



WOOD FINISHES DIRECT

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For purchasing information visit:
[Osmo Oil Stain Hardener \(6631\)](#)

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

Printing date 08.10.2014

Version number 1

Revision: 08.10.2014

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

1.1 Product identifier

Trade name: **6631 Hardener for Oil Stain**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use : Hardener for coating materials or adhesives for industrial and trade applications
Uses advised against : Not suitable for use in homemaker (DIY) applications.

Application of the substance / the mixture

Hardening agent/ Curing agent
Use only in combination with Osmo Oil Stain

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Osmo Holz und Color GmbH & Co. KG
Affhüppen Esch 12
D-48231 Warendorf

Further information obtainable from:

Product safety department
Phone: +49 (0) 251 / 692 - 188
Fax: +49 (0) 251 / 692 - 462
e-mail: helmut.starp@osmo.de

1.4 Emergency telephone number:

emergency phone no. Berlin (24h): +49 (0) 30 / 30686 790 advisory service in German and English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour.

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.

R10: Flammable.

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**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.

2.2 Label elements**Labelling according to Regulation****(EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07

Signal word

Warning

**Hazard-determining components
 of labelling:**

Hexamethylene diisocyanate, oligomers

Hazard statements

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat/open flames. - No smoking.

P260 Do not breathe mist/vapours/spray.

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

P280 Wear protective gloves.

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

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

Additional information:

Observe the general safety regulations when handling chemicals.

Always wear a dust mask when sanding.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Description:**

Mixture of substances listed below with nonhazardous additions.

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Dangerous components:		
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119488934-20	Hexamethylene diisocyanate, oligomers ☒ Xn R20; ☒ Xi R37; ☒ Xi R43 ☠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate R10 ☠ Flam. Liq. 3, H226	10-<25%

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

SECTION 4: First aid measures

4.1 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.

Immediately remove any clothing soiled by the product.

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.

If skin irritation continues, consult a doctor.

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

After swallowing: Do not induce vomiting; call for medical help immediately.

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

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 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

5.2 Special hazards arising from the substance or mixture Formation of toxic gases is possible during heating or in case of fire.
 Carbon monoxide (CO)
 Isocyanate vapors
 (Traces)
 Hydrogen cyanide (HCN)

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5.3 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

Cool endangered receptacles with water spray.
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures
**6.1 Personal precautions,
 protective equipment and
 emergency procedures**

Wear protective equipment. Keep unprotected persons away.
 Keep away from ignition sources.
 Ensure adequate ventilation

6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.
 Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for
 containment and cleaning up:**

Pick up mechanically.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.

6.4 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.

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Keep away from heat and direct sunlight.
 Keep receptacles tightly sealed.
 Use only in well ventilated areas.
 Prevent formation of aerosols.

**Information about fire - and
 explosion protection:**

Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.

7.2 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.

**Information about storage in one
 common storage facility:**

Store away from foodstuffs.
 Do not store together with alkalis (caustic solutions).

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Further information about storage conditions:

Do not store together with oxidizing and acidic materials.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from frost.

Storage class:

3

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical facilities:**

No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****108-65-6 2-methoxy-1-methylethyl acetate**

WEL	Short-term value: 548 mg/m ³ , 100 ppm
	Long-term value: 274 mg/m ³ , 50 ppm
	Sk

Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Keep away from foodstuffs, beverages and feed.

Do not eat, drink, smoke or sniff while working.

Do not carry product impregnated cleaning cloths in trouser pockets.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

Respiratory protection:

Use suitable respiratory protective device only when aerosol or mist is formed.

Only during spraying without adequate removal by suction.

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.

Fresh air mask

Short term filter device:

Filter A/P2

In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

Protection of hands:

Protective gloves

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

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

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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. Butyl rubber, BR Fluorocarbon rubber (Viton)
Penetration time of glove material	Recommended thickness of the material: ≥ 0.5 mm For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6). The exact break trough 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

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Fluid
Colour:	According to product specification Colourless
Odour:	Mild
Odour threshold:	Not determined.

pH-value: Not applicable**Change in condition**

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

Flash point: 45 °C (DIN EN ISO 2719)**Flammability (solid, gaseous):** Not applicable.**Ignition temperature:** 315 °C**Decomposition temperature:** Not determined.**Self-igniting:** Product is not selfigniting.**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.**Explosion limits:**

Lower:	1.5 Vol %
Upper:	10.8 Vol %

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Vapour pressure at 20 °C:	3.4 hPa (Lösemittel/solvent)
Density at 20 °C:	1.145 g/cm ³ (DIN 51757)
Relative density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Not determined.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C:	36 s (DIN 53211/4mm)
Solvent content:	
VOC (EC)	150.0 g/l
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity****10.2 Chemical stability****Thermal decomposition /****conditions to be avoided:**

No decomposition if used according to specifications.

10.3 Possibility of hazardous**reactions**

Reacts with alcohols, amines, aqueous acids and alkalis.

Danger of bursting.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials:

No further relevant information available.

