

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## 07R704000000MOV-188 Oropal Polyurethane Hardener

**OROPAL**  
INDUSTRIAL & DECORATIVE PAINTS SINCE 1923

Version: 8  
Revision date: 17/03/2017

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### SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: 188 Oropal Polyurethane Hardener  
Product Code: 07R704000000MOV

#### 1.2 Relevant identified uses of the mixture and uses advised against.

Not available.

#### 1.3 Details of the supplier of the safety data sheet.

Company: **Industrias Químicas Irurena, S.A.**  
Address: Ctra. de Tolosa, s/nº. Apdo. 30  
City: 20730 Azpeitia  
Province: Gipuzkoa  
Telephone: 943 15 70 99  
Fax: 943 81 09 11  
E-mail: sds@irurena.com  
Web: <http://www.irurenagroup.com>

**1.4 Emergency telephone number:** (Only available during office hours; Monday-Friday; 08:00-18:00)

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the mixture.

In accordance with Regulation (EU) No 1272/2008:

Flam. Liq. 3 : Flammable liquid and vapour.  
Skin Irrit. 2 : Causes skin irritation.  
Skin Sens. 1 : May cause an allergic skin reaction.  
STOT SE 3 : May cause drowsiness or dizziness.

#### 2.2 Label elements.

##### Labelling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



Signal Word:

**Warning**

H statements:

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H336 May cause drowsiness or dizziness.

P statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P321 Specific treatment (see ... on this label).  
P370+P378 In case of fire: Use... to extinguish.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.

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### EUH statements:

EUH204	Contains isocyanates. May produce an allergic reaction.
EUH208	Contains hexamethylene-di-isocyanate. May produce an allergic reaction.
EUH208	Contains aliphatic polyisocyanate. May produce an allergic reaction.

### Contains:

n-butyl acetate  
Hexamethylene diisocyanate, oligomers

### 2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

### 3.1 Substances.

Not Applicable.

### 3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	specific concentration limit
CAS No: 28182-81-2 EC No: 500-060-2	Hexamethylene diisocyanate, oligomers	>= 25% < 50 %	Skin Sens. 1, H317	-
Index No: 607-025-00-1 CAS No: 123-86-4 EC No: 204-658-1 Registration No: 01-2119485493-29-XXXX	[1] n-butyl acetate	>= 25% < 50 %	Flam. Liq. 3, H226 - STOT SE 3, H336	-
Index No: 601-022-00-9 CAS No: 1330-20-7 EC No: 215-535-7 Registration No: 01-2119488216-32-XXXX	[1] xylene (Mixture of isomers)	>=10% < 25%	Acute Tox. 4 *, H312 - Acute Tox. 4 *, H332 - Flam. Liq. 3, H226 - Skin Irrit. 2, H315	-
Index No: 601-023-00-4 CAS No: 100-41-4 EC No: 202-849-4 Registration No: 01-2119489370-35-XXXX	[1] ethylbenzene	>= 2,5% < 10%	Acute Tox. 4 *, H332 - Asp. Tox. 1, H304 - Flam. Liq. 2, H225 - STOT RE 2, H373(órganos de audición)	-
Index No: 615-011-00-1 CAS No: 822-06-0 EC No: 212-485-8 Registration No: 01-2119457571-37-XXXX	hexamethylene-di-isocyanate	>= 0,1% < 1%	Acute Tox. 3 *, H331 - Eye Irrit. 2, H319 - Resp. Sens. 1, H334 - Skin Irrit. 2, H315 - Skin Sens. 1, H317 - STOT SE 3, H335	Resp. Sens. 1, H334: C ≥ 0,5 % Skin Sens. 1, H317: C ≥ 0,5 %

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CAS No: 666723-27-9	aliphatic polyisocyanate	$\geq 0,1\% < 1\%$	Aquatic Chronic 3, H412 - Skin Sens. 1, H317 - STOT SE 3, H335	-
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(\* ) The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

\* See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

[1] Substance with a Community workplace exposure limit (see section 8.1).

### SECTION 4: FIRST AID MEASURES.

**IRRITANT PREPARATION.** Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

#### 4.1 Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

#### Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

#### Eye contact.

If wearing contact lenses, remove them. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

#### Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. **NEVER** use solvents or thinners.

#### Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. **NEVER** induce vomiting.

#### 4.2 Most important symptoms and effects, both acute and delayed.

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate. Can cause allergic reactions.

