

## Material Safety Data Sheet

### 1. PRODUCT AND COMPANY INFORMATION

**Product name** : M33AS1A-NP0 (Polyketone)  
**Company** : Hyosung Corporation  
**Address** : #65, 487beon-gil, Cheoyong-ro, Nam-gu, Ulsan, 680-140, Republic of Korea  
**Telephone** : + 82 52 208 9000  
**Fax** : + 82 52 208 9195

**Recommended use of the chemical and restrictions on use**

Recommended use : Plastic goods

Restrictions on use : No data available

### 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 / Signal word : Not applicable

Hazard statements / Precautionary statements : Not applicable

**NFPA Rating**

Health : 0

Flammability : 1

Reactivity : 0

Water reactivity : 0

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No.	Conc. %
1-Propene, polymer with carbon monoxide and ethene	88995-51-1	97 %
Dimethyl siloxane, dimethyl- vinyl terminated	None	< 2 %
Additives	Various	< 1 %

- Appearance form : Pellet (thickness : > 1.9 mm)

## 4. FIRST AID MEASURES

### **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**

Wash off with soap and plenty of water.

### **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.

### **Potential health effect**

May be harmful if swallowed.

### **Other medical attention.**

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

## 5. FIRE-FIGHTING MEASURES

### **Flammable properties**

Flash point : No flash occurred under 93 °C (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 250 °C

Burning rate : < 0.7 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.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions**

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.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Remove all sources of ignition.

Provide appropriate exhaust ventilation at places where dust is formed.

Do not eat, drink or smoke when using this product.

### Conditions for safe storage

Avoid heat sources, and strong oxidizing agents.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### Components with workplace control parameter

KOSHA : No data available

US ACGIH : No data available

Appropriate engineering controls : Ventilation

### Personal protective equipment

Respiratory protection : Dust mask

Hand protection : Protective gloves

Eye protection : Protective goggles

Skin and body protection : Working clothes

## 9. PHYSICAL AND CHEMICAL PROPERTIES

State : Solid at 20 °C

Appearance form : Pellet (Not powder)

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

Flash point : No flash occurred under 93 °C (Rapid equilibrium method)

Autoignition temperature : No spontaneous combustion under 250 °C

Water solubility : Water Insoluble at 20 °C

Density : > 1.24 at 20 °C

Melting range : > 220 °C

### Flammability

Burning rate : < 0.7 mm/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

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

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under general condition.

### Conditions to avoid

Avoid dust formation.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Oral	rat	LD50 : No data available	※ from IUCLID / US NLM
Inhalation	rat	LC50 : No data available	
Skin	rabbit	LD50 : No data available	

**Skin irritation** : Not classifiable ※ from EC ESIS

**Eye irritation** : Not classifiable ※ from EC ESIS

**Respiratory sensitization** : No data available

**Skin sensitization** : No data available

**Germ cell mutagenicity** : No data available

**Carcinogenicity** : Not classifiable ※ from CCRIS / IARC

**Reproductive toxicity** : No data available

**Specific target organ toxicity – single exposure (GHS)** : No data available

**Specific target organ toxicity – repeated exposure (GHS)** : No data available

**Aspiration hazard** : No data available

## 12. ECOLOGICAL INFORMATION

### Toxicity

Fish	LC50	: No data available	※ from IUCLID / US NLM
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Crustacean EC50 : No data available

Algae EC50 : No data available

**Persistence and degradability** : No data available

**Bioaccumulative potential** : No data available

**Mobility in soil** : No data available

**Other adverse effects** : No data available

## 13. DISPOSAL CONSIDERATIONS

### Disposal consideration

Observe all environmental regulations.

### Disposal precaution

Avoid disposing to the environment.

## 14. TRANSPORT INFORMATION

UN TDG : Not dangerous goods

IMDG : Not dangerous goods

IATA : Not dangerous goods

**Marine pollution** : Not applicable

### Special precaution

Fire EmS Guide : F-A (Recommendation)

Spillage EmS Guide : Not dangerous goods

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

Issued Date : 2014. 04. 07

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Revision Date : -

### References

- GHS Classification :

Korea MSDS Testing Lab Certificate (Report No. 2014-03-04-122), EC ESIS, US NLM

- Physical and chemical properties : Korea MSDS Testing Lab Certificate
- Transport information : Korea MSDS Testing Lab Certificate
- Toxic & ecological information : OECD SIDS, IUCLID, US NLM, IARC, EC ESIS, CCRIS

#### **Acronyms and Websites**

- EC ESIS : European chemical Substances Information System, <http://esis.jrc.ec.europa.eu/>
- IUCLID : International Uniform Chemical Information Database, <http://esis.jrc.ec.europa.eu/>
- US NLM : U.S. National Library of Medicine, <http://chem.sis.nlm.nih.gov/chemidplus/>
- HSDB : US Hazardous Substances Data Bank, <http://toxnet.nlm.nih.gov/>
- CCRIS : US Chemical Carcinogenesis Research Information System, <http://toxnet.nlm.nih.gov/>
- IARC : International Agency for Research on Cancer, <http://monographs.iarc.fr/>

#### **※ Hazards Testing and Classification**

##### **Korea MSDS Testing Laboratory**

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The product composition is provided by the mentioned company of this MSDS' section 1.  
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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