



**Gravograph**



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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

NAME OF THE PRODUCT: GRAVOPLY 2 and Metallex

COMMERCIAL USE: Engraving

SELLER:

EMERGENCY NUMBER:

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE OR PREPARATION: Acrylo Nitrile Butadiene Styrene (A.B.S.) + pigments + Polyethylene film low density treated anti-UV

IMPURITIES (HAZARDOUS): None

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### 3. HAZARDS IDENTIFICATION

MAIN HAZARDS :

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#### 4. FIRST AID MEASURES

EYE CONTACT: If dust, flush eyes with plenty of water during 5 minutes

SKIN CONTACT:

INGESTION: Put the victim to free air

INHALATION:

NOTE TO PHYSICIAN: No effects

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#### 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA RECOMMENDED: Water extinguisher, CO<sub>2</sub>, foam, dry chemical.

FIRE FIGHTING INSTRUCTIONS:

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear a protection mask

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#### 6. ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE:

PROTECT THE ENVIRONMENT:

CLEANUP:

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#### 7. HANDLING AND STORAGE

HANDLING: When handling material, leave the protective film in its place.. Mechanical handling equipment can cause formation of dusts. Keep in a clean environment.

PACKING AND FLASK MATERIALS RECOMMENDED: in cardboard.

OTHER RECOMMENDATIONS: Keep away from sunlight.

## 8. SPECIAL PROTECTION INFORMATION

ENGINEERING CONTROLS: None.

PERSONAL PROTECTIVE EQUIPMENT None

## 9. PHYSICAL AND CHEMICAL PROPERTIES FOR ABS BASES

APPEARANCE/PHYSICAL STATE: Solid

ODOUR:

VAPOUR PRESSURE: Not applicable

SOLUBILITY IN WATER: Insoluble to water

AUTO FLAMMABILITY TEMPERATURE: 505°C

LIGHTNING POINT: 360°C

<u>PROPERTIES MECHANICAL</u>	<u>TEST METHOD</u>	<u>UNIT</u>	<u>VALUES</u>
Yield strength	DIN 53455	N/mm <sup>2</sup>	46
Tensile strength	DIN 53455	N/mm <sup>2</sup>	
Elongation at yield	DIN 53455	%	
Elongation at rupture	DIN 53455	%	40
Young's modulus	DIN 53457	N/mm <sup>2</sup>	2300
Shear modulus	DIN 53445	N/mm <sup>2</sup>	
Flexural strength	DIN 53452	N/mm <sup>2</sup>	70
Impact strength unnotched			
23°C	DIN 53453	kJ/m <sup>2</sup>	no break
- 20°C	DIN 53453	kJ/m <sup>2</sup>	no break
- 40°C	DIN 53453	kJ/m <sup>2</sup>	no break
Impact strength notched			
23°C	DIN 53453	kJ/m <sup>2</sup>	13
- 40°C	DIN 53453	kJ/m <sup>2</sup>	8
Impact strength Izod			
	ISO 180	kJ/m <sup>2</sup>	20
	ISO R 180	J/m	200
Hole impact test	DIN 53753	kJ/m <sup>2</sup>	
Ball indentation (H-35.9/30)	DIN 53456	N/mm <sup>2</sup>	100



## Gravograph

### THERMAL

Vicat (5kg-50°C/h) B/50	DIN 53460	°C	100
Temperature resistance			
M.A.	DIN 53461	°C	
M.B.	DIN 53461	°C	101
Maximum application temperature		°C	80

### OPTICAL

Surface calender smooth

### ADDITIONNAL

Density	DIN 53479	g/cm <sup>3</sup>	1,05
Burning resistance	UL Standard 94		94 HB

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## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

CONDITIONS TO AVOID:

INCOMPATIBILITY WITH OTHER MATERIALS:

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO<sub>2</sub>, Methyl Methacrylate (Refer to section 5 for hazardous combustion products).

HAZARDOUS POLYMERISATION:

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## 11. TOXICOLOGICAL INFORMATION

IT IS NOT RECOMMENDED TO BREATHE THE DUSTS

EYE CONTACT: None

SKIN CONTACT: None

INGESTION: Single dose oral toxicity is believed to be very low. The victim may vomit if a high quantity of material has been absorbed.

INHALATION: None

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12. ECOLOGICAL INFORMATION

BURN IN AN ADEQUATE INCINERATOR. RECYCLABLE PRODUCT

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13. DISPOSAL CONSIDERATIONS

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14. TRANSPORT INFORMATION

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15. REGULATORY INFORMATION

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16. OTHER INFORMATION

IT IS NOT RECOMMENDED TO BREATHE THE DUSTS

The information contained herein relates only to the specific material identified. Such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability or completeness of the information. We urge persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.