

**Safety Data Sheet According to the Directive (EC) 1907/2006 (REACH)****1. Identification of the Substance/Preparation and the Company/Undertaking**

<b>Article Number:</b>	KL1101-H, KL1101-H/0		
<b>Product Identifier:</b>	Hardener powder Dibenzoylperoxide in phthalic acid ester		
<b>Relevant identified uses and uses advised against:</b>	recommended use(s):	hardener for reactive resins	
	non-recommended use(s):	None known.	
<b>Supplier:</b>	FIOR & GENTZ GmbH Gesellschaft für Entwicklung und Vertrieb von orthopädiotechnischen Systemen mbH Dorette-von-Stern-Straße 5 21337 Lüneburg (Germany)		
<b>Emergency Number:</b>	Mobile:	+49 4131 24445-0	
	Fax:	+49 4131 24445-57	
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**2. Hazards Identification**

<b>Information pertaining to particular dangers for man and environment:</b>	Harmful if swallowed. Toxic by inhalation and in contact with skin. Causes severe burns. Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. EC-Labeling
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**3. Composition/Information on Ingredients**

<b>Chemical Characterization:</b>	<b>Epoxy hardener</b>			
<b>Identification Number:</b>	<b>CAS No.:</b>	<b>Content:</b>	<b>EINECS No. :</b>	<b>EU No.:</b>
Dioxadodecanediamine	7300-34-7	30-60%	229-962-1	612-110-00-1
Pentaethylenehexamine	4067-16-7	30-60%	203-950-6	612-059-00-5
Alkylethylenetheramine	39423-51-3	05-10%		500-109-6
<b>Hazard designation:</b>	T = Toxic	C = Corrosive	N = Dangerous for the environment	
<b>Risk phrases:</b>	R 21-24; R 34; R 52/53 S23/26/28, S36, S44			

#### 4. First Aid Measures

<b>General Information:</b>	Instantly remove any clothing soiled by the product. Take affected persons out of danger area and instruct them to lie down. Symptoms of poisoning may even occur after several hours; therefore, medical supervision for at least 48 hours after the accident is necessary.
<b>After Inhalation:</b>	Supply fresh air or oxygen; call for a doctor for safety reasons.
<b>After Skin Contact:</b>	Instantly wash with water and soap and rinse thoroughly. Cover wound with a sterile dressing. Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
<b>After Eye Contact:</b>	Rinse opened eye for several minutes under running water. Then consult doctor.
<b>After Swallowing:</b>	Rinse out mouth and then drink plenty of water. Do not induce vomiting. Instantly call for medical help.

#### 5. Fire-Fighting Measures

<b>Suitable Extinguishing Agents:</b>	CO <sub>2</sub> , extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam
<b>Special Hazards Caused by the Material, its Products of Combustion or Resulting Gases:</b>	Can be released in case of fire: Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Ammonia
<b>Protective Equipment:</b>	Wear self-contained breathing apparatus. Wear full protective suit.
<b>Additional Information:</b>	Collect contaminated fire fighting water separately. It must not enter drains. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

#### 6. Accidental Release Measures

<b>Information for Safe Handling:</b>	Wear protective equipment. Keep unprotected person away. Put on breathing apparatus.
<b>Measures for Environmental Protection:</b>	Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Inform respective authorities in case product reaches water or sewage system.
<b>Measures for cleaning/ collecting:</b>	Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13.

## 7. Handling and Storage

### Handling

**Information for Safe Handling:** Ensure good ventilation/exhaustion at the workplace. Open and handle container with care.

**Information about Protection against Explosions and Fires:** No special measures required.

### Storage

**Requirements to be Met by Storerooms and Containers:** Use only containers specifically permitted for this substance/product. Prevent any penetration into the ground.

**Information about Storage in one Common Storage Facility:** Not required.

**Further Information about Storage Conditions:** Store in cool, dry conditions in well-sealed containers. Keep container tightly sealed.

## 8. Exposure Controls/Personal Protection

**Additional Information about Design of Technical Systems:** No further data; see item 7.

### Personal Protective Equipment:

**General Protective and Hygienic Measures:** Take off all contaminated clothing immediately. Wash hands during breaks and at the end of work. Avoid contact with eyes and skin. Do not inhale gases/fumes/aerosols.

**Breathing Equipment:** Not necessary if room is well-ventilated. Use breathing protection in case of insufficient ventilation.

