

LANITZ-PRENA FOLIEN FACTORY GmbH

issuing date: 19 August 2009

last updated on: 19 August 2009

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product: **ORASTICK® BONDING EMULSION**

1. Identification of the substance and supplier

Product's name:

Name: **ORASTICK® BONDING EMULSION**

Art.-no.:0970

Supplier:

LANITZ-PRENA FOLIEN FACTORY GmbH

Am Ritterschlösschen 20

04179 Leipzig

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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: gloss oil
 State of aggregation: liquid
 Colour: colourless - yellowish
 Odour: smells of dissolvers

Dangerous ingredients:

	CAS-No.:	EC-No.:	Danger:	Classification:	Concentration:
Ethyl acetate	141-78-6	205-500-4	F,Xi	R11,R36,R66,R67	20-35%
n-Heptane	142-82-5	205-563-8	F,Xn,N	R11,R38,R50/53,R65,R67	10-20%
Isopropanol	67-63-0	200-661-7	F,Xi	R11,R36,R67	1-5%
Methanol	67-56-1	200-659-6	F,Xn	R11,R20/21/22,R68/20/21/22	1-5%
Methylcyclohexane	108-87-2	203-624-3	F,Xn,Xi,N	R11,R38,R51/53,R65,R67	1-5%
Toluol	108-88-3	203-625-9	F,Xn	R11,R38,R48/20,R63,R65,R67	ca. 1%
Ethanol	64-17-5	200-578-6	F	R11	<1%
2-Ethylhexyl acrylate	103-11-7	203-080-7	Xi	R37/38,R43	<1%
Methyl acrylate	96-33-3	202-500-6	F,Xn,Xi	R11,R20/21/22,R36/37/38,R43	<0,5%
Cyclohexane	110-82-7	203-806-2	F,Xn,Xi,N	R11,R38,R50/53,R65,R67	<0,5%
2,4-Pentanedione	123-54-6	204-634-0	Xn	R10,R22	<0,5%

3. Hazards identification

Highly flammable. Irritates the eyes and skin. Very toxic for aquatic organisms, can have long-term harmful effects on the waters. Harmful; can cause damages to the lungs by ingestion. Repeated contact can cause rough or chapped skin. Vapours may cause sleepiness and dazedness.

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.

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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!

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 may 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.

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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.

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 devices:

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
141-78-6	Ethyl acetate	1500 mg/m ³ , 400ppm	2(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits.			
142-82-5	n-Heptane	2100 mg/m ³ , 500ppm	1(ÜF)
67-63-0	Isopropanol	500 mg/m ³ , 200ppm	2(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits.			
67-56-1	Methanol	270 mg/m ³ , 200ppm	4(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits. Danger of absorption by the skin (H)			
108-87-2	Methylcyclohexane	810 mg/m ³ , 200ppm	2(ÜF)
108-88-3	Toluol	190 mg/m ³ , 50ppm	4(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits. Danger of absorption by the skin (H)			
64-17-5	Ethanol	960 mg/m ³ , 500ppm	2(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits.			
103-11-7	2-Ethylhexyl acrylate	82 mg/m ³ , 10ppm	1(ÜF)
96-33-3	Methyl acrylate	18 mg/m ³ , 5ppm	1(ÜF)
Danger of absorption by the skin (H)			
110-82-7	Cyclohexane	700 mg/m ³ , 200ppm	4(ÜF)
123-54-6	2,4-Pentanedione	126 mg/m ³ , 30ppm	2(ÜF)
Remark Y – When observing the MAC there is no risk of damage to fruits. Danger of absorption by the skin (H)			

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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 (multilayer gloves; 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 - yellowish
 Odour: smells of dissolvers

	Value / Field	Unit	Method
Flash point:	-10	°C	DIN 51755
Boiling range:	>60	°C	DIN 51751
Ignition point:	>260	°C	DIN 51794
Explosion limit: Lower limit:	ca. 2	Vol.%	
Upper limit:	ca. 19	Vol.%	
Density:	ca. 0.98	g / cm ³	
Dynamic viscosity:	1000 - 6000	mPas	
Solubility in water:	insoluble		

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 and oxidants.

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.

