

KUMHO PETROCHEMICAL

SAFETY DATA SHEET

KUMHO SOL 1205

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 1205

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

Identified uses Bitumen modifier, shoes, plastic modifier

Uses advised against Not available.

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.
R&BD Center, Synthetic Rubber Reasearcher Lab
1557, Yuseongdae-ro, Yuseong-gu, Daejeon, Korea
Tel.:+82-42-865-8689

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 Not Classified

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Styrene-Butadiene Copolymer	>99%
CAS number: 9003-55-8	
Classification	
Not Classified	
Additives	<1%
CAS number: —	
Classification	
Not Classified	

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	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. 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. 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. Chemical burns must be treated by a physician. 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. 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	Heating may cause a fire. Dust may form explosive mixture with air.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO ₂). Toxic gases or vapours. Fume

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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 generation and spreading of dust. Avoid inhalation of dust and vapours. Avoid heat, flames and other sources of ignition. 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. Provide adequate ventilation. 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. Avoid above 316 °C and contact. Provide adequate ventilation. Avoid handling which leads to dust formation. Storage tanks and other containers must be earthed. Avoid inhalation of vapours/spray and contact with skin and eyes. Wash contaminated clothing before reuse. Use fire prevention tools and explosion-proof equipment. Avoid heat, flames and other sources of ignition. Do not ingestion or inhalation. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Clean equipment and the work area every day. Do not press, cut, weld, solder, bond, drill, grind.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Protect from sunlight. Do not store outdoor. Keep in a cool, well ventilated place. Protect from moisture. Avoid heat. Do not store near heat sources or expose to high temperatures. Avoid UV light. Avoid contact with the following materials: Strong oxidising agents.

7.3. Specific end use(s)

Specific end use(s)

Not available.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Biological limit values

Not available., Not available., Not available.

DNEL

Not available.

PNEC

Not available.

8.2. Exposure controls

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Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

Eye/face protection

Wear chemical splash goggles. Wear face protection.

Hand protection

Wear protective gloves.

Other skin and body protection

Wear appropriate clothing to prevent skin contamination.

Respiratory protection

Respiratory protection may be required if excessive airborne contamination occurs. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.

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.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not applicable.
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.

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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 temperatures above 316 °C.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight. Avoid generation and spreading of dust.
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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). Acid chlorides (Acyl chlorides). Acid anhydrides. Mild steel. Copper.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO ₂). Acrid smoke or fumes. Hydrocarbons. Irritating gases or vapours.
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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

Extreme pH	Not available.
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Serious eye damage/irritation

Serious eye damage/irritation	Not available.
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Germ cell mutagenicity

Genotoxicity - in vitro	Not available.
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Genotoxicity - in vivo	Not available.
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Carcinogenicity

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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.

Toxicological information on ingredients.

Styrene-Butadiene Copolymer

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

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

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

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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

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

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

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Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
Revision comments	Product name change.
Issued by	KIST Europe
Revision date	25/10/2019
Revision	1
SDS number	20673

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