

# SAFETY DATA SHEET

**Date Printed** : 01 August 1994  
**Date Updated** : 01 April 2015  
**Version** : Rev. 21  
**Regulation** : In accordance with Regulation (EU) 453/2010 (REACH), Annex II

## 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

### 1.1 Product identifier

**Name of the Product** : KEP Ethylene Propylene Rubber

Substance Name	CAS No.	EC No.	Applicable Grade
Ethylene propylene 5-ethylidene-2-norbornene terpolymer	25038-36-2	618-455-4	KEP210, KEP240, KEP270, KEP330 KEP350, KEP370F, KEP570P, KEP430H, KEP435 KEP510, KEP570C, KEP570F, KEP650, KEP650L KEP281F, KEP2371, KEP1030F, KEP7141 KEP2320, KEP2380, KEP2480, KEP5770, KEP282F, KEP9590, KEP2372,
Ethylene propylene Copolymer	9010-79-1	None	KEP020P, KEP070P, KEP110, KEP2060, KEP111, KEP300V

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified uses** : Parts of automobile, Cables, Roofing Sheet, General industrial parts etc.

**Uses advised against** : No information

### 1.3 Details of the supplier of the Safety Data Sheet

**Company name** : KUMHO POLYCHEM CO., LTD.  
**Address** : #144-6, Weoulha-dong, Yeosu-City, Cheonranam-Do, Korea  
**Contact Telephone** : +82-61-688-2825  
**Fax** : +82-61-688-2850  
**Email Address** : spkjj09@polychem.co.kr

**1.4. Emergency Telephone** : +82-61-688-2700 (Fax: +82-61-688-2899)

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

KEP Ethylene Propylene Rubber is not classified according to Regulation (EC) No 1272/2008 [CLP] and Directive 67/548/EEC.

### 2.2 Label elements

**Hazard pictograms** : Not applicable  
**Signal word** : Not applicable  
**Hazard statements** : Not applicable  
**Additional precautionary statements** : Not applicable

**2.3 Other hazards** : No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

	Ethylene propylene 5-ethylidene-2-norbornene terpolymer	Ethylene propylene Copolymer
<b>Other Name/s</b>	2-norbornene, 5-ethylidene polymer with ethylene and propene	1-propene, polymer with ethene
<b>Content(%)</b>	100	100

\* Monomers of the polymers have been registered under EU REACH regulation in compliance with the Article 6 of the regulation. Below is the information on the Registration.

Component	CAS No.	EC No.	EU REACH Registration No
Ethylene	74-85-1	200-815-3	01-2119462827-27-0116
Propylene	115-07-1	204-062-1	01-2119447103-50-0113
5-Ethylidene-2-norbornene	16219-75-3	240-347-7	01-2119494722-31-0002

## 4. FIRST-AID MEASURES

### 4.1 Description of first aid measures

- After eye contact :** - If in an eye, remove in the same manner as one would when any solid object enters the eye since the product is an inert solid.
- After skin contact :** - If the skin is in contact with the heated product, immediately immerse in or flush the affected area with a large amount of cold water to dissipate heat. Cover with clean cotton sheet or gauze and get prompt medical attention.  
- No attempt should be made to remove the heated product from the affected skin or to remove the contaminating clothing as the damaged flesh can easily be torn.
- After inhalation :** - Using proper respiratory protection, immediately remove the affected victim from exposure.  
- Administer artificial respiration if breathing has stopped.  
- Keep the affected victim at rest.  
- Call for prompt medical attention
- After ingestion :** - First aid is normally not required

### 4.2 Most important symptoms and effects

#### Acute effects

None known.

#### Delayed effects

None known.

### 4.3 Indication of immediate medical attention and notes for physician

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

- Suitable Extinguishing Media :** - Foam  
- Carbon dioxide  
- Water spray
- Unsuitable Extinguishing Media :** - No information available

### 5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products :** - Due to thermal decomposition and incomplete combustion gases such as black smoke, carbon monoxide and other toxic gases, danger based on inhalation of such gases may occur.