141-78-6	Ethyl acetate	
	Acute toxicity (LD 50) oral:	5600 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	18000 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalation:	58 mg/l 8h (rat)
	Contact with respiratory system:	irritating (nausea, vertigo, headache)
	Skin contact:	not irritating (rabbit) – not sensitising

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142-82-5	Eye contact: n-Heptane	slightly irritating (rabbit) – not sensitising
	Acute toxicity (LD 50) oral:	>2000 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	>2000 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalation:	>5 mg/l 4h (rat)
	Contact with respiratory system:	slightly irritating
	Skin contact:	irritations are possible (rabbit) – not sensitising
	Eye contact:	irritating (rabbit) – not damaging or sensitising
67-63-0	Isopropanol	
	Acute toxicity (LD 50) oral:	5280 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	12800 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalation:	72,6 mg/l 4h (rat)
	Contact with respiratory system:	no information
	Skin contact:	not irritating (rabbit) – not sensitising
	Eye contact:	irritating (rabbit) – not sensitising
67-56-1	Methanol	
	Acute toxicity (LD 50) oral:	5628 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	15800 mg/kg (human)
	Acute toxicity (LC 50) inhalativ:	83,8 mg/l 4h (rat)
	Contact with respiratory system:	irritating
	Skin contact:	irritating
	Eye contact:	irritating
108-88-3	Toluol	
	Acute toxicity (LD 50) oral:	5300 - 5910 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	12124 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalativ:	28.1 mg/l 4h (rat)
	Contact with respiratory system:	irritating
	Skin contact:	irritating (rabbit) – not sensitising
	Eye contact:	slightly irritating (rabbit)
64-17-5	Ethanol	
	Acute toxicity (LD 50) oral:	7060 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	>2000 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalativ:	39 mg/l 4h (mouse)
	Contact with respiratory system:	no information
	Skin contact:	slightly irritating (rabbit) – not sensitising
	Eye contact:	slightly irritating (rabbit) – not sensitising
103-11-7	2-Ethylhexyl acrylate	
	Acute toxicity (LD 50) oral:	4435 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	7522 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalativ:	no information
	Contact with respiratory system:	irritating
	Skin contact:	irritating - sensitisation possible
	Eye contact:	irritating
96-33-3	Methyl acrylate	
	Acute toxicity (LD 50) oral:	277 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	126 - 252 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalativ:	2.0 – 4.8 mg/l 4h (rat)
	Contact with respiratory system:	irritating
	Skin contact:	irritating - sensitisation possible
	Eye contact:	strongly irritating
110-82-7	Cyclohexane	
	Acute toxicity (LD 50) oral:	12705 mg/kg (rat)
	Acute toxicity (LD 50) dermal:	>2000 mg/kg (rabbit)
	Acute toxicity (LC 50) inhalativ:	14 mg/l 4h (rat)
	Contact with respiratory system:	irritating – not sensitising
	Skin contact:	irritating – not sensitising

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Eye contact:	irritating – not sensitising
123-54-6 2,4-Pentanedione	
Acute toxicity (LD 50) oral:	575 mg/kg (rat)
Acute toxicity (LD 50) dermal:	790 mg/kg (rabbit)
Acute toxicity (LC 50) inhalativ:	5.1 mg/l 4h (rat)
Contact with respiratory system:	irritating
Skin contact:	irritating
Eye contact:	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.

141-78-6 Ethyl acetate	
Biodegradability:	easily degradable 100 % 28d
Toxicity for fish:	LC50 230 mg/l 96h (Pimephales promelas)
Toxicity for daphnia:	EC50 717 mg/l 48h (Daphnia magna – big water flea)
Toxicity for algae:	EC50 3300 mg/l 48h (Scenedesmus subspicactus)
Toxicity for bacteria:	EC10 2900 mg/l 16h (Pseudomonas putida)
142-82-5 n-Heptane	
Biodegradability:	easily degradable
Toxicity for fish:	LC50 220 mg/l 96h (Leuciscus idus)
Toxicity for daphnia:	EC50 <=10mg/l 24h (Daphnia magna – Großer Wasserfloh)
Toxicity for algae:	IC50 <=10 mg/l
Toxicity for bacteria:	no information
67-63-0 Isopropanol	
Biodegradability:	easily degradable 95 % 21d
Toxicity for fish:	LC50 9640 mg/l 96h (Pimephales promelas)
Toxicity for daphnia:	EC50 13299 mg/l 48h (Daphnia magna – big water flea)
Toxicity for algae:	EC50 >1000 mg/l 72h (Scenedesmus subspicactus)
Toxicity for bacteria:	EC10 5175 mg/l 18h (Pseudomonas putida)
67-56-1 Methanol	
Biodegradability:	easily degradable 76 % 5d
Toxicity for fish:	LC50 15400mg/l 96h (Lepomis macrochirus)
Toxicity for daphnia:	EC50 >10000mg/l 48h (Daphnia magna – Großer Wasserfloh)
Toxicity for algae:	IC5 8000mg/l 8d (Scenedesmus quadricauda)
Toxicity for bacteria:	EC5 6600mg/l 16h (Pseudomonas putida)
108-88-3 Toluol	
Biodegradability:	easily degradable 86 % 20d
Toxicity for fish:	LC50 24mg/l 96h (Oncorhynchus mykiss)
Toxicity for daphnia:	EC50 11,5mg/l 48h (Daphnia magna – Großer Wasserfloh)
Toxicity for algae:	IC50 12mg/l 72h (Selenastrum capricornutum)
Toxicity for bacteria:	NOEC 29 mg/l 16h (Pseudomonas putida)
64-17-5 Ethanol	
Biodegradability:	easily degradable 70 % 5d
Toxicity for fish:	LC0 8140mg/l 48h (Goldorfe)
Toxicity for daphnia:	EC50 >1000mg/l 24h (Daphnia magna – Großer Wasserfloh)
Toxicity for algae:	EC0 5000mg/l (Scenedesmus quadricauda)

