

EC-HEALTH AND SAFETY DATA SHEET (acc 1907/2006/EC, article 31)

LANITZ-PRENA FOLIEN FACTORY GmbH

issuing date: 30.07.2009

last updated on: 30.07.2009

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product: **ORACOLOR®** hardener for spraying

1. Identification of the substance and supplier

product's name:

name: **ORACOLOR®** hardener for spraying
art.-no.:100-997

supplier:

LANITZ-PRENA FOLIEN FACTORY GmbH
Am Ritterschlösschen 20
04179 Leipzig
Germany
phone: +49-341 / 44 23 05-0
fax: +49-341 / 44 23 05-99
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: contains aliphatic polyisocyanates
state of aggregation: liquid
colour: uncoloured
odour: characteristic

dangerous ingredients:

	Hexamethylen-1,6- diisocyanat homopolymer	Hexamethylen-1,6- diisocyanat	n-Butylacetat	Solventnaphtha (Solvesso100)	Xylol
CAS-No.:	28182-81-2	822-06-0	123-84-4	64742-95-6	1330-20-7
EC-No.:		212-485-8	204-658-1	265-199-0	215-535-7
symbole:	Xi	T		Xi, Xn, N	Xn, Xi
classification:	R43,R52/53	R23,R36/37/38 R42/43	R10,R66,R67	R10,R37,R51/53 R65,R66,R67	R10,R20/21, R38
Concentration:	ca. 64%	ca. 1%	15%	10%	10%

3. Hazards identification

Flammable. Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin. May cause sensitizations by inhalation and skin contact. Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

4. First Aid Measures

General advices:

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

After inhalation:

Move to fresh air, rest half upright position, loosen clothing, keep warm. Artificial respiration in case of difficulty in breathing or apnoea, seek medical attention.

After contact with Skin:

Wash immediately with soap and water. Remove contaminated clothing. When irritation persists, seek medical attention.

After contact with Eyes:

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Rinse immediately with plenty of water (not less than 10 minutes), hold eyelids away from eyeball. If necessary apply antibacterial protective dressing. Seek medical attention!

After Ingestion:

Seek medical attention immediately. Rinse mouth with water, do not induce vomiting, don't drink anything. Keep concerned person steady.

5. Fire fighting measures

general advices:

keep away from source of ignition, don't smoke, take precautionary measures against static discharge. Cool down closed containers by water-jets, avoiding explosions caused by raised 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. Burning products or gases can be: carbon monoxide, CO², nitric oxide, water vapour.

Protective equipment:

Wear self contained breathing apparatus, if necessary protective clothing.

6. Accidental release measures

personal protection:

Wear protective clothing. 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, surface water, ground water and soil.

If not possible contact responsible authorities.

Methods of clean-up:

Collect released material with inert absorbent (sand, vermiculite, universal absorbent) and dispose 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 box well closed. Ensure good aeration and ventilation at the working place.

Ensure also good ventilation near to bottom (vapour is heavier than air).

Fire and explosion prevention:

Use only in explosion safe area; keep away from sources of ignition; take precautionary measures against static discharge. Vapours are heavier than air and expaniate on the bottom. Vapours mixed with air compose an explosive mixture.

storage:

Requirements for storerooms:

Electrical devices must be explosion proof according to technical standards. Floors must be conductive.

Keep boxes well closed and store them upstanding to avoid leakage.

instructions on storage alongside other materials:

store according to national regulations. Keep away from acidic and alkaline materials, oxidisers and combustible materials.

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Further information on storage:

Keep only in well closed boxes. Storage in a dry, well ventilated place. Don't expose to heat or direct solar radiation. Keep away from electrical devices and ignition sources.

Respect storage regulations on storage of combustible materials.

Additionally, national regulations concerning water hazard class and storage of materials that are hazardous to water must be observed.

8. Exposure control/personal protection

Additional advises for designing technical devices:

Assure good ventilation. Assure, if necessary, observation of limit values by technical measures (aspiration).

