

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

## 1. IDENTIFICATION

<b>Product Name</b>	:	Polyurethane Hardener Glossy Drying (HPU200)
<b>Colors</b>	:	Clear
<b>Material Uses</b>	:	Slow Hardener for Polyurethane Paint
<b>Manufacturer</b>	:	BMA Commercial and Industrial s.a.l Industrial Valley, Ain Saade Nahr El Mot 55091, North Metn Lebanon
<b>Telephone Number</b>	:	+961. 1. 885385 / 485
<b>Emergency Phone Number</b>	:	+961. 1. 885385 / 485
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<b>E-mail</b>	:	info@bmapaints.com
<b>Website</b>	:	www.bmapaints.com

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

<b>Physical State</b>	:	Liquid
<b>Odor</b>	:	No information available
<b>Eyes</b>	:	Direct contact can cause eye irritation
<b>Skin</b>	:	Causes skin irritation Repeated exposure may cause skin dryness and cracking
<b>Inhalation</b>	:	May cause respiratory irritation May cause drowsiness or dizziness
<b>Additional Hazards</b>	:	May cause cancer

### Label Elements

#### Hazard Pictograms



Signal Word: **DANGER**

Hazard Statements

<b>H226</b>	: Flammable liquid and vapour.
<b>H315</b>	: Causes skin irritation.
<b>H319</b>	: Causes serious eyes irritation.
<b>H335</b>	: May cause respiratory irritation.
<b>H336</b>	: May cause drowsiness or dizziness.
<b>H350</b>	: May cause cancer.
<b>EUH066</b>	: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements

Prevention

<b>P101</b>	: If medical advice is needed, have product container or label at hand.
<b>P201</b>	: Obtain special instructions before use.
<b>P210</b>	: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
<b>P240</b>	: Ground/Bond container and receiving equipment.
<b>P261</b>	: Avoid breathing dust/fume/gas/mist/vapours/spray.
<b>P271</b>	: Use only outdoors or in a well-ventilated area.
<b>P281</b>	: Use personal protective equipment as required.

Response

<b>P312</b>	: Call a POISON CENTER or doctor/physician if you feel unwell.
<b>P303 + P361 + P353:</b>	: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
<b>P304 + P340</b>	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>P370 + P378</b>	: In case of fire: Use alcohol resistant foam or normal protein foam for extinction.

Storage

<b>P403 + P235</b>	: Store in a well-ventilated place. Keep cool.
<b>P405</b>	: Store locked up.

Disposal

<b>P501</b>	: Dispose of contents/container in accordance with local regulations.
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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% by weight</u>
Aromatic polyisocyanate	53317-61-6	30.0 – 50.0
Toluene	108-88-3	10.0 – 20.0
Methyl Ethyl Ketone	78-93-3	5.0 – 10.0
n-Butyl acetate	123-86-4	5.0 – 10.0
Ingredients determined not to be hazardous	-	To 100

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 Hazard Communication Standard.

### 4. FIRST-AID MEASURES

<b>Eye Contact</b>	:	Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully without rubbing eyes. Consult a physician if irritation persists.
<b>Skin Contact</b>	:	Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Consult a physician in case of a lasting irritation.
<b>Inhalation</b>	:	Get medical advice immediately. Remove to fresh air, away from the accident scene and keep at rest in a position comfortable for breathing. If the subject stops breathing, administer artificial respiration.
<b>Ingestion</b>	:	Have the subject drink as much water as possible. Get medical advice immediately and show this SDS. Do not induce vomiting without medical advice.

### 5. FIRE-FIGHTING MEASURES

<b>Flammability of the Product</b>	:	Classed as flammable.
<b>Products of Combustion</b>	:	Decomposition products may include the following materials: Carbon dioxide Carbon monoxide Nitrogen oxide/oxides



<b>Suitable Extinguishing Media</b>	: Dry powder, CO <sub>2</sub> or foam.
<b>Not Suitable Extinguishing Media</b>	: Do not use water jet. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.
<b>Fire-Fighting</b>	: Highly flammable liquid. Keep containers cool with water spray. Keep storage tanks, pipelines, fire exposed surfaces etc. cool with water spray. Shut off any leak if safe to do so and remove sources of re-ignition. Vapour/air mixtures may ignite explosively and flashback along the vapour trail may occur. On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions, Protective Equipment and Emergency Procedures</b>	: Block the leakage if there is no hazard. Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.
<b>Environmental Precautions</b>	: The product must not penetrate into the sewer system or come into contact with surface water or ground water.
<b>Methods and materials for containment and cleaning up</b>	: Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

## 7. HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	: Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or
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	<p>mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.</p> <p>Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised.</p>
<b>Conditions for Safe Storage</b>	<p>: Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.</p> <p>Store in a well-ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition.</p>

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with Workplace Control Parameters

