R - phrases

R 11 Highly flammable
R 19 May form explosive peroxides
R 36/37 Irritating to eyes and respiratory system

S - phrases

S 2 Keep out of the reach of children

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- S 16 Keep away from sources of ignition – No smoking
S 29/35 Do not empty into drains; dispose of this material and its container in a safe way
S 33 Take precautionary measures against static discharges
S 51 Use only in well-ventilated areas

National regulations:

Water hazard class: 1 slightly hazardous to water (according to VwVwS)

Bulletin: M017 (BGI 621) – solvents (of the German government safety organisation)

The latest versions of the Ordinance on Hazardous Substances and the Ordinance on General Plant Safety have to be observed strictly.

As protection from hazardous substances also the following regulations have to be observed strictly:

- Mutterschutzrichtlinienverordnung (legal protection of working mothers)
- Jugendarbeitsschutzgesetz (Youth Employment Protection Act)

16. Other information

The information contained in this data sheet correspond to our current state of knowledge. They solely describe the safety requirements when handling our products and do not represent an assurance of the product properties.

The user is responsible for observing all necessary legal regulations.

The information contained in this data sheet cannot be applied to other products.

As soon as the product mentioned in this safety data sheet is treated with any other materials or worked on, the information in this safety data sheet cannot be applied to the newly emerged material.

Wording of all R-phrases, referred to in section 2:

- R 11 Highly flammable
R 19 May form explosive peroxides
R 36/37 Irritating to eyes and respiratory system

Abbreviations and und Acronyms:

ADR: Accord europeen relatif au transport international des marchandises Dangereuses par Route

= European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Reglement concernant le transport international ferroviaire de marchandises Dangereuses

= Regulations Concerning the International Transport of Dangerous Goods by Rail

GGVSE: Gefahrgutverordnung Straße / Eisenbahn

= Regulation on Carriage of dangerous Goods by Road and Rail

IMDG: International Maritime Dangerous Goods Code

GGVSee: Gefahrgutverordnung See

= Regulation on Carriage of dangerous Goods by Sea

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

PAX: Passenger Aircraft

CAO: Cargo Aircraft Only

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe

= Administrative provision for water-hazardous substances