### 5.3 Advice for firefighters

- Depending on the situation, protective equipment such as chemical cartridge respirator for fire-fighting and protective clothing shall be worn.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective gloves.

### 6.2 Environmental precautions

- Pay attention so that product does not flow into the sewage or public water area.

### 6.3 Methods and material for containment and cleaning up

- Sweep up the scattered product and recover into a suitable container.

### 6.4 Reference to other sections

- See also sections 8 and 13 of the Safety Data Sheet.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

- Do not handle until all safety precautions have been read and understood.

### 7.2 Conditions for safe storage, including any incompatibilities

- Keep away from heat, direct sunlight and ultraviolet rays. Exposure to direct sunlight and ultraviolet rays cause the polymer to generate light-induced crosslinked gel in the product.
- Avoid wetting and abrupt temperature change when storing this material.
- Please store product at room temperature, and keep it dry. Especially, high ethylene type EP(D)M should be stored in a warm room for more than 48hours prior to use and process.

### 7.3 Specific end use(s)

- None

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure Limits :

- o ACGIH regulation : No information available
- o Biological exposure index : No information available
- o OSHA regulation : No information available
- o NIOSH regulation : No information available
- o EU regulation : No information available

#### Occupational Exposure Controls :

Exposure route of relevance	DNELs, DMELs, PNECs											
	Industrial				Professional				Consumer			
	Long term, local effects	Long term, systemic effects	Short term, local effects	Short term, systemic effect	Long term, local effects	Long term, systemic effects	Short term, local effects	Short term, systemic effects	Long term, local effects	Long term, systemic effects	Short term, local effects	Short term, systemic effects
Human: oral	-	-	-	-	-	-	-	-	-	-	-	-
Human: inhalation	-	-	-	-	-	-	-	-	-	-	-	-
Human: dermal	-	-	-	-	-	-	-	-	-	-	-	-
Environment: water	-											
Environment: air	-											
Environment: soil	-											
Environment: sediment	-											
Environment: STP	-											
Environment: oral	-											

### 8.2 Exposure controls

#### Appropriate engineering controls :

- Since volatile matters will be generated at the time of mixing, processing and molding work, install equipment to wash the hands and eyes nearby.

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**Individual protection measures, such as personal protective equipment :****Respiratory protection :**

- Use a protective mask as required

**Eye protection :**

- Install equipment to wash the hands and eyes nearby.
- Wear protective glasses as required

**Hand protection :**

- Use protective gloves as required.

**Body protection :**

- Use work clothes and safety shoes as required.

**Environmental exposure controls :**

- Prevent entry into waterways, sewers, basements or confined areas.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****Appearance**

<b>Description :</b>	Solid
<b>Color :</b>	White or yellow-Green
<b>Odor :</b>	Slight Odor
<b>Odor threshold :</b>	Not applicable
<b>pH :</b>	Not applicable
<b>Melting point/freezing point :</b>	Not applicable
<b>Initial boiling point and boiling range :</b>	Not applicable
<b>Flash point :</b>	250 °C
<b>Evaporation rate :</b>	Not applicable
<b>Flammability (solid, gas) :</b>	Not applicable
<b>Upper/lower flammability or explosive limits :</b>	Not applicable
<b>Vapor pressure :</b>	Not applicable
<b>Solubility (ies) :</b>	Insoluble in water
<b>Vapor density :</b>	Not applicable
<b>Specific gravity :</b>	0.86 ~ 0.89
<b>Partition coefficient: n-octanol/water :</b>	Not applicable
<b>Auto ignition temperature :</b>	Not applicable
<b>Decomposition temperature :</b>	250 °C
<b>Viscosity :</b>	Not applicable
<b>Explosive properties :</b>	Not applicable
<b>Oxidizing properties :</b>	Not applicable
<b>Molecular weight :</b>	100,000 ~ 600,000

**9.2 Other information :** No information available

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**10. STABILITY AND REACTIVITY****10.1 Reactivity/Chemical stability/Possibility of hazardous reactions**

- Polymerization does not occur.
- Stable at normal temperature and pressure.

