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SAFETY DATA SHEET

Date Printed : 01 August 1994

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Version : Rev. 36

Regulation : In accordance with Regulation (EC) No 1272/2008 [CLP] – amendment - Regulation (EU) 2025/1222

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Name of the Product : Ethylene Propylene Diene Monomer (EPDM)
Ethylene Propylene Copolymer (EPM)

Substance Name	CAS No.	EC/List No.	Applicable Grade
Ethylene propylene 5-ethylidene-2-norbornene terpolymer	25038-36-2	607-505-0	KEP210, KEP240, KEP270, KEP330, KEP350, KEP370F, KEP430H, KEP435, KEP510, KEP570P, KEP570F, KEP650, KEP650L, KEP281F, KEP282F, KEP1030F, KEP2320, KEP2371, KEP2380, KEP2480, KEP2660, KEP5770, KEP4730, KEP7141, KEP8512, KEP9590
Ethylene propylene Copolymer	9010-79-1	618-455-4	KEP020P, KEP070P, KEP110, KEP2060, KEP0410T, KEP0520T, KEP0530, KEP0550, KEP0750P

UFI : Not available

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, Viscosity Modifier for Engine Oils & Lubricants etc.

Uses advised against : No information

1.3 Details of the supplier of the Safety Data Sheet

Supplier : KUMHO POLYCHEM CO., LTD.

Street address/P.O. Box : #144-6, Weoulha-dong, Yeosu-City, Cheonranam-Do, Korea

Country ID/Postcode/Place : 59611

Telephone number : +82-61-688-2821

Telefax : +82-61-688-2850

e-mail address of competent person responsible for the SDS : ljhoon@polychem.co.kr

1.4. Emergency Telephone :

Emergency Telephone number : +82-61-688-2700 (Fax: +82-61-688-2899)

Opening hours : Not available

Other comments (e.g. language(s) of the phone service) : Not available

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP] – amendment- Regulation (EU) 2025/1222: Not classified

2.1.2 Additional information: Not available

2.2 Label elements

Hazard pictograms : Not applicable

Signal word : Not applicable

Hazard statements : Not applicable

Additional hazard information (EU) : Not applicable

2.3 Other hazards

- The substance does not meet the criteria for classification as vPvB and PBT in accordance with Regulation (EC)

No 1907/2006, Annex XIII

- Substance identified not as having endocrine-disrupting properties in accordance with Regulation (EU) 2017/2100

and 2018/605

- The substance is not listed in article 59.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

	Ethylene propylene 5-ethylidene-2-norbornene terpolymer	Ethylene propylene Copolymer
Other Name/s	2-norbornene, 5-ethylidene polymer with ethylene and propene	1-propene, polymer with ethene
CAS No.	25038-36-2	9010-79-1
Content(%)	100	100

Classification under Regulation (EC) No 1278/2008 (CLP)– amendment- Regulation (EU) 2025/1222	Not classified	Not classified
SCL / Fator-M / ATE	-	-

* 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	0
Ethylene	74-85-1	200-815-3	01-2119462827-27-0116	Press. Gas Flam. Gas 1 H220 STOT SE 3 H336
Propylene	115-07-1	204-062-1	01-2119447103-50-0113	Press. Gas, Flam. Gas 1 H220
5-Etylidene-2-norbornene	16219-75-3	240-347-7	01-2119494722-31-0002	Not available

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General notes : - not available

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

First Responder Self-Protection : - Not available

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

- **For non-emergency personnel**
 - Protective equipment :**
 - Wear protective gloves.
 - Emergency procedures :** Not available
 - For emergency responders :** Not available

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

For containment : Not available

For cleaning up :

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

Other information: Not available

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

Protective measures :

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

Measures to prevent fire : Not available

Human: inhalation	-	-	-	-	-	-	-	-	-	-	-	-
Human: dermal	-	-	-	-	-	-	-	-	-	-	-	-
Environment: water	-											
Environment: air	-											
Environment: soil	-											
Environment: sediment	-											
Environment: STP	-											
Environment: oral	-											

8.2 Exposure controls

8.2.1 Appropriate engineering controls :

Substance/mixture related measures to prevent exposure during identified uses:

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

Structural measures to prevent exposure: Not available

Organisational measures to prevent exposure: Not available

Technical measures to prevent exposure: Not available

8.2.2 Individual protection measures, such as personal protective equipment :

Eye and face protection:

- Install equipment to wash the hands and eyes nearby.