#### 4.3 Indication of any immediate medical attention and special treatment needed.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

### SECTION 5: FIREFIGHTING MEASURES.

Flammable product, the necessary prevention measures should be taken in order to avoid risks, In case of fire, the following measures are recommended:

#### 5.1 Extinguishing media.

##### Recommended extinguishing methods.

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

#### 5.2 Special hazards arising from the mixture.

##### Special risks.

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

#### 5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

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### **Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES.**

### **6.1 Personal precautions, protective equipment and emergency procedures.**

Eliminate possible ignition points and ventilate the area. No smoking. Avoid breathing fumes. For exposure control and individual protection measures, see section 8.

### **6.2 Environmental precautions.**

Prevent the contamination of drains, surface or subterranean waters, and the ground.

### **6.3 Methods and material for containment and cleaning up.**

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate decontaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

### **6.4 Reference to other sections.**

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

## **SECTION 7: HANDLING AND STORAGE.**

### **7.1 Precautions for safe handling.**

The fumes are heavier than air and can spread across the ground. They can form explosive mixtures with air. Prevent the creation of flammable or explosive fume concentrations in the air; prevent fume concentrations above work exposure limits. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Electrical equipment has to be protected according to applicable standards.

The product can be electrostatically charged: always use earth grounds when transferring the product. Operators must use anti-static footwear and clothing, and floors must be conductors.

Keep the container tightly closed and isolated from heat sources, sparks, and fire. Do not use tools that can cause sparks. For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

### **7.2 Conditions for safe storage, including any incompatibilities.**

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III)::

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5.000	50.000

### **7.3 Specific end use(s).**

To be used within industrial facilities only

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.**

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### 8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m <sup>3</sup>
n-butyl acetate	123-86-4	United Kingdom [1]	Eight hours	150	724
			Short term	200	966
xylene (Mixture of isomers)	1330-20-7	European Union [2]	Eight hours	50 (skin)	221 (skin)
			Short term	100 (skin)	442 (skin)
		United Kingdom [1]	Eight hours	50	220
			Short term	100	441
ethylbenzene	100-41-4	European Union [2]	Eight hours	100 (skin)	442 (skin)
			Short term	200 (skin)	884 (skin)
		United Kingdom [1]	Eight hours	100	441
			Short term	125	552

[1] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

[2] According both Binding Occupational Exposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
n-butyl acetate N. CAS: 123-86-4 N. CE: 204-658-1	DNEL (Workers)	Inhalation, Long-term, Systemic effects	480 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Long-term, Systemic effects	102,34 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Acute, Systemic effects	960 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Acute, Systemic effects	859,7 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Long-term, Local effects	480 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Long-term, Local effects	102,34 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Acute, Local effects	960 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Acute, Local effects	859,7 (mg/m <sup>3</sup> )
	DNEL (General population)	Oral, Long-term, Systemic effects	3,4 (mg/kg bw/day)
	DNEL (General population)	Dermal, Long-term, Systemic effects	3,4 (mg/kg bw/day)
xylene (Mixture of isomers) N. CAS: 1330-20-7 N. CE: 215-535-7	DNEL (Workers)	Inhalation, Long-term, Systemic effects	77 (mg/m <sup>3</sup> )
ethylbenzene N. CAS: 100-41-4 N. CE: 202-849-4	DNEL (Workers)	Inhalation, Long-term, Systemic effects	77 (mg/m <sup>3</sup> )
hexamethylene-di-isocyanate N. CAS: 822-06-0 N. CE: 212-485-8	DNEL (Workers)	Inhalation, Long-term, Local effects	0,035 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Long-term, Systemic effects	0,035 (mg/m <sup>3</sup> )

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
n-butyl acetate N. CAS: 123-86-4	aqua (freshwater)	0,18 (mg/l)
	aqua (marine water)	0,018 (mg/l)

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N. CE: 204-658-1	aqua (intermittent releases)	0,36 (mg/l)
	PNEC STP	35,6 (mg/l)
	sediment (freshwater)	0,981 (mg/kg sediment dw)
	sediment (marine water)	0,0981 (mg/kg sediment dw)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>	<b>100 %</b>		
<b>Uses:</b>			
<b>Breathing protection:</b>			
If the recommended technical measures are observed, no individual protection equipment is necessary.			
<b>Hand protection:</b>			
PPE:	Work gloves.		
Characteristics:	«CE» marking, category I.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.		
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480
		Material thickness (mm):	0,35
<b>Eye protection:</b>			
PPE:	Face shield.		
Characteristics:	«CE» marking, category II. Face and eye protector against splashing liquid.		
CEN standards:	EN 165, EN 166, EN 167, EN 168		
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions. Make sure that mobile parts move smoothly.		
Observations:	Face shields should offer a field of vision with a dimension in the central line of, at least, 150 mm vertically once attached to the frame.		
<b>Skin protection:</b>			
PPE:	Anti-static protective clothing.		
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.		
CEN standards:	EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5		
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.		
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.		
PPE:	Anti-static safety footwear.		
Characteristics:	«CE» marking, category II.		
CEN standards:	EN ISO 13287, EN ISO 20344, EN ISO 20346		
Maintenance:	The footwear should be checked regularly		
Observations:	The level of comfort during use and acceptability are factors that are assessed very differently depending on the user. Therefore, it is advisable to try on different footwear models and, if possible, different widths.		