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**10.2 Conditions to avoid :** Not applicable

**10.3 Incompatible materials :** Not applicable

**10.4 Hazardous decomposition products :** Not applicable

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicology effects

**Acute toxicity;**

**Oral** Not applicable

**Dermal** Not applicable

**Inhalation** Not applicable

**Skin Corrosion/ Irritation;** Not applicable

**Serious Eye Damage/ Irritation;** Not applicable

**Respiratory sensitization;** Not applicable

**Skin Sensitization;** Not applicable

**Carcinogenicity;** Not applicable

**Mutagenicity;** Not applicable

**Reproductive toxicity;** Not applicable

**Specific target organ toxicity (single exposure);** Not applicable

**Specific target organ toxicity (repeat exposure);** Not applicable

**Aspiration Hazard;** Not applicable

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Acute toxicity** No information available

**Chronic toxicity** No information available

**12.2 Persistence and degradability** No information available

**12.3 Bioaccumulative potential** No information available

**12.4 Mobility in soil** No information available

**12.5 Results of PBT and vPvB assessment** No information available

**12.6 Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Disposal Methods**

- Observe all regulations made by administration

**Precautions for disposal**

- Observe all regulations made by administration

## 14. TRANSPORT INFORMATION

**14.1 UN number** : Not applicable to the criteria for classification

**14.2 UN proper shipping name** : Not applicable to the criteria for classification

**14.3 Transport hazard class** : Not applicable to the criteria for classification

**14.4 Packing group** : Not applicable to the criteria for classification

**14.5 Environmental hazards** : Not applicable to the criteria for classification

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#### 14.6 Special precautions for user

- in case of fire : Not applicable
- in case of leakage : Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

### 15. REGULATORY INFORMATION

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

	Ethylene propylene 5-ethylidene-2-norbornene terpolymer	Ethylene propylene Copolymer
EU Regulatory Information		
EU classification		
Annex I of Directive 67/548/EEC :		
Classification :	Not regulated	Not regulated
Risk phrases :	Not regulated	Not regulated
Safety phrases :	Not regulated	Not regulated
EU CLP 2008 :		
Classification :	Not regulated	Not regulated
Hazard statement codes :	Not regulated	Not regulated
Precautionary statement codes :	Not regulated	Not regulated
EU SVHC list :	Not regulated	Not regulated
EU Authorisation List :	Not regulated	Not regulated
EU Restriction list :	Not regulated	Not regulated
Foreign Regulatory Information		
Korea management information :	Existing Chemical Substance (KE-13881)	Existing Chemical Substance (KE-29433)

#### 15.2 Chemical safety assessment :

- No chemical safety assessment has been carried out for this substance by the supplier.

### 16. OTHER INFORMATION

Product safety data sheet was prepared for KEP Ethylene Propylene Rubber in accordance with Regulation (EU) 453/2010 (REACH), Annex II

#### 16.1 Indication of changes:

- Version : Rev. 21
- Revision date : 1 April 2015

#### 16.2. Abbreviations and acronyms:

- CLP = Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008
- CAS No. = Chemical Abstracts Service number
- DNEL = Derived No Effect Level
- EC Number = EINECS and ELINCS Number (see also EINECS and ELINCS)
- EU = European Union
- OSHA = European Agency for Safety and Health at work
- PBT = Persistent, Bioaccumulative and Toxic substance
- PNEC(s) = Predicted No Effect Concentration(s)
- REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
- SVHC = Substances of Very High Concern
- vPvB = Very Persistent and Very Bioaccumulative

#### 16.3 Key literature reference and sources for data:

- HSDB (Hazardous Substances Data Bank)
- ICSC (International Chemical Safety Cards)
- NLM (United States National Library of Medicine)
- IUCLID (International Uniform Chemical Information Database)

- NCIS (National Chemicals Information System of South Korea)

**16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008**  
[CLP]: Not applicable

**16.5 Relevant R-phrases and/or H-statements (number and full text):** Not applicable

**16.6 Training advise:**

- Do not handle until all safety precautions have been read and understood.

**16.7 Further information:** No information available

**This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship.**