<u>Product name</u>	<u>Exposure Limit</u>
Toluene	: ACGIH: 20 ppm TWA
Methyl Ethyl Ketone	: EU Exposure Limit Values: TWA: 200 ppm; 600 mg/m <sup>3</sup> STEL: 300 ppm; 900 mg/m <sup>3</sup>
n-Butyl acetate	: ACGIH: 150 ppm TWA; 200 ppm STEL NIOSH: 150 ppm TWA; 710 mg/m <sup>3</sup> TWA; 1700 ppm IDLH OSHA – Final PELs: 150 ppm TWA; 710 mg/m <sup>3</sup> TWA

### Exposure Controls

<b>Respiratory Protection</b>	: Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate threshold value. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted
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approved respirator for organic solvent vapours. A dust mask does not provide protection against vapours.

<b>Eye Protection</b>	:	Use safety glasses to avoid exposure to liquid splashes.
<b>Hand Protection</b>	:	Wear impermeable protective gloves.
<b>Body Protection</b>	:	Wear suitable coveralls to prevent exposure to the skin.
<b>Hygiene Measures</b>	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	:	Liquid
<b>Color</b>	:	Clear
<b>Odor</b>	:	Characteristic
<b>Odor Threshold</b>	:	Not determined.
<b>pH</b>	:	Not applicable.
<b>Melting point/freezing point</b>	:	Not determined.
<b>Initial Boiling Point and Boiling Range</b>	:	77 °C
<b>Flash point</b>	:	-4 °C
<b>Evaporation Rate</b>	:	Not determined.
<b>Flammability (solid, gas)</b>	:	Not applicable.
<b>Explosive Limits</b>	:	Lower: 1.2 Vol % Upper: 11.5 Vol %
<b>Vapour Pressure (20 °C)</b>	:	97 hPa
<b>Vapour Density</b>	:	Not determined.
<b>Relative Density (g/cm<sup>3</sup>)</b>	:	(1.05 ± 0.01)
<b>Solubility in / Miscibility with water</b>	:	Not miscible or difficult to mix.
<b>Partition Coefficient: n-octanol/water</b>	:	Not determined.
<b>Auto-ignition Temperature</b>	:	The product is not self-igniting.
<b>Decomposition Temperature</b>	:	Not determined.
<b>Viscosity (25°C)</b>	:	(10 ± 1) KU



## 10. STABILITY AND REACTIVITY

<b>Stability and Reactivity</b>	:	The product is stable in normal conditions of storage and recommended use.
<b>Possibility of Hazardous Reactions</b>	:	Reacts with strong acids and oxidising agents. Vapours may form explosive mixtures with air.
<b>Hazardous Decomposition Products</b>	:	As the product decomposes even at ambient temperature, it must be stored and used at a controlled temperature. Avoid violent blows. Avoid oxidizing agents.

## 11. TOXICOLOGICAL INFORMATION

Specific information about the product itself are not available.

Component: *Aromatic polyisocyanate*

<b>Acute Oral Toxicity</b>	:	LD50 (Rat): > 5,000 mg/Kg
<b>Primary Skin Irritation</b>	:	Species: rabbit Exposure duration: 24 h Result: slight irritant Classification: No skin irritation
<b>Primary Mucosae Irritation</b>	:	Species: rabbit Result: irritating Classification: Causes serious eye irritation
<b>Skin Sensitisation</b>	:	Species: guinea pig Result: positive Classification: May cause sensitization by skin contact.

Component: *Toluene*

<b>Acute Oral Toxicity</b>	:	LD50 (Rat) = 28.1 mg/l 4H
<b>Acute Dermal Toxicity</b>	:	LD50 (Rabbit) = 12,124 mg/Kg
<b>Acute Inhalation Toxicity</b>	:	LC50 (Rat) = 28.1 mg/l 4H
<b>Additional Information</b>	:	This product must be handled carefully because of its possible teratogenicity effects, which may be toxic and damage the foetus development. The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary oedema. This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate



inside the human body and is thus graded as dangerous. This product may cause serious ocular lesions, cornea opacity, iris lesions, and irreversible eye coloration.  
 Acute effects: contact with skin may cause: irritation, erythema, oedema, dryness and chapped skin. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.  
 This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, slow reflexes, and narcosis.