Ingredients with limit values to observe:

CAS-No.	denotation substance	STEL	max. exposure limit
28182-81-2	Hexamethylen-1,6-disocyanat danger of sensensitization by inhalation	0,035mg/m ³ , 0,005ppm	1(ÜF)
123-86-4	n-Butylacetat (=1= do not exceed limit value at no time)	480mg/m ³ , 100ppm	=1=
64742-95-6	Solventnaphtha (Solvesso100) anotation P	100mg/m ³ , 20ppm	
1330-20-7	Xylol danger of absorption by skin (H)	440mg/m ³ , 100ppm	2(ÜF)

Personal protection equipment

respiratory protection:

Avoid inhalation of vapours, atomised spray and aerosols. In case of insufficient ventilation wear suitable respiratory equipment (full face mask/half mask) with adequate filter (type A).

hand protection:

wear suitable protective gloves (multi-layer gloves – observe specifications given by manufacturer). The gloves should be tested for 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 also wear under-gloves of cotton.

eye protection:

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

skin protection:

Wear suitable protective clothing (impermeable).

General advices:

Do not eat, drink or smoke at the working place. Keep away from foods, drinks and feeding stuff.

9. Physical and chemical properties

state of aggregation: liquid
colour: uncoloured
odour: characteristic

	value / field	unity	method
Flash point:	ca. 50	°C	DIN 51755
Boiling range:	ca. 120	°C	DIN 51751
Ignition point:	ca. 400	°C	DIN 51794

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density:	ca. 1	g / cm ³
Dynamic viscosity at 20°C:	ca. 80	mPas
Explosion prop: Lower limit:	0,8	Vol. %
Max limit:	7,5	Vol. %
Solubility water:	not	

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 suggested instructions are observed, no dangerous reactions are known.

Materials to avoid:

Keep away from acidic and alkaline materials and oxidisers.

Dangerous products of decomposition:

Under high temperatures, dangerous products of decomposition as carbon monoxide, CO², nitric oxide and vapour can emerge.

When all suggested instructions are observed, **no!**

11. Toxicological information

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

28182-81-2	Hexamethylen-1,6-disocyanat homopolymer
acute toxicity (LD 50) oral:	>5000 mg/kg (Rat)
acute toxicity (LD 50) dermal:	>15800 mg/kg (rabbit)
acute toxicity (LC 50) inhalation:	137-176 mg/m ³ (Rat)
contact with respiratory system:	lightly irritating (rabbit) – not sensibilising
Skin contact:	lightly irritating (rabbit) – not sensibilising
123-86-4	n-Butylacetat
acute toxicity (LD 50) oral:	13100 mg/kg (Rat)
acute toxicity (LD 50) dermal:	>17600 mg/kg (rabbit)
acute toxicity (LC 50) inhalation:	>21 mg/l 4h (Rat)
Skin contact:	not skin irritating – not sensibilising (guinea pig)
Eye contact:	light irritations possible (rabbit)
64742-95-6	Solventnaphtha (Solvesso100)
acute toxicity (LD 50) oral:	>3000 mg/kg (Rat)
acute toxicity (LD 50) dermal:	>3160 mg/kg (rabbit)
acute toxicity inhalation:	slightly toxic
contact with respiratory system:	lightly irritating
Skin contact:	light irritations possible
Eye contact:	light irritations possible
1330-20-7	Xylol
acute toxicity (LD 50) oral:	4300 mg/kg (Rat)
acute toxicity (LD 50) dermal:	2000 mg/kg (rabbit)
acute toxicity (LC 50) inhalation:	6350 mg/l 4h (Rat)
contact with respiratory system:	lightly irritating (rabbit) – not sensibilising
Skin contact:	skin irritating (rabbit) – danger of resorption by skin
Eye contact:	lightly irritating (rabbit) – not sensibilising

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

Indications and symptoms: headache, vertigo, fatigue, amyasthenia, rarely unconsciousness. Longer or repeated contact with the product affect the natural greasing of the skin and causes its drying-out. The product can then penetrate the body by the skin.

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Spots of the dissolver 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.