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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

#### 9.1 Information on basic physical and chemical properties.

Appearance: N.A./N.A.  
Colour: N.A./N.A.  
Odour: N.A./N.A.  
Odour threshold: N.A./N.A.  
pH: N.A./N.A.  
Melting point: N.A./N.A.  
Boiling Point: N.A./N.A.  
Flash point: 32 °C  
Evaporation rate: N.A./N.A.  
Inflammability (solid, gas): N.A./N.A.  
Lower Explosive Limit: N.A./N.A.  
Upper Explosive Limit: N.A./N.A.  
Vapour pressure: N.A./N.A.  
Vapour density: N.A./N.A.  
Relative density: .990 g/cm<sup>3</sup>  
Solubility: N.A./N.A.  
Liposolubility: N.A./N.A.  
Hydrosolubility: N.A./N.A.  
Partition coefficient (n-octanol/water): N.A./N.A.  
Auto-ignition temperature: N.A./N.A.  
Decomposition temperature: N.A./N.A.  
Viscosity: N.A./N.A.  
Explosive properties: N.A./N.A.  
Oxidizing properties: N.A./N.A.  
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

#### 9.2 Other information.

Pour point: N.A./N.A.  
Blink: N.A./N.A.  
Kinematic viscosity: N.A./N.A.  
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

### SECTION 10: STABILITY AND REACTIVITY.

#### 10.1 Reactivity.

If the storage conditions are satisfied, does not produce dangerous reactions.

#### 10.2 Chemical stability.

Unstable in contact with:

- Acids.
- Bases.
- Oxidizing agents.

#### 10.3 Possibility of hazardous reactions.

Flammable liquid and vapour.

In certain conditions this may cause a polymerization reaction.

#### 10.4 Conditions to avoid.

Avoid the following conditions:

- Heating.
- High temperature.
- Static discharge.
- Contact with incompatible materials.
- Avoid temperatures near or above the flash point. Do not heat closed containers. Avoid direct sunlight and heat, as these may cause a risk of fire.

#### 10.5 Incompatible materials.

Avoid the following materials:

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- Acids.
- Bases.
- Oxidizing agents.
- Explosives materials.
- Toxic materials.
- Oxidizing materials.

### 10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- CO<sub>x</sub> (carbon oxides).
- Organic compounds.

In case of fire, dangerous decomposition products can be generated, such as carbon monoxide and dioxide and nitrogen fumes and oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION.

IRRITANT PREPARATION. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

IRRITANT PREPARATION. The inhalation of spray mist or suspended particulates can irritate the respiratory tract. It can also cause serious respiratory difficulties, central nervous system disorders, and in extreme cases, unconsciousness.

### 11.1 Information on toxicological effects.

There are no tested data available on the product.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Exposure to concentrations of solvent fumes above the work exposure limit can have negative effects (for example, irritation of the mucous membranes and respiratory system, adverse effects on the kidneys, liver, and the central nervous system). Among the symptoms are headaches, vertigo, fatigue, muscular weakness, drowsiness, and in extreme cases, unconsciousness.

Based on the properties of isocyanates and taking into account existing technical data on similar products, it appears that this product may cause irritation and / or acute awareness of the respiratory system, leading to an asthmatic condition, a wheezing and chest pressure. Therefore, sensitized individuals may show asthmatic symptoms when exposed to atmospheres containing concentrations below the level of exposure. Repeated exposure can lead to chronic respiratory diseases.

a) acute toxicity;

Not conclusive data for classification.

Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Dermal) = 5.699 mg/kg

b) skin corrosion/irritation;

Product classified:

Skin irritant, Category 2: Causes skin irritation.

c) serious eye damage/irritation;

Based on available data, the classification criteria are not met.

d) respiratory or skin sensitisation;

Product classified:

Skin sensitizer, Category 1: May cause an allergic skin reaction.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Product classified:

Specific target organ toxicity following a single exposure, Category 3:



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i) STOT-repeated exposure;  
Based on available data, the classification criteria are not met.

j) aspiration hazard;  
Based on available data, the classification criteria are not met.

