KUMHO PETROCHEMICAL

SAFETY DATA SHEET
KUMHO SOL 5270M

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name KUMHO SOL 5270M

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

Identified uses Raw materials for tires, shoes, rubber hoses

1.3. Details of the supplier of the safety data sheet

Supplier
OR of KOREA KUMHO Petrochemical Co., Ltd.
KIST Europe Forschungsgesellschaft mbH
Campus E71
66123 Saarbruecken
Germany
Tel: +49 681 9382 334
Fax: +49 681 9382 319
e-mail: reach.it@kist-europe.de

Manufacturer
KUMHO Petrochemical Yeosu Synthetic Rubber Plant 1
118, Yeosusandan,
3-ro, Yeosu-si,
Jeonnam, Korea
and/or
KUMHO Petrochemical Yeosu Synthetic Rubber Plant 2
331, Sandan Jungang,
Yeosu-si,
Jeonnam, Korea

1.4. Emergency telephone number

Emergency telephone +49 551 19240
GIZ-Nord, Goettingen, Germany (English only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC/1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard statements H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P273 Avoid release to the environment.
P501 Dispose of contents/ container in accordance with national regulations.

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Supplementary precautionary statements P273 Avoid release to the environment.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Styrene-Butadiene Copolymer **60-100%**

CAS number: 9003-55-8

Classification
Not Classified

BHT **<1%**

CAS number: 128-37-0 EC number: 204-881-4

M factor (Chronic) = 1

Classification
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

Composition comments Monomer is registered instead of Styrene-Butadiene-Styrene copolymer. (Registration number of monomer: 1,3-Butadiene; 01-2119471988-16-****, Styrene; 01-2119457861-32-****)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Get medical attention.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Rinse nose, mouth and throat with water. Get medical attention if any discomfort continues.

Skin contact Rinse immediately with plenty of water. Remove contaminated clothing and rinse skin thoroughly with water. Wash contaminated clothing before reuse. Get medical attention if irritation persists after washing. Contact with hot product can cause serious thermal burns. Get medical attention if symptoms are severe or persist.

Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information Not available.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Heating may cause a fire. Dust may form explosive mixture with air.

Hazardous combustion products Toxic gases/vapours/fumes of: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon.

5.3. Advice for firefighters

Protective actions during firefighting Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Cool containers exposed to flames with water until well after the fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust and vapours. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Foam.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Re-packaging dismantled rubber. Collect spillage with a shovel and broom, or similar and reuse, if possible. VENTILATE/EVAPORATE. Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Avoid handling which leads to dust formation. Avoid inhalation of vapours/spray and contact with skin and eyes. Use fire-extinguishing media suitable for the surrounding fire. Wash contaminated clothing before reuse. Avoid heat, flames and other sources of ignition. Do not eat, drink or smoke when using the product. Wash hands after handling. Maintain a clean working environment. Avoid above 316 ºC and contact. Dust may form explosive mixture with air. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Protect against direct sunlight. Avoid high temperature, moisture, UV light when stored inside. Store at moderate temperatures in dry, well ventilated area. Avoid heat. Avoid contact with the following materials: Strong oxidising agents. Collect and place in suitable waste disposal containers and seal securely.

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7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

BHT

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³
ACGIH = American Conference of Governmental Industrial Hygienists.

Biological limit values Not available., Not available., Not available.

DNEL Not available.

PNEC Not available.

8.2. Exposure controls

Protective equipment



Eye/face protection The following protection should be worn: Chemical splash goggles.

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection Provide adequate ventilation. Avoid inhalation of dust. Observe any occupational exposure limits for the product or ingredients. If ventilation is inadequate, suitable respiratory protection must be worn. Use engineering controls to reduce air contamination to permissible exposure level. Wear a suitable dust mask. Wear apron or protective clothing in case of contact.

Environmental exposure controls Not available.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Solid

Colour Not available.

Odour Mild.

Odour threshold Not available.

pH Not applicable.

Melting point Not applicable.

Initial boiling point and range Not applicable.

Flash point Not available.

Evaporation rate Not available.

Upper/lower flammability or explosive limits Not available.

Vapour pressure Not applicable.

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Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Other information	Specific gravity: 0.91 ~ 0.97 @ 20 ºC
Molecular weight	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not available.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Avoid above 316 ºC.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid contact with incompatible materials. Avoid exposure to high temperatures or direct sunlight. Avoid generation and spreading of dust. Avoid the following conditions: >50 ºC.

10.5. Incompatible materials

Materials to avoid Acids - oxidising. Flammable/combustible materials. Alkalis - inorganic. Alkalis - organic. Strong oxidising agents. Halocarbon compounds. Carbon monooxide (CO). Carbon dioxide (CO2). Acids -organic, halogenated. Acid anhydrides. Unsuitable container materials: Common metals. Mild steel. Aluminium. Copper. Direct sunlight.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Hydrocarbons. Irritating and toxic fumes, smoke, and gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - oral

Notes (oral LD_{50}) Not available.

Acute toxicity - dermal

Notes (dermal LD_{50}) Not available.

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Acute toxicity - inhalation

Notes (inhalation LC_{50}) Not available.

Skin corrosion/irritation

Extreme pH Not available.

Serious eye damage/irritation

Serious eye damage/irritation Not available.

Germ cell mutagenicity

Genotoxicity - in vitro Not available.

Genotoxicity - in vivo Not available.

Carcinogenicity

Carcinogenicity Not available.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

Reproductive toxicity - development Not available.

Specific target organ toxicity - single exposure

STOT - single exposure Not available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not available.

Aspiration hazard

Aspiration hazard Not available.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Not available.

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

Toxicity to soil Not available.

12.2. Persistence and degradability

Persistence and degradability Not available.

Biodegradation Not available.

12.3. Bioaccumulative potential

Bioaccumulative potential Not available.

Partition coefficient Not applicable.

12.4. Mobility in soil

Mobility Not available.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Confirm disposal procedures with environmental engineer and local regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not available.

14.3. Transport hazard class(es)

Not available.

14.4. Packing group

Not available.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
Not available.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

SECTION 15: Regulatory information

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

Authorisations (Title VII Regulation 1907/2006) No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006) No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Issued by KIST Europe

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Revision date	26/06/2018
Revision	1
SDS number	20655
Hazard statements in full	H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.