



210, Jeil plaza, 432, Pangyo Ro, Bundang Ku,  
Seongnam City, Kyunggi Do, 13523, Korea

Product : MCR-65

## Material Safety Data Sheet (MSDS)

### 1. PRODUCT AND COMPANY IDENTIFICATION

**A. Product Name :** MCR-65 (Vinyl-acrylic emulsion)

**B. Product Use Description:** Paper Coatings

**C. Manufacturer/Supplier/Distributor Information:**


1) Manufacturer : En-Tech Polymer Co.,Ltd.

Address : Rm210, Jeil Plaza, Pangyo Ro 432, Bundang Ku, Seongnam City, 13523, SOUTH KOREA

Korea Emergency telephone number : TEL) 82-31-706-7452 FAX) 82-31-706-7453

2) Supplier/Distributor Information : same with manufacturer

### 2. HAZARDS IDENTIFICATION

<b>A. Hazardous classification</b>	Skin corrosion/ irritation - Category 2 Serious eye damage/eye irritation - Category 2 Skin sensitization-Category 1
<b>B. GHS label elements</b>	
Glyph	
Signal word	Warning
Harmful Risk phrases	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes severe eye irritation..
Precautionary statements	<b>Prevention</b> P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection  <b>Response</b>



	<p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p><b>Storage</b> P405 Store locked up.</p> <p><b>Disposal</b> P501 Dispose of contents and container according to wastes control act.</p>
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<p><b>Other hazards</b> No data available</p>
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<b>C. Hazardous which do not result in classification • Other adverse risk (NFPA)</b>	
<b>Vinyl-Acrylic Copolymer</b>	
Health	1
Fire	0
Reactivity	0

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Official Name	CAS-No	Content (%)
Vinyl-acrylic copolymer	2-Propenoic acid, butyl ester, polymer with ethenyl acetate	25067-01-0	44~46
Water	DIHYDROGEN OXIDE	7732-18-5	54~56

### 4. FIRST AID MEASURES

**A. Eye contact:**

- Rinse with plenty of water. If eye irritation persists, consult a specialist.

**B. Skin contact:**

- Wash with water and soap as a precaution.
- If skin irritation persists, call a physician.

**C. Inhalation:**

- Move to fresh air

**D. Ingestion:**

- Drink 1 or 2 glasses of water. Consult a physician if necessary. Never give anything by mouth to an unconscious person

**E. Notes to physician**



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- Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient
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## 5. FIRE FIGHTING MEASURES

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### A. Suitable extinguishing media:

- Use extinguishing media appropriate for surrounding fire

### B. Thermal decomposition

- Thermal decomposition may yield acrylic monomers.

### C. Specific hazards during fire fighting

- Material can splatter above 100C/212F. Dried product can burn

### D. Special protective equipment for firefighters

- Wear self-contained breathing apparatus and protective suit
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## 6. ACCIDENTAL RELEASE MEASURES

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### A. Personal precautions and emergency procedures:

- Use personal protective equipment.  
Keep people away from and upwind of spill/leak.  
Material can create slippery conditions

### B. Environmental precautions:

- Avoid release to the environment.  
- Waterways, sewers, basements, and Prevent entry into confined spaces

### C. Methods for cleaning up:

- Contain spills immediately with inert materials (e.g., sand, earth).  
Transfer liquids and solid diking material to separate suitable containers for recovery or disposal
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## 7. HANDLING AND STORAGE

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### A. Handling :

- Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed.  
Do not breathe vapour, mist or gas
- Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required:

### B. Storage

**Further information on storage conditions:** Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

**Storage temperature:** 1 - 49 °C

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**A. Exposure limits :**

- Exposure limits are listed below, if they exist

**B. Exposure controls**

**Engineering measures:** Use only in area provided with appropriate exhaust ventilation.

**Protective measures** Facilities storing or utilizing this material should be equipped with an eye wash facility.

**C. Individual protection measures**

- **Eye/face protection:** Safety glasses with side-shields Eye protection worn must be compatible with respiratory protection system employed.
- **Skin protection**
- **Hand protection:** The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Neoprene gloves
- **Respiratory protection:** Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, 89/686/EEC ), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>A. Physical state:</b>	liquid
<b>B. Colour</b>	white milky
<b>C. Odour</b>	Vinyl acetate odor
<b>D. Odour Threshold</b>	no data available
<b>E. pH</b>	4.0~6.0
<b>F. Melting point / freezing point</b>	0 °C Water
<b>G. Boiling point/boiling range</b>	100 °C Water
<b>H. Flash point</b>	Noncombustible
<b>I. Evaporation rate</b>	<1.00 Water
<b>J. Flammability (solid, gas)</b>	no data available
<b>K. Upper / lower flammability or explosive limits</b>	Not Applicable
<b>L. Vapor pressure</b>	17mmHg@20°C/Water
<b>M. Water solubility</b>	Dilutable
<b>N. Relative vapour density</b>	<1.0 Water
<b>O. Specific gravity</b>	1.0~1.10
<b>P. Partition coefficient: n-octanol/water</b>	no data available
<b>Q. Autoignition temperature</b>	no data available



