

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.12.2014

Version number 2

Revision: 11.12.2014

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

- **Product identifier**
- **Trade name:** 869 Eurofinish Oil Wax Duo - Härter
- **Article number:** 75969
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Process category**
 PROC7 Industrial spraying
 PROC11 Non industrial spraying
- **Application of the substance / the mixture**
 Hardening agent/ Curing agent
 Coating compound/ Surface coating/ paint
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 FORBO Eurocol Deutschland GmbH
 August-Roebling-Str. 2
 D-99091 Erfurt
 Tel.: +49 (0)361 73041-0
 Fax: +49 (0)361 73041-92
 Website: <http://www.forbo-bonding.de>
- **Further information obtainable from:**
 Laboratory
 Ronny Dorna
 Ronny.Dorna@forbo.com
- **Emergency telephone number:** GGIZ +49-361-730730 (for Germany)

2 Hazards identification

- **Classification of the substance or mixture**



Acute Tox. 4 H332 Harmful if inhaled.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

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



Xn; Harmful

R20: Harmful by inhalation.



Xi; Irritant

R37: Irritating to respiratory system.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

- **Information concerning particular hazards for human and environment:** Not applicable.

- **Label elements**

- **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

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· Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labelling:

hexamethylene diisocyanate, homopolymer

hexamethylene diisocyanate

· Hazard statements

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

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

· Dangerous components:

CAS: 28182-81-2 NLP: 500-060-2	hexamethylene diisocyanate, homopolymer ⊗ Xn R20; ⊗ Xi R37; ⊗ Xi R43 ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	75-<100%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1	hexamethylene diisocyanate ⚠ T R23; ⊗ Xn R42/43; ⊗ Xi R36/37/38 ⚠ Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0,1-<0,5%

4 First aid measures

· Description of first aid measures

· General information: Immediately remove any clothing soiled by the product.

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- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **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.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen cyanide (HCN)
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter drains/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Dispose contaminated material as waste according to item 13.
- **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

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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- **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Store only in the original receptacle.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from humidity and water.
- **Storage class:** 10
- **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:**

822-06-0 hexamethylene diisocyanate

REL (USA)	Long-term value: 0,035 mg/m ³ , 0,005 ppm Ceiling limit: 0,14* mg/m ³ , 0,02* ppm *10-min
TLV (USA)	Long-term value: 0,034 mg/m ³ , 0,005 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Immediately remove all soiled and contaminated clothing
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
Wash hands before breaks and at the end of work.
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.

- **Recommended filter device for short term use:** Combination filter A2-P2
- **Protection of hands:**



Protective gloves

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

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

· **Material of gloves**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

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.

· **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

· **Body protection:** Protective work clothing

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Clear

· **Odour:** Light

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 285 °C (DIN 53171)

Fusion temperature / range: Undetermined.

· **Flash point:** > 100 °C (DIN 22719)

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:** 435 °C

· **Decomposition temperature:** ~150 °C

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

· **Vapour pressure at 20 °C:** <0,00001 hPa (EG A4)

· **Density at 20 °C:** 1,15 g/cm³ (DIN 51757)

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** 8,38 log POW

· **Viscosity:**

Kinematic at 20 °C: 40 s (ISO 6 mm)

· **Solvent content:**

Organic solvents: 0,0 %

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VOC (CE)	Not applicable.
Solids content:	100,0 %
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**
Reacts with alcohols, amines, aqueous acids and alkalis.
Develops
Carbon dioxide
Danger of bursting.
- **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:**

- **LD/LC50 values relevant for classification:**

28182-81-2 hexamethylene diisocyanate, homopolymer

Oral	LD50	>5000 mg/kg (rat)
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822-06-0 hexamethylene diisocyanate

Oral	LD50	738 mg/kg (rat)
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Dermal	LD50	593 mg/kg (rat)
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- **Primary irritant effect:**

- **on the skin:**

Prolonged contact may cause skin irritation.

28182-81-2 hexamethylene diisocyanate, homopolymer

Sensitisation	Skin Sensitisation	positiv (Guinea Pig)
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- **on the eye:** Irritating effect.

- **Sensitisation:** Sensitisation possible through skin contact.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

822-06-0 hexamethylene diisocyanate

EC50/48h	>89,1 mg/l (Daphnia magna) (OECD 202)
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LC50/96h	>82,8 mg/l (zebrafish (Brachydanio rerio)) (OECD 203)
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- **Persistence and degradability** Not easily biodegradable

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

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

- **Ecotoxical effects:**

- **Behaviour in sewage processing plants:**

Type of test	Effective concentration	Method	Assessment
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822-06-0 hexamethylene diisocyanate			
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EC50/3h	842 mg/l (activated sludge) (OECD 209)		
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- **Additional ecological information:**

- **General notes:**

Do not allow product to reach ground water, water course or sewage system.

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

- **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.

- **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
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08 01 00	wastes from MFSU and removal of paint and varnish
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08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
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08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
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08 05 00	wastes not otherwise specified in 08
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08 05 01*	waste isocyanates
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- **Uncleaned packaging:**

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

14 Transport information

- **UN-Number**

· ADR, ADN, IMDG, IATA	Void
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- **UN proper shipping name**

· ADR	Void
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· ADN, IMDG, IATA	Void
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- **Transport hazard class(es)**

· ADR, ADN, IMDG, IATA	
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· Class	Void
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· 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.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed. (94/33/EC)
Employment restrictions concerning pregnant and lactating women must be observed. (92/85/EC)
- **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.

- **Department issuing MSDS:** Laboratory
- **Contact:**
Dr. Amina Chnirheb
Amina.Chnirheb@forbo.com
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- *** Data compared to the previous version altered.**

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