

KUMHO PETROCHEMICAL

SAFETY DATA SHEET KUMANOX SP-N

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010, 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 KUMANOX SP-N
REACH registration number 01-2119979575-18-XXXX

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

Identified uses Antioxidant for foam rubber.
Uses advised against No specific uses advised against are identified.

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
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Manufacturer Korea Kumho Petrochemical Co., Ltd.
227, Yeosusandan 2-ro, Yeosu-si,
Jeollanam-do, Korea
+82 61 688 3920
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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 2 - H411

2.2. Label elements

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Pictogram



Hazard statements	H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P391 Collect spillage. P501 Dispose of contents/ container in accordance with national regulations.
Supplementary precautionary statements	P273 Avoid release to the environment. P391 Collect spillage. P501 Dispose of contents/ container to ...

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Styrenated phenol	60-100%
CAS number: 61788-44-1	EC number: 262-975-0
	REACH registration number: 01-2119979575-18-XXXX

Classification

Aquatic Chronic 2 - H411

Silicon dioxide

30-60%

CAS number: 7631-86-9

EC number: 231-545-4

Classification

Not Classified

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention.
Inhalation	Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Never give anything by mouth to an unconscious person. Consult a physician for specific advice. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Rinse nose, mouth and throat with water.
Skin contact	Continue to rinse for at least 15 minutes. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Do not rub eye.

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

Skin contact	May cause skin irritation/eczema.
Eye contact	May cause minor irritation on eye.

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

Notes for the doctor Treatment may vary with condition of victim and specifics of incident.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with dry sand. Water spray, foam, dry powder or carbon dioxide.

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 Dust or gas may ignite by flames. Thermal decomposition may liberate toxic