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103-11-7	Toxicity for bacteria: 2-Ethylhexyl acrylate	EC0 6500mg/l (Pseudomonas putida)
	Biodegradability:	easily degradable
	Toxicity for fish:	LC50 23 mg/l 48h (Leuciscus idus)
	Toxicity for daphnia:	EC50 17 mg/l 48h (Daphnia magna – Großer Wasserfloh)
	Toxicity for algae:	IC50 44mg/l 72h (Desmodesmus subspicatus)
96-33-3	Toxicity for bacteria: Methyl acrylate	no information
	Biodegradability:	no information
	Toxicity for fish:	LC50 1,1 mg/l 96h
	Toxicity for daphnia:	EC50 2,2 mg/l 48h (Daphnia magna – Großer Wasserfloh)
	Toxicity for algae:	IC50 15 mg/l 72h (Desmodesmus subspicatus)
110-82-7	Toxicity for bacteria: Cyclohexane	no information
	Biodegradability:	easily degradable 6 % 28d
	Toxicity for fish:	LC50 34 mg/l 96h (Lepomis macrochirus - Sonnenbarsch)
	Toxicity for daphnia:	EC50 3,78 mg/l 48h (Daphnia magna – Großer Wasserfloh)
	Toxicity for algae:	IC50 > 500 mg/l 72h (Desmodesmus subspicatus)
123-54-6	Toxicity for bacteria: 2,4-Pentanedione	no information
	Biodegradability:	easily degradable 79 - 88 % 28d
	Toxicity for fish:	LC50 / 48h 116 mg/l (Leuciscus idus)
	Toxicity for daphnia:	EC50 / 48h 75 mg/l (Daphnia magna)
	Toxicity for algae:	LC50 / 96h 72 mg/l (Oncorhynchus mykiss)
	Toxicity for bacteria:	EC10 / 16h 67 mg/l (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.

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	1133
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	Adhesives (heptane, ethyl acetate, isopropanol, methanol, toluol)

Sea transport IMDG, GGVSee

UN – No	1133
Class	3
EmS - Code	F-E, S-E
Marine Pollutant	No
Packing group	II

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Hazard label	3
Exempted quantity (EQ)	E2
Correct technical name:	Adhesives (heptane, ethyl acetate, isopropanol, methanol, toluol)

Air transport ICAO/IATA

UN – No	1133
Class	3
Packing group	II
PAX	305
CAO	307
Cargo IMP code	RFL
Limited quantity (LQ)	Y305
Exempted quantity (EQ)	E2
Correct technical name	Adhesives (heptane, ethyl acetate, isopropanol, methanol, toluol)

15. Regulatory information

Designation according to EC-directives



F Highly flammable



Xn Harmful



N Dangerous for the environment

Denotation according to Ordinance on Hazardous Substances for labelling:
heptane, ethyl acetate, isopropanol, methanol, toluol

R - phrases

R 11 Highly flammable
 R 36/38 Irritating to eyes and skin
 R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
 R 66 Repeated exposure may cause skin dryness or cracking.
 R 67 Vapours may cause drowsiness and dizziness

S - phrases

S 1/2 Keep locked up and out of the reach of children
 S 9 Keep container in well-ventilated place
 S 16 Keep away from sources of ignition – No smoking
 S 24/25 Avoid any inhalation, contact with skin and eyes. Wear suitable protective clothing and gloves
 S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
 S 29 Do not empty into drains
 S 33 Take precautionary measures against static discharges
 S 60 This material and its container must be disposed of as hazardous waste
 S 61 Avoid release to the environment. Refer to special instructions/safety data sheet
 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 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)

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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 10	Flammable
R 11	Highly flammable
R 20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R 22	Very Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. May cause cancer
R 23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R 36/37/38	Irritating to eyes, respiratory system and skin
R 36/38	Irritating to eyes and skin
R 37/38	Irritating to respiratory system and skin
R 38	Irritating to skin
R 39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R 43	May cause sensitisation by skin contact
R 48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R 50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic Environment
R 63	Possible risk of harm to the unborn child
R 65	Harmful: may cause lung damage if swallowed
R 66	Repeated exposure may cause skin dryness or cracking.
R 67	Vapours may cause drowsiness and dizziness
R 68/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed

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

UVV: Unfallverhütungsvorschriften = accident prevention regulations

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe

= Administrative provision for water-hazardous substances