

KUMHO PETROCHEMICAL

SAFETY DATA SHEET KUMHO SOL 5360H

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 5360H

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 Korea Kumho Petrochemical Co., Ltd.
#331, Sandanjungang-ro, Yeosu-si Jeollanam-do, Republic of Korea
+82 61 688 7270~7273
+82 61 688 7219

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.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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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 symptoms are severe or persist. Get medical attention if irritation persists after washing.
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

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 Slight fire hazard. Dust may form explosive mixture with air.

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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. Use vapour suppression foam to reduce vapour.

6.2. Environmental precautions

Environmental precautions

Do not discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. If large spills, call emergency services to get advice.

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

Wear protective clothing as described in Section 8 of this safety data sheet. Storage tanks and other containers must be earthed. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid handling which leads to dust formation. Avoid inhalation of vapours/spray and contact with skin and eyes. Wash contaminated clothing before reuse. Use fire-extinguishing media suitable for the surrounding fire. Avoid heat, flames and other sources of ignition. Avoid inhalation of dust and vapours. Avoid ingestion. Do not eat, drink or smoke when using the product. Wash hands after handling. Clean equipment and the work area every day. Do not act pressure, cutting, welding, soldering, drilling, grinding, etc. Avoid above 316 °C and contact.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Protect against direct sunlight. Do not store outdoor. Do not store near heat sources or expose to high temperatures. Protect from moisture. Avoid UV light. 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.

7.3. Specific end use(s)

Specific end use(s)

Not available.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

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BHT

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.

ACGIH

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. If ventilation is inadequate, suitable respiratory protection must be worn. Wear self-contained breathing apparatus. Wear a full facepiece respirator fitted with the following cartridge: Wear a supplied-air respirator. 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. Not available.
pH	Not applicable. 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.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Not available. Insoluble in water.

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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 °C
Molecular weight	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Not available.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Avoid the following conditions: above 316°C
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable.
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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 °C.
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10.5. Incompatible materials

Materials to avoid	Acids - oxidising. Flammable/combustible materials. Alkalis - inorganic. Alkalis - organic. Strong oxidising agents. Halocarbon compounds. Carbon monoxide (CO). Carbon dioxide (CO ₂). Acids -organic, halogenated. Acid anhydrides. Unsuitable container materials: Common metals. Mild steel. Aluminium. Copper. Direct sunlight.
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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.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	No information available.
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Acute toxicity - oral

Notes (oral LD₅₀)	Not available.
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Acute toxicity - dermal

Notes (dermal LD₅₀)	Not available.
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Not available.
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Skin corrosion/irritation

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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. 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

Results of PBT and vPvB assessment Not available.

12.6. Other adverse effects

Other adverse effects Not available.

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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 Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

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
Revision date	12/01/2018
Revision	4
Hazard statements in full	H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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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.