28182-81-2	Hexamethylen-1,6-disocyanat homopolymer
biodegradability:	not readily biodegradable 1% 28d
toxicity for fish:	LC0 > 100mg/l 96h (Brachydanio rerio)
toxicity for daphnia:	EC0 > 100mg/l 24h (Daphnia magna – big water flea)
toxicity for algae:	EC0 > 100mg/l 72h (Scenedesmus subspicactus)
toxicity for bacteria:	no information
123-86-4	n-Butylacetat
biodegradability:	readily biodegradable 98% 28d
toxicity for fish:	LC50 62mg/l 96h (Leuciscus idus melanotus)
toxicity for daphnia:	EC50 72,8mg/l 24h (Daphnia magna – big water flea)
toxicity for algae:	EC50 675mg/l 72h (Scenedesmus subspicactus)
toxicity for bacteria:	EC50 959mg/l 18h (Pseudomonas putida)
64742-95-6	Solventnaphtha (Solvesso100)
biodegradability:	readily biodegradable
toxicity for fish:	no information
toxicity for daphnia:	no information
toxicity for algae:	no information
toxicity for bacteria:	no information
1330-20-7	Xylol
biodegradability:	degradable
toxicity for fish:	LC50 86mg/l 48h (Leuciscus idus melanotus)
toxicity for daphnia:	EC50 165mg/l 24h (Daphnia magna – big water flea)
toxicity for algae:	no information
toxicity for bacteria:	no information

additional ecological advices:

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

13. Disposal considerations

Don't throw away with household garbage. Avoid penetration into the canalisation.

Has to be disposed according to the local regulations.

Empty box completely and dispose according to local regulations. .

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

UN – No	1866
Classification	F1
class	3
hazard denotation number	30
Packing group	III
Hazard label	3
Exempted quantity (EQ)	E1
Limited quantity (LQ)	LQ7
Correct technical name	Resin solution, flammable

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Sea transport IMDG

UN – No	1866
class	3
EmS - Code	F-E, S-E
Marine pollutant	No
Packing group	III
Hazard label	3
Exempted quantity (EQ)	E1
Correct technical name	Resin solution, flammable

Air transport ICAO/IATA

UN – No	1866
class	3
Packing group	III
PAX	309
CAO	310
Cargo IMP code	RFL
Limited quantity (LQ)	Y309
Exempted quantity (EQ)	E1
Correct technical name	Resin solution, flammable

15. Regulatory information

designation according to EC-directives



Xn Harmful

denotation according to Ordinance on Hazardous Substances: Hexamethylen-1,6-disocyanat, Solventnaphtha, Butylacetate, Xylene

R – phrases:

R 10	Flammable
R 20/21	Harmful by inhalation and in contact with skin
R 37/38	Irritating to respiratory system and skin
R 42/43	May cause sensitizations by inhalation and skin contact
R 65	Harmful, may cause lung damage if swallowed
R 66	Repeated contact may cause skin dryness or cracking
R 67	Vapours may cause drowsiness and dizziness

S - phrases:

S 2	Keep out of the reach of children
S 23	Do not breathe vapours
S 24/25	Avoid any contact with skin and eyes
S 29/35	Do not empty into drains; dispose of this material and its container in a safe way
S 45	In case of accident or if you feel unwell see medical advice immediately (show the label where possible)
S 60	This material and its container must be disposed of as hazardous waste
S 62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

National regulations:

Water hazard class: 2 (hazardous to waters)

bulletin: M017 – solvents (of the German government safety organisation)

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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 is, to the best of our knowledge, true and accurate, but any recommendations or suggestions, which may be made, are without guarantee, since the conditions of use are beyond our control.

The user is responsible for using this product correctly and respecting all regulations.

The information in this safety data sheet cannot be applied to other products. As soon as the product mentioned in this safety data sheet is immingled, mixed, 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 10	Flammable
R 20/21	Harmful by inhalation and in contact with skin
R 23	Toxic by inhalation
R 36/37/38	Irritating to eyes, respiratory system and skin
R 37	Irritating to respiratory system
R 38	Irritating to skin
R 42/43	May cause sensitizations by inhalation and skin contact
R 43	May cause sensitization by skin contact
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R 65	Harmful, may cause lung damage if swallowed
R 66	Repeated contact may cause skin dryness or cracking
R 67	Vapours may cause drowsiness and dizziness

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

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

PAX: Passenger Aircraft

CAO: Cargo Aircraft Only

STEL: Short Term Exposure Limit