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<b>R. Decomposition temperature</b>	no data available
<b>S. Viscosity, dynamic</b>	30~3000(cps)
<b>T. Molecular Weight</b>	Not available
<b>U. Percent volatility</b>	54 - 56 % Water
<b>V. Solubility in other solvents</b>	no data available

NOTE: The physical data represented above are typical values and should not be construed as a specification

## 10. STABILITY AND REACTIVITY

### A. Chemical stability:

- None known.
- Stable
- Inhalation of the substance may be harmful

### B. Conditions to avoid:

- no data available

### C. Materials to avoid:

- There are no known materials which are incompatible with this product

### D. Hazardous decomposition products

- no data available

### E. polymerization

- Product will not undergo polymerization

## 11. TOXICOLOGICAL INFORMATION

### A. Exposure routes

- Inhalation
- Eye contact
- Skin contact

### B. To health information

#### Acute Toxicity

#### Acute oral toxicity

LD50, rat, > 5,000 mg/kg

#### Acute dermal toxicity

LD50, rabbit, > 5,000 mg/kg

#### Acute inhalation toxicity

no data available

#### Skin corrosion/irritation

rabbit May cause transient irritation



**Serious eye damage/eye irritation**

rabbit No eye irritation

**Skin and Respiratory Sensitization**

no data available

**Carcinogenicity**

no data available

**Mutagenicity**

no data available

**Reproductive toxicity**

no data available

**Specific Target Organ Systemic Toxicity (Single Exposure)**

no data available

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

no data available

**Aspiration Hazard**

no data available

No data are available for this material. The information shown is based on profiles of compositionally similar materials

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## 12. ECOLOGICAL INFORMATION

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**A. Acute aquatic toxicity**

**- Acute toxicity to fish**

no data available

**-Acute toxicity to aquatic invertebrates**

no data available

**-Acute toxicity to algae**

no data available

**-Toxicity to bacteria**

no data available

**나. Persistence and degradability**

**-Biodegradability**

no data available

**- Physicochemical removability**

no data available:

**C. Bioaccumulative potential:**



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Bioaccumulation : no data available

**D. Mobility in soil :**

Partition coefficient: n-octanol/water : no data available

Distribution among environmental compartments : no data available

Fate and behaviour in the environment : no data available

**E. Other adverse effects :** no data available

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### 13. DISPOSAL CONSIDERATIONS

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**A. Disposal :**

Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

**B. Environmental precautions:**

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

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### 14. TRANSPORT INFORMATION

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**Classification for ROAD and Rail transport:**

Not regulated (Not dangerous for transport)

**Classification for SEA transport (IMO-IMDG):**

Not regulated (Not dangerous for transport)

**Classification for AIR transport (IATA/ICAO):**

Not regulated (Not dangerous for transport)

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations

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### 15. REGULATORY INFORMATION

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**A. Korea. Korean Existing Chemicals Inventory (KECI):**

All intentional components are listed on the inventory, are exempt, or are supplier certified.

**B. United States TSCA Inventory (US.TSCA):**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory

**C. Regulation – Korea**

**Industrial Safety and Health Act**

The product is not classified as hazardous by ISHL in Korea.

**Toxic Chemicals Control Law**

Not regulated by Toxic Chemical Control Act

**Dangerous Substances Safety Management Act:**



POLYMER

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Not regulated by Dangerous Substance Safety Management Act

### **Waste Management Law**

For all countries the disposal methods must be in compliance with national and provincial laws and any municipal or local by laws.

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## **16. OTHER INFORMATION**

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### **A. Source of data**

International Chemical Safety Cards(ICSC)(<http://www.nihs.go.jp/ICSC>)

TOXNET, U.S. National Library of Medicine(<http://toxnet.nlm.nih.gov>)

The Chemical Database, The Department of Chemistry at the University of Akron(<http://ull.chemistry.uakron.edu/erd>)

Manual of industrial poisoning, Xinguang Publisher

Hazardous Materials Information Management System, the National Emergency Management Agency (<http://hazmat.nema.go.kr>)

Chemical Information Systems, National Institute of Environmental Research (<http://ncis.nier.go.kr>)

### **B. Date of first:** 23/Apr/2013

### **C. Revision number and date:**

Revision number : 2 times

Date of last revision:20/May/2019

### **D. Etc. :**

○ Written material safety data sheets (MSDS) provided by the Korea Occupational Safety and Health Agency with reference to MSDS editing, some modified materials.