

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name - KEP ETHYLENE PROPYLENE RUBBER  
 Ethylene Propylene Copolymer/Terpolymer/Oil Extended Polymer

Supplier/Manufacturer - KUMHO POLYCHEM CO., LTD.  
 - Address : #144-6, Weoulha-dong, Yeosu-City, Cheonranam- Do, Korea  
 - TEL : 81-61-688-2825, FAX : 81-61-688-2850

Rev. Date - March 19. 2009

## 2. COMPOSITION

- EPM grade (CAS No. 9010-79-1)

CAS NO.	Material	CAS No.	Concentration (%)
	ETHYLENE	74-85-1	50 ~ 75
	PROPYLENE	115-07-1	25 ~ 50

- EPDM grade (CAS No. 25038-36-2)

Material	CAS No.	Concentration (%)
ETHYLENE	74-85-1	50 ~ 75
PROPYLENE	115-07-1	25 ~ 50
ENB	16219-75-3	0 ~ 10

- Oil extended grade (CAS No. 25038-36-2 and 64742-54-7)

Material	CAS No.	Concentration (%)
ETHYLENE	74-85-1	50 ~ 75
PROPYLENE	115-07-1	25 ~ 50
OIL	No Reportable Ingredient	13 ~ 50

## 3. HAZARD IDENTIFICATION

Hazardous Ingredient - This product is not hazardous as defined in CFR1910.1200

Eye Contact - Particulates may scratch eye surfaces/cause mechanical irritation.

Skin Contact - No hazard in normal industrial use.  
 Exposure to hot material may cause thermal burns.

Inhalation - Negligible hazard at ambient temperature

Ingestion - No hazard in normal industrial use.

## 4. FIRST AID MEASURES

Eye contact - This product is an inert solid. If in eye, remove as one would any foreign object.

Skin contact - For hot product, immediately immerse in or flush the affected area with large amount of cold water to dissipate heat. Cover with clean

cotton sheeting or gauze and get prompt medical attention.

No attempt should be made to remove material from skin or to remove contaminating clothing, as the damaged flesh can be easily torn.

Inhalation

- Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

Ingestion

- First aid is normally not required.

## 5. FIRE FIGHTING MEASURES

Flash Point	- > 482	Note : Greater Than, Decomposes
Auto ignition Temperature	- Not Applicable	
Flammable Limits	- Not Applicable	
Fire Fighting	- Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply to fire. Extinguish the fire by cooling with water spray. Respiratory and eye protection required for fire fighting personnel.	
Hazardous Combustion of Product	- Under Oxygen lean conditions. Carbon Monoxide (CO) and irritating smoke may be produced.	

## 6. ACCIDENTAL RELEASE MEASURES

Land spill	- Recover spilled material and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
Water spill	- Recover spilled material and place in suitable containers for recycle or disposal. - Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

## 7. HANDLING AND STORAGE

Electrostatic Accumulation Hazard	- No, but use proper grounding procedure
Storage Temperature,	- Ambient
Storage/Transport Pressure, mmHg	- Atmospheric
Loading/Unloading Temperature,	- Ambient

Viscosity at Loading/Unloading	- Not Applicable
Temperature, cST	
Storage/ Keep	- Avoid the heat or sunlight. Store in a well ventilated place. Store in a cool, dry place. Keep container tightly closed.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	- Use local ventilation to Control fumes from hot processing. Use static controls. Static charges can build up and ignite dust or solvent laden atmospheres.
Personal Protection	- For open system at ambient temperature(-18 to 38 ) where contact is likely, wear safety glass where contact may occur with hot material, wear thermal resistant gloves, arm protection, and a face shield. where concentrations in air may exceed the limits given in this section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation
Ventilation	- Local exhaust ventilation of process equipment may be to control particulate exposures to below the recommended exposure limit. See personal protection recommendations
Workplace Exposure Limits	- OSHA regulation 29CFR1910.1000 requires the following permissible exposure limits : 5 mg/m <sup>3</sup> (respirable dust), and 15 mg/m <sup>3</sup> (total dust) based on the OSHA, PEL for nuisance dust. - The ACGIH recommends the following occupational exposure limit : a TWA of 10 mg/m <sup>3</sup> (total dust) for nuisance dust

## 9. PHYSICAL AND CHEMICAL DATA

Physical State	- White to slight brown rubber solid
Flash Point(PMCO)( )	- Not Applicable
Solubility In Water(kg/m <sup>3</sup> )	- Insoluble
Vapour Pressure(kPa)	- Not Applicable
Density(kg/m <sup>3</sup> )	- 860 ~ 890
Pour Point ( )	- Not Applicable

## 10. STABILITY AND REACTIVITY

Chemical Stability	- Stable at normal temperatures and storage conditions
Conditions to Avoid Instability	- Extension heating at temperature above 250 (482 F) can result In decomposition.
Hazardous Polymerization	- Polymerization will not occur.
Materials and Conditions to avoid Incompatibility	- High diene grades should not be heated above 350 /177 unless oxygen is excluded or more antioxidant is added before storage. See product identification section for list of high diene grades.
Hazardous Decomposition Products	- Flammable Hydrocarbon. Certain grades- acetic acid See product Identification section

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity	- Not Applicable
Local Affection	- Not Applicable

## 12. ECOLOGICAL INFORMATION

This product is not regulated.

## 13. DISPOSAL CONSIDERATION

Observe the all regulations made by  
administration.

## 14. TRANSPORT INFORMATION

This product is not DOT regulated.

## 15. REGULATORY INFORMATION

TSCA	- This product is listed on the TSCA Inventory
CERCLA :	- If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Environmental Response. Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling 800-4424-8802(In U.S.A) and KEPR(061-688-2830) The reportable spill quantity of this product is 5,880pounds. This product contains : n-Hexane, CAS No. 110-54-3
SARA TITLE :	- Under the provisions of Title , Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories : Not Hazardous.

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This product does not contain Section 313 Reportable Ingredients.

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## 16. OTHER INFORMATION

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### NOTES

1) Applicable grades of KEP Copolymers(CAS No. 9010-79-1 ) are :

KEP : 020P, 070P, 110, 2060

EP : 11, 11A

2) Applicable grades of KEP Terpolymers(CAS No. 25038-36-2 ) are :

KEP : 210, 220, 240, 270, 281F, 330, 350, 370F, 430H, 435, 510, 570F(C,P)

650(L), 1030F, 7141, 2320, 2380, 2480

EP : 21, 22, 27, 37F, 43, 51,

3) Applicable grades of Oil Extended Terpolymers(CAS No. 25038-36-2 and 64742-54-7) are :

KEP : 901, 960, 960F, 980, 1030EF, 2733

4) High diene grades

KEP : 330, 350, 370F, 650(L) , 2480

If previously heated above 350 /177 unless Oxygen is excluded from the storage area or more antioxidant is added before storage of the polymer

Acetic acid is liberated as a hazardous decomposition product from these grades

This information relates to the specific material designated and not be valid for such material used in combination with any other materials or in any process.

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