10.6 Hazardous decomposition**products:**

No hazardous decomposition products when stored and handled correctly.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:****LD/LC50 values relevant for classification:****28182-81-2 Hexamethylene diisocyanate, oligomers**

Oral	LD50	>5000 mg/kg (rat)
Inhalative	LC50 / 4h	1.5 mg/l (rat) (OECD- Prüfrichtlinie 403)

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108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8532 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50 / 4h	35.7 mg/l (rat)

Primary irritant effect:**on the skin:****28182-81-2 Hexamethylene diisocyanate, oligomers**

Dermal	Hautreizung	schwach reizend (rabbit) (OECD- Prüfrichtlinie 404)
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on the eye: No irritating effect.**Sensitization:** Sensitization possible through skin contact.**28182-81-2 Hexamethylene diisocyanate, oligomers**

Inhalative	Sensibilisierung	positiv (mouse) (Lokaler Lymphknoten-Test (LLNA))
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Other information (about experimental toxicology):

Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.

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

May cause sensitisation by skin contact.

Special properties/effects: Over-exposure, especially when spraying coatings containing isocyanate without the necessary precautions, entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin may cause tanning and irritant effects.

May cause sensitisation by skin contact.

Sensitisation**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

hexamethylene-1,6-diisocyanate homopolymer.

Carcinogenicity: Based on available data the classification criteria are not met.

Mutagenicity: In vitro tests did not show mutagenic effects. Based on available data the classification criteria are not met.

Teratogenicity: Based on available data the classification criteria are not met.

Reproductive toxicity: Based on available data the classification criteria are not met.

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SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****28182-81-2 Hexamethylene diisocyanate, oligomers**

Biolog. Abbaubarkeit	nach 28 Tagen 2 % (-) (OECD Guideline for Testing of Chemicals, No.301 D)
EC50 / 48h	> 100 mg/l (daphnia) (OECD- Prüfrichtlinie 202)
IC50 / 72h	199 mg/l (algae) (OECD- Prüfrichtlinie 201)
LC50 / 96h	> 100 mg/l (Brachydanio rerio) (OECD- Prüfrichtlinie 203)

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential****28182-81-2 Hexamethylene diisocyanate, oligomers**

log POW	ca 8.38 (-) (Wert berechnet)
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12.4 Mobility in soil No further relevant information available.**Ecotoxicological effects:****Behaviour in sewage processing plants:****28182-81-2 Hexamethylene diisocyanate, oligomers**

EC0 / 3h	>100 mg/l (daphnia)
EC50	> 10.000 mg/l (activated sludge organism) (OECD Guideline for Testing of Chemicals, No.209)

108-65-6 2-methoxy-1-methylethyl acetate

EC50	>1000 mg/l (algae)
	>1000 mg/l (activated sludge organism)
	>100 mg/l (daphnia)
	>100 mg/l (fish)

Additional ecological information:**According to the formulation**

contains the following heavy metals and compounds from the

EU guideline NO. 2006/11/EC:

Isocyanate reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.

General notes:

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

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

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12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 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.
 After final product withdrawal, all residues must be removed from containers (dripfree, powderfree or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. These containers can be returned for recycling to the appropriate centres set up within the framework of the existing takeback scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA UN1263

14.2 UN proper shipping name

ADR 1263 PAINT RELATED MATERIAL
IMDG, IATA PAINT RELATED MATERIAL

14.3 Transport hazard class(es)

ADR
Class 3 (F1) Flammable liquids.
Label 3

IMDG, IATA

Class 3 Flammable liquids.
Label 3

14.4 Packing group

ADR, IMDG, IATA III

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Flammable liquids.
Danger code (Kemler): 30

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EMS Number:	F-E,S-E
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN1263, PAINT RELATED MATERIAL, 3, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:****Other regulations, limitations and prohibitive regulations**

The European Committee of Paint, Printing Ink and Artists' Colours Manufacturers' Associations (CEPE) provides the following information on coatings containing isocyanates: Ready-to-use paints containing isocyanates may have an irritant effect on mucous membranes - especially on breathing organs - and cause hypersensitivity reactions. Inhalation of vapor or spray mist may cause sensitisation. When handling paints containing isocyanates all precautions required for solventcontaining paints must be followed. Vapor and spray mist in particular should not be inhaled. Allergics and asthmatics as well as people prone to respiratory ailments should not work with isocyanate containing paints.

15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.
A Chemical Safety Assessment (Chemical Safety Assessment) is available for:
Hexamethylen-1,6-diisocyanat Homopolymer;
2-Methoxy-1-methylethylacetat

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SECTION 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.

Relevant phrases

H226 Flammable liquid and vapour.
 H317 May cause an allergic skin reaction.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 R10 Flammable.
 R20 Harmful by inhalation.
 R37 Irritating to respiratory system.
 R43 May cause sensitisation by skin contact.

Department issuing MSDS:

product safety department

Contact:

Hr. Dr. Starp

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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Liq. 3: Flammable liquids, Hazard Category 3
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3