**Protection of Hands:** plastic gloves

**Material of Gloves:** butyl rubber, BR; nitrile rubber; NBR

**Penetration Time of Glove Mat.:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

<b>Eye Protection:</b>	tightly-sealed safety glasses
<b>Body Protection:</b>	impervious protective clothing

## 9. Physical and Chemical Properties

<b>Form:</b>	fluid
<b>Colour:</b>	yellowish
<b>Odour:</b>	amine-like
<b>Melting Temperature:</b>	-7 to -1°C
<b>Boiling Temperature:</b>	> 350°C (DIN 53171)
<b>Flash Point:</b>	>= 130°C (ISO 2719)
<b>Ignition Temperature:</b>	>275 °C (DIN 51794)
<b>Lower Explosion Limit:</b>	0,5 Vol %
<b>Upper Explosion Limit:</b>	2,8 Vol %
<b>Vapour Pressure:</b>	at 30°C < 0.1 hPa
<b>Density:</b>	at 20°C 0,95 g/cm <sup>3</sup> (DIN 53217)
<b>Bulk Density:</b>	620 - 650kg/cm <sup>3</sup> at 20°C
<b>Water Solubility at 20 °C:</b>	3,6 g/l
<b>pH at 20 °C:</b>	11
<b>Viscosity/Dynamic at 25 °C:</b>	app. 90 +/- 10 mPa*s (ISO 9371)

## 10. Stability and Reactivity

<b>Solubility in/Miscibility with Water at 20 °C:</b>	3,6 g/l
<b>pH Value at 20°C:</b>	11
<b>Viscosity Dynamic at 25 °C:</b>	app. 90 +/- 10 mPa*s (ISO 9371)

## 11. Toxicological Information

### Acute Toxicity:

<b>Values that are relevant for classification:</b>	LD 50 oral / rat	320 - 460 mg/kg
<b>6864-37-5</b>	<b>3,3-Dimethyl--4,4-diaminodicyclohexylmethane</b>	LC 50 inhalativ, rat 4h: 0,42 mg/l LD 50 Dermal, rabbit 200 - 400 mg/kg

<b>Primary Irritant Effect:</b>	on the skin:	strong caustic effects on skin and mucous membranes
	on the eye:	strong caustic effect
	sensitization:	no sensitizing

## 12. Ecological Information

### (Information about elimination persistence and degradability)

**Other Information:** analysing method: DOC decrease; OECD 302 B

### Ecotoxicological effects:

### Acquatic toxicity:

Type of Test	Concentration	Method Assessment
fish toxicity	LC 50 (96h)	<22 <46 mg/l
daphnia magna	EC 50 (48h)	15,2 mg/l
green algae	EC 50 (72h)	2,1 mg/l

**General Notes:** Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

## 13. Disposal Considerations

**Product:** PANDOX Hardener 9601-1

**Recommendation:** Remove according to local authority recommendations, e.g. convey to a suitable incinerator.

**European Waste Catalogue:** The waste code classification is to be carried out according to the European Waste Catalogue (EWC) specifically for each branch of industry and each type of process.

### Uncleaned Packagings:

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

## 14. Transport Information

<b>Land Transport: ADR/RID</b>	Class:	8	Packaginggr.:	III
	Hazard Index:	0,8	Subs. Index No.:	2735
<b>Designation of Goods:</b>	Corrosive liquid, toxic, n.o.s. (Dioxadodecandiamin, Pentaethylenhexamin)			
<b>Maritime Trans- port IMDG:</b>	Class:	8	Subs. Index No.:	2735
	PG	III	EMS:	8–15
	MPO:	no	MFAG:	3,2
<b>Correct Techni- cal Name:</b>	Corrosive liquid, toxic, n.o.s. (Dioxadodecandiamin, Pentaethylenhexamin)			
<b>Air Transp. ICAO-TI and IATA-DGR:</b>	Class:	8	Subs. Index No.:	2735
<b>Correct Techni- cal Name:</b>	Polyamine, liquid, Corrosive, n.o.s. (Dioxadodecandiamin, Pentaethylenhexamin)			

## 15. Regulatory Information

### Designation Accord. to EC Guidelines:

**Code Letter and Hazard Designation of Product:** T = Toxic; C = Corrosive; N = Dangerous for the environment

### Risk Phrases:

R 21/22	Harmful in contact with skin/if swallowed.
R 23/24	Toxic by inhalation and in contact with skin.
R 35	Causes severe burns.
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Safety Phrases:

S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/38/39	Wear suitable protective clothing, gloves and eye/face protection.
S 44	Avoid release to the environment. Refer to special instructions / safety data sheets.

## 16. Other Information

This data is based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.