Skin protection:

- Use work clothes and safety shoes as required.

Hand protection:

- Use protective gloves as required.

Respiratory protection:

- Use a protective mask as required.

8.2.3 Environmental exposure controls

Substance/mixture related measures to prevent exposure:

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

Instruction measures to prevent exposure: Not available

Organisational measures to prevent exposure: Not available

Technical measures to prevent exposure: Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

	2-norbornene, 5-ethylidene polymer with ethylene and propene	1-propene, polymer with ethene
Description :	Solid	Not available
Color :	White or yellow-Green	Not available
Odor :	Slight Odor	Not available
Odor threshold :	Not applicable	Not available
pH :	Not applicable	Not available
Melting point/freezing point :	Not applicable	Not available
Initial boiling point and boiling range :	Not applicable	Not available
Flash point :	250 °C	Not available
Evaporation rate :	Not applicable	Not available
Flammability (solid, gas) :	Not applicable	Not available
Upper/lower flammability or explosive limits :	Not applicable	Not available
Vapor pressure :	Not applicable	Not available
Solubility (ies) :	Insoluble in water	Not available
Vapor density :	Not applicable	Not available
Specific gravity :	0.86 ~ 0.89	Not available
Partition coefficient: n-octanol/water :	Not applicable	Not available
Auto ignition temperature :	Not applicable	Not available
Decomposition temperature :	250 °C	Not available
Viscosity :	Not applicable	Not available
Explosive properties :	Not applicable	Not available
Oxidizing properties :	Not applicable	Not available
Molecular weight :	100,000 ~ 600,000	Not available

9.2 Other information : No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity :

- Polymerization does not occur.

10.2 Chemical stability :

- Stable at normal temperature and pressure

10.3 Possibility of hazardous reactions : Not applicable

10.4 Conditions to avoid : Not applicable

10.5 Incompatible materials : Not applicable

10.6 Hazardous decomposition products : Not applicable

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicology effects

	2-norbornene, 5-ethylidene polymer with ethylene and propene	1-propene, polymer with ethene
Acute toxicity;		
Oral	Not applicable	Not applicable
Dermal	Not applicable	Not applicable
Inhalation	Not applicable	Not applicable
Skin Corrosion/ Irritation;	Not applicable	Not applicable
Serious Eye Damage/ Irritation;	Not applicable	Not applicable
Respiratory sensitization;	Not applicable	Not applicable
Skin Sensitization;	Not applicable	Not applicable
Carcinogenicity;	Not applicable	Not applicable
Mutagenicity;	Not applicable	Not applicable
Reproductive toxicity;	Not applicable	Not applicable
Specific target organ toxicity (single exposure);	Not applicable	Not applicable
Specific target organ toxicity (repeat exposure);	Not applicable	Not applicable
Aspiration Hazard;	Not applicable	Not applicable
Endocrine disrupting properties	Substance identified as not having endocrine-disrupting properties in accordance with Regulation (EU) 2017/2100 and 2018/605	Substance identified as not having endocrine-disrupting properties in accordance with Regulation (EU) 2017/2100 and 2018/605

12. ECOLOGICAL INFORMATION

	2-norbornene, 5-ethylidene polymer with ethylene and propene	1-propene, polymer with ethene
12.1 Toxicity		

Acute toxicity	No information available	No information available
Chronic toxicity	No information available	No information available
12.2 Persistence and degradability	No information available	No information available
12.3 Bioaccumulative potential	No information available	No information available
12.4 Mobility in soil	No information available	No information available
12.5 Results of PBT and vPvB assessment	No information available	No information available
12.6 Endocrine disrupting properties	Substance identified as not having endocrine-disrupting properties in accordance with Regulation (EU) 2017/2100 and 2018/605	Substance identified as not having endocrine-disrupting properties in accordance with Regulation (EU) 2017/2100 and 2018/605
12.7 Other adverse effects	No information available	No information available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Protective measures:

- Observe all regulations made by administration.

