

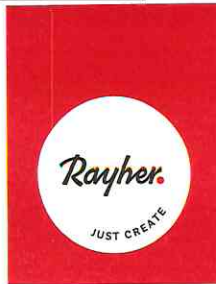
WOOSOL INDUSTRY

# Material Safety Data Sheet

## 1. PRODUCT AND COMPANY INFORMATION

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## 2. HAZARDS IDENTIFICATION

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Physical hazard : Not applicable

Health hazard : Not applicable

Environment hazard : Not applicable

Label elements including precautionary statements

Symbol : Not applicable

Signal word : Not applicable

Hazard statements: Not applicable

Precautionary statements : Not applicable

NFPA Rating

Health : 0    Flammability 1    Reactivity 0    Water reactivity 0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	C.A.S. No.	EINECS No.	Wt. %
Polyethylene terephthalate film	25038-59-9	-	94% ~ 97%
Aluminum	7429-90-5	231-072-3	< 0.3%
Silica gel	112926-00-8	-	< 1.0%
Epoxy resin	25036-25-3	-	1.40% ~ 1.46%

Melamine-formaldehyde resin	9003-08-1	-	0.70% ~ 0.74%
C.I solvent yellow 082	12227-67-7	-	< 0.8%
C.I. solvent red 160	84962-27-6		< 0.7%
C.I. solvent blue 70	12237-24-0		< 1.9%
C.I. solvent black 27	12237-22-8		< 1.1%
C.I. solvent red 127	61969-48-0		< 0.6%

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#### 4. FIRST AID MEASURES

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In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of skin contact

Not applicable

If inhaled

If breathed in, move person into fresh air.

If not breathing, give artificial respiration.

If swallowed

Never give anything by mouth to an unconscious person.

Other medical attention.

Medical personnel should be aware of the protective measures of the substance.

Potential health effect

May be harmful if swallowed.

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#### 5. FIRE-FIGHTING MEASURES

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Flammable properties

Flash point : No flash occurred under 110°C (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 300°C

Burning rate : < 0.667 mm/s (UN TDG test & criteria -Test N1)

Suitable extinguisher

Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

Specific hazards arising from the chemical

No data available

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

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#### 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions

- Avoid breathing dust.
- Remove all sources of ignition.

Environmental precautions

- Don't dispose the product into drainages.

Methods and materials for containment and cleaning up

- Pick up and arrange disposed materials without creating dust.

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## 7. HANDLING AND STORAGE

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Precautions for safe handling

- Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

- Keep away from sources of ignition.

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## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

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Components with workplace control parameters

KOSHA	Chemical Name	TWA	STEL
	Aluminum	2mg/m <sup>3</sup>	-

US ACGIH	Chemical Name	TLV	STEL
	Aluminum	1 mg/m <sup>3</sup> respirable fraction	-

Appropriate engineering controls : Ventilation

Personal protective equipment

- Respiratory protection : Dust mask
- Eye protection : Protective goggles
- Hand protection : Protective gloves
- Skin and body protection: Working clothes

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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State : Solid at 20°C

pH : 6.5 ~ 7.5 at 20°C ※ sample : H<sub>2</sub>O = 1 : 5 (V/V)

Flash point : : No flash occurred under 110°C (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 300°C  
Water solubility : Water Insoluble at 20°C  
Density (Apparent) : 0.663 at 20°C  
Melting range : > 120°C  
Flamibility  
    Burning rate : < 0.667mm/s ※ UN TDG test & criteria -Test N1  
Explosive properties  
    No self-reaction hazard ※ UN TDG test & criteria -Test E3  
Boiling point (Initial) : No data available  
Oxidizing properties : No data available  
Vapour pressure : No data available  
Decomposition temperature : No data available  
Partition coefficient (n-octanol/water) : No data available  
Viscosity: No data available  
Lower explosion limit : No data available  
Upper explosion limit : No data available

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## 10. STABILITY AND REACTIVITY

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Chemical stability  
    Stable under general condition.

Conditions to avoid  
    Avoid dust formation.

Materials to avoid  
    Strong oxidizing agents

Hazardous decomposition products  
    Carbon oxides

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## 11. TOXICOLOGICAL INFORMATION

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Acute toxicity

Oral	rat	LD50 : > 2,000 mg/kg	※ from IUCLID / US NLM
Inhalation	rat	LC50 : No data available	
Skin	rabbit	LD50 : No data available	

Skin irritation : No data available

Eye irritation: No data available

Respiratory sensitization: No data available

Skin sensitization : No data available  
Carcinogenicity : Not classifiable ※ from US NLM / CCRIS  
Reproductive toxicity : No data available  
Specific target organ toxicity -single exposure : No data available  
Specific target organ toxicity -repeated exposure : No data available  
Aspiration hazard : No data available

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## 12. ECOLOGICAL INFORMATION

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### Toxicity

Fish	LC50 : > 100 mg/L - 96 h	※ from IUCLID / US NLM / JP NITE
Crustacean	EC50 : > 100 mg/L - 48 h	
Algae	EC50 : > 100 mg/L - 72 h	

Persistence and degradability : No data available

Bioaccumulative potential : No data available

Mobility in soil : No data available

Other adverse effects : No data available

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## 13. DISPOSAL CONSIDERATIONS

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### Disposal consideration

Observe all environmental regulations.

### Disposal precaution

Avoid disposing to the environment.

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## 14. TRANSPORT INFORMATION

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UN TDG: Not dangerous goods

IMDG : Not dangerous goods

IATA: Not dangerous goods

Marine pollution : Not applicable

### Special precaution

Fire EmS Guide (Recommendation) : F-A

Spillage EmS Guide (Recommendation) : Not dangerous goods

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**15. REGULATORY INFORMATION**

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Korea Industrial Safety and Health Act (GHS) : Not applicable

Korea Hazardous Materials Safety Control Act : Not hazardous material

Korea Toxic Chemicals Control Act : Not toxic chemical

Korea Persistent Organic Pollutants Control Act : Not applicable

US OSHA Hazards (GHS) : Not applicable

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**16. OTHER INFORMATION**

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Issue Date : 2018-01-05

This MSDS is composed in line with The Korea Occupational Safety and Health Act Article 41 to protect the health of the employees, and for documentation.

This MSDS is composed with reference to documents and criteria provided by KOSHA.

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