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

Printing date 08.10.2014

Version number 1

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SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1 Product identifier	
Trade name:	6632 Hardener for Polyx®-Oil
1.2 Relevant identified uses of substance or mixture and us	of the es
advised against	Use : Hardener for coating materials or adhesives for industrial and trade applications Uses advised against : Not suitable for use in homeworker (DIY) applications.
Application of the substance	/ the
mixture	Hardening agent/ Curing agent
	Use only in combination with Osmo Polyx®-Oil
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 obtaina	ıble
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 Germa 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.
<i>Classification according to Directive 67/548/EEC or Directive 1999/45/EC</i> Xn; Harmful
R20: Harmful by inhalation.
Xi; Irritant
R37: Irritating to respiratory system.
Xi; Sensitising
R43: May cause sensitisation by skin contact.
R10: Flammable.
(Contd. on page 2)

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

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Trade name: 6632 Hardener for Polyx®-Oil (Contd. of page 1) Information concerning particular hazards for human and The product has to be labelled due to the calculation procedure of the "General environment: Classification guideline for preparations of the EU" in the latest valid version. The classification is according to the latest editions of the EU-lists and extended by Classification system: 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 Signal word Warning Hazard-determining components Hexamethylene diisocyanate, oligomers of labelling: H226 Flammable liquid and vapour. Hazard statements H332 Harmful if inhaled. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. P101 If medical advice is needed, have product container or label at hand. **Precautionary statements** P102 Keep out of reach of children. P103 Read label before use. P210 Keep away from heat/open flames. - No smoking. Do not breathe mist/vapours/spray. P260 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. Observe the general safety regulations when handling chemicals. Additional information: 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.

 $(Contd. \ on \ page \ 3)$

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	(Co	ontd. of page 2
Dangerous components:		
CAS: 28182-81-2	Hexamethylene diisocyanate, oligomers	50-100%
NLP: 500-060-2	Xn R20; Xi R37; Xi R43	
Reg.nr.: 01-2119488934-20	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	-
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	10-<25%
EINECS: 203-603-9	R10	
Index number: 607-195-00-7	Blam. Liq. 3, H226	-
Reg.nr.: 01-2119475791-29		
Additional information:	For the wording of the listed risk phrases refer to section 16.	1

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 a	lcohol 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)	
		(Contd. on page 4)



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	(Contd. of page 3)
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, in	cluding 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).	
	(Contd. on page 5)



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rade name: 6632 Hardener for Polyx [®] -Oil	
	(Contd. of page 4)
	Do not store together with oxidizing and acidic materials.
Further information about	
storage conditions:	Keep container tightly sealed.
C .	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 co	ntrols/personal protection
Additional information about	
design of technical facilities:	No further data; see item 7.
8.1 Control parameters	
Ingredients with limit values the	at require monitoring at the workplace:
108-65-6 2-methoxy-1-methyle	thyl acetate
WEL Short-term value: 548 mg	/m³, 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/P?
	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
	who surfer from enrolme bronemers and enrolme skin compraint) it is inadvisable to
Durada adiana adi kana la	work with the product.
rrolection of nanas:	The close metanic has to be improved by a local to the descent of the local state of the second state of t
	I ne give 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	(Contd. of page 5) 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 materia	Recommended thickness of the material: $\geq 0.5 \text{ mm}$ 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: Body protection:	Tightly sealed goggles Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical a	und chemical properties
General Information Appearance:	
Form:	Fluid
Colour:	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 %
	(Contd. on page 7)



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Trade name: 6632 Hardener for Polyx®-Oil (Contd. of page 6) Vapour pressure at 20 °C: 3.4 hPa (Lösemittel/solvent) Density at 20 °C: 1.145 g/cm3 (DIN 51757) **Relative density** Not determined. Not determined. **Evaporation** rate 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 / No decomposition if used according to specifications. conditions to be avoided: 10.3 Possibility of hazardous Reacts with alcohols, amines, aqueous acids and alkalis. reactions 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 No hazardous decomposition products when stored and handled correctly. products: **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)
	•	(Contd. on page 8)

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Tra	Frade name: 6632 Hardener for Polyx®-Oil							
				(Contd. of page 7)				
	108-65-6	2-methoxy-	1-met	hylethyl acetate				
	Oral	LD50	8532	mg/kg (rat)				
	Dermal	LD50	>500	0 mg/kg (rabbit)				
	Inhalative	LC50 / 4h	35.7	mg/l (rat)				
	Primary i	rritant effec	et:					
	on the skin:							
	28182-81	-2 Hexamet	thylen	e diisocyanate, oligomers				
	Dermal H	lautzeizung	schwa	ach reizend (rabbit) (OECD- Prüfrichtlinie 404)				
	on the eye	:		No irritating effect.				
	Sensitizati	ion:		Sensitization possible through skin contact.				
	28182-81	-2 Hexamet	thylen	e diisocyanate, oligomers				
	Inhalative	Sensibilisi	erung	positv (mouse) (Lokaler Lymphknoten-Test (LLNA))				
	Additiona	ormanon (a ntal toxicolo l toxicologi on:	bout pgy): cal	Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction. 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.				
	Sensitisati	ion		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.				
	CMR effe	cts (carcino aity and term	genity					
	muagenu reproduct	vuy ana tox ion)	icuy f	 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. (Contd. on page 9) 				



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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

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)

12.4 Mobility in soil

No further relevant information available.

Ecotoxical effects:

EC50

General notes:

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

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

12.5 Results of PBT and vPvB assessmentPBT: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 informa	tion
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
	(Contd. on pag



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	(Contd. of page
EMS Number:	F-E, <u>S-E</u>
14.7 Transport in bulk according to Anne	ex 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
	asthmatics as well as people prone to respiratory ailments should not work with
15.2 Chamie al anfata and ante	A Chamical Sofety Account has been comind out
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 inform	mation
This information is based on our features and shall not establish a	present knowledge. However, this shall not constitute a guarantee for any specific produce 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.
	D10 Element
	R10 Flammaole.
	R20 Harmful by inhalation.
	R37 Infitating 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 Agreeme
	concerning the International Carriage of Dangerous Goods by Road)
	IMDG: International Maritime Code for Dangerous Goods
	IATA: International AIT 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 10x. 4: Acute toxicity, Hazard Category 4 Skin Sens, 1: Sensitisation - Skin, Hazard Category 1
	SKIII SUIS, 1. SUISIUSAUUI - SKIII, HAZAU UAICEUI Y I STOT SE 3: Specific target organ toxicity - Single exposure Hazard Category 3