Waste codes / Waste designation according to LoW(2015): 07 02 99

Waste treatment-relevant information:

- Observe all regulations made by administration.

Sewage disposal-relevant information: Not available

Other disposal recommendations: Not available

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

ADR-Shipping Name : Not applicable to the criteria for classification

IATA-Shipping Name : Not applicable to the criteria for classification

IMDG-Shipping Name : Not applicable to the criteria for classification

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

ADR-Class : Not applicable to the criteria for classification

IATA-Class : Not applicable to the criteria for classification

IMDG-Class : Not applicable to the criteria for classification

14.4 Packing group : Not applicable to the criteria for classification

ADR-Packing Group : Not applicable to the criteria for classification

IATA-Packing Group : Not applicable to the criteria for classification

IMDG-Packing Group : Not applicable to the criteria for classification

14.5 Environmental hazards : Not applicable to the criteria for classification

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

	Ethylene propylene 5-ethylidene-2-norbornene terpolymer	1-propene, polymer with ethene
EU Regulatory Information		
EU classification		
Annex I of Directive 67/548/EEC :		
Classification :	Not classified	Not regulated
Risk phrases :	Not applicable	Not regulated
Safety phrases :	Not applicable	Not regulated
EU CLP 2008 :		
Classification :	Not classified	Not regulated
Hazard statement codes :	Not applicable	Not regulated
Precautionary statement codes :	Not applicable	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		
United States of America Regulatory information		
U.S.A management information (TSCA)	Present (ACTIVE)	Present [XU] (ACTIVE)
U.S.A management information (OSHA Regulation)	Not regulated	Not regulated

U.S.A management information (CERCLA Regulation)	Not regulated	Not regulated
U.S.A management information (EPCRA 302 Regulation)	Not regulated	Not regulated
U.S.A management information (EPCRA 304 Regulation)	Not regulated	Not regulated
U.S.A management information (EPCRA 313 Regulation)	Not regulated	Not regulated
Korea management information :	Existing Chemical Substance (KE-12546)	Existing Chemical Substance (KE-13881)

15.2 Chemical safety assessment :

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

16. OTHER INFORMATION

Product safety data sheet for KEP Ethylene Propylene rubber prepared in accordance with Regulation (EU) 2020/878 (REACH), Annex II

16.1 Indication of changes:

Version : Rev. 36

Revision date : 08. Jan 2026

16.2. Abbreviations and acronyms:

CLP = Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008[CLP] – amendment-Regulation (EU) 2025/1222

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:

Ethylene propylene 5-ethylidene-2-norbornene terpolymer

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- Corporate Solution From Thomson Micromedex (<http://csi.micromedex.com>)
 - ECB-ESIS (European Chemical Substances Information System) (<http://ecb.jrc.it/esis>)
 - ECOTOX Database, EPA (<http://cfpub.epa.gov/ecotox>)
 - IUCLID Chemical Data Sheet, EC-ECB
 - ICSC (International Chemical Safety Cards)
 - NLM (United States National Library of Medicine)
 - The Chemical Database, The Department of Chemistry at the University of Akron (<http://ull.chemistry.uakron.edu/erd>)
 - National Emergency Management Agency-Korea dangerous material inventory management system (<http://www.nema.go.kr/hazmat/main/main.jsp>)
 - NCIS (National Chemicals Information System of South Korea)
 - REACH information on registered substances (<http://apps.echa.europa.eu/registered/registered-sub.aspx>)
 - American Conference of Governmental Industrial Hygienists TLVs and BEIs.
 - NIOSH Pocket Guide; <http://www.cdc.gov/niosh/npg/npgdcas.html>
 - IARC Monographs on the Evaluation of Carcinogenic Risks to Humans; <http://monographs.iarc.fr>

1-propene, polymer with ethene

- 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)
- American Conference of Governmental Industrial Hygienists TLVs and BEIs.
- NIOSH Pocket Guide; <http://www.cdc.gov/niosh/npg/npgdcas.html>
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans; <http://monographs.iarc.fr>

1-propene, polymer with ethene

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008[CLP] – amendment- Regulation (EU) 2025/1222

[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.