Component: Methyl Ethyl Ketone

<b>Acute Oral Toxicity</b>	: LD50 (Rat) = 2,193 mg/Kg
<b>Acute Dermal Toxicity</b>	: LD50 (Rabbit): > 8,050 mg/Kg
<b>Acute Inhalation</b>	: LC50 (Rat): > 5,000 ppm

Component: n-Butyl acetate

<b>Acute Oral Toxicity</b>	: LD50 (Mouse) = 6 mg/Kg LD50 (Rabbit) = 3,200 mg/Kg LD50 (Rat) = 10,768 mg/Kg
<b>Acute Dermal Toxicity</b>	: LD50 (Rat): > 17,600 mg/Kg
<b>Acute Inhalation Toxicity</b>	: LC50 (Rat) = 390 ppm/4H LC50 (Mouse) = 6 mg/m <sup>3</sup> /2H
<b>Draize Test</b>	: Rabbit, eye: 100 mg; Moderate Rabbit, skin: 500 mg/24H; Moderate

## 12. ECOLOGICAL INFORMATION

This product is dangerous for the environment and the aquatic organisms. In the long term, it has negative effects on aquatic environment.

### Toxicity

Component: Toluene

<b>LC50 – For Fish</b>	: 5.5 mg/L/96H – Oncorhynchus kisutch
<b>EC50 – For Crustacea</b>	: 3.78 mg/L/48H – Ceriodaphnia dubia
<b>EC50 – For Algae</b>	: 12.5 mg/L/72H – Pseudokirchneriella subcapitata
<b>Chronic NOEC for Fish</b>	: 1.39 mg/L – Oncorhynchus kisutch – 40 days
<b>Chronic NOEC for Crustacea</b>	: 0.74 mg/L Daphnia magna – 7 days
<b>Chronic NOEC for Algae</b>	: 10 mg/L Skeletonema costatum

Component: Methyl Ethyl Ketone

<b>LC50 – For Fish</b>	: 2,993 mg/L – Pimephales promelas
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<b>EC50 – For Crustacea</b>	:	> 308 mg/L/48H – Daphnia – Leuciscus Doratus
<b>EC50 – For Algae</b>	:	> 100 mg/L/72H – Desmodesmus subspicatus

Component: *N-Butyl Acetate*

<b>LC50 – For Fish</b>	:	18 mg/L/96H – Pimephales promelas
<b>EC50 – For Crustacea</b>	:	44 mg/L/48H – Daphnia magna
<b>EC50 – For Algae</b>	:	647 mg/L/72H – Desmodesmus subspicatus
<b>Chronic NOEC for Algae</b>	:	200 mg/L – Desmodesmus + mus subspicatus

## Persistence and Degradability

Petroleum distillates, charcoal, vegetable extracts: they are mixtures of paraffinic, naphthenic, diterpenic and aromatic hydrocarbons. Their behaviour on the environment depends on the concentration. In each case use, according to good working practices, avoiding disposal in the environment. As a rule, the product is poorly biodegradable.

Product	Description
<b>Toluene</b>	: Rapidly biodegradable
<b>Methyl Ethyl Ketone</b>	: Solubility in water: > 10,000 mg/L Rapidly biodegradable
<b>N-Butyl Acetate</b>	: Solubility in water: 1,000 – 10,000 mg/L Rapidly biodegradable

## Bio accumulative Potential

Product	Partition Coefficient n-octanol/water	BCF
<b>Toluene</b>	: 2.73	90
<b>Methyl Ethyl Ketone</b>	: 0.3	-
<b>N-Butyl Acetate</b>	: 2.3	15.3

## Mobility in Soil

Product	Partition Coefficient soil/water
<b>N-Butyl Acetate</b>	: < 3

# 13. DISPOSAL CONSIDERATIONS

## Waste Treatment Methods


Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.



Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## 14. TRANSPORT INFORMATION

	ADR/RID	IMDG	ICAO/IATA
TRANSPORTATION	Road	Marine	Airways
PROPER SHIPPING NAME	Solvent Based Paint		
UN/ID No.	1263		
SYMBOL			
CLASS	3		
PACKING GROUP	II		
LABEL CODES	3		
Environmental Hazards (MARINE Pollutant)		No	
EmS		F-E, S-E	
MFAG Table No.		See IMO MFAG	
HS CODE	32089010		

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category – Directive 2012/18/EC: P5c-H3

Restrictions related to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

PRODUCT	
Point	: 3 – 40
CONTAINED SUBSTANCE	
Point	: 48 Toluene Reg. no: 01-2119471310-51
SUBSTANCES IN CANDIDATE LIST (Art. 59 REACH)	



None
<b>SUBSTANCES SUBJECT TO AUTHORIZATION (ANNEX XIV REACH)</b>
None
<b>SUBSTANCES SUBJECT TO EXPORTATION REPORTING PURSUANT TO (EC) Reg. 689/2008</b>
None
<b>SUBSTANCES SUBJECT TO THE ROTTERDAM CONVENTION</b>
None
<b>SUBSTANCES SUBJECT TO THE STOCKHOLM CONVENTION</b>
None

### Chemical Safety Assessment

No chemical safety assessment has been carried out.

## 16. OTHER INFORMATION

**Date of Issue or Change** : | 03-04-2020

*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