### SECTION 12: ECOLOGICAL INFORMATION.

#### 12.1 Toxicity.

No information is available regarding the ecotoxicity of the substances present.

#### 12.2 Persistence and degradability.

No information is available about persistence and degradability of the product.

#### 12.3 Bioaccumulative potential.

Information about the bioaccumulation of the substances present.

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
n-butyl acetate N. CAS: 123-86-4      EC No: 204-658-1	1,78	-	-	Very low
ethylbenzene N. CAS: 100-41-4      EC No: 202-849-4	3,15	-	-	Moderate

#### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

#### 12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

#### 12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

### SECTION 13 DISPOSAL CONSIDERATIONS.

#### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.  
Follow the provisions of Directive 2008/98/EC regarding waste management.

### SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

**Land:** Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

**Sea:** Transport by ship: IMDG.

Transport documentation: Bill of lading

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**Air:** Transport by plane: ICAO/IATA.  
Transport document: Airway bill.

**14.1 UN number.**  
UN No: UN1263

**14.2 UN proper shipping name.**  
Description:  
ADR: UN 1263, PAINT, 3, PG III, (D/E)  
IMDG: UN 1263, PAINT, 3, PG III  
ICAO: UN 1263, PAINT, 3, PG III

**14.3 Transport hazard class(es).**  
Class(es): 3

**14.4 Packing group.**  
Packing group: III

**14.5 Environmental hazards.**  
Marine pollutant: No

**14.6 Special precautions for user.**  
Labels: 3



Hazard number: 30  
ADR LQ: 5 L  
IMDG LQ: 5 L  
ICAO LQ: 10 L

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.  
Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-E,S-E  
Proceed in accordance with point 6.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.**  
The product is not transported in bulk.

### SECTION 15: REGULATORY INFORMATION.

**15.1 Safety, health and environmental regulations/legislation specific for the mixture.**  
The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Volatile organic compound (VOC)  
VOC content (p/p): 57,535 %  
VOC content: 569,597 g/l

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): P5c  
The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.  
The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

**15.2 Chemical safety assessment.**

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# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## 07R70400000MOV-188 Oropal Polyurethane Hardener

**OROPAL**  
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No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

### SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.(órganosdeaudición)
H412	Harmful to aquatic life with long lasting effects.

Classification codes:

Acute Tox. 3 [Inhalation] : Acute toxicity (Inhalation), Category 3  
Acute Tox. 4 [Dermal] : Acute toxicity (Dermal), Category 4  
Acute Tox. 4 [Inhalation] : Acute toxicity (Inhalation), Category 4  
Aquatic Chronic 3 : Chronic effect to the aquatic environment, Category 3  
Asp. Tox. 1 : Aspiration toxicity, Category 1  
Eye Irrit. 2 : Eye irritation, Category 2  
Flam. Liq. 2 : Flammable liquid, Category 2  
Flam. Liq. 3 : Flammable liquid, Category 3  
Resp. Sens. 1 : Respiratory sensitiser, Category 1  
Skin Irrit. 2 : Skin irritant, Category 2  
Skin Sens. 1 : Skin sensitiser, Category 1  
STOT RE 2 : Specific target organ toxicity following a repeated exposure, Category 2  
STOT SE 3 : Specific target organ toxicity following a single exposure, Category 3

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Information on the TSCA Inventory (Toxic Substances Control Act) USA:

CAS No	Name	State
28182-81-2	Hexamethylene diisocyanate, oligomers	Registered
123-86-4	n-butyl acetate	Registered
1330-20-7	xylene (Mixture of isomers)	Registered
100-41-4	ethylbenzene	Registered
822-06-0	hexamethylene-di-isocyanate	Registered
666723-27-9	aliphatic polyisocyanate	Registered

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
BCF: Bioconcentration factor.  
CEN: European Committee for Standardization.  
DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be

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# SAFETY DATA SHEET

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- considered a tolerable minimum.
- DNEL:** Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
- EC50:** Half maximal effective concentration.
- PPE:** Personal protection equipment.
- IATA:** International Air Transport Association.
- ICAO:** International Civil Aviation Organization.
- IMDG:** International Maritime Code for Dangerous Goods.
- LC50:** Lethal concentration, 50%.
- LD50:** Lethal dose, 50%.
- Log Pow:** Logarithm of the partition octanol-water.
- NOEC:** No observed effect concentration.
- PNEC:** Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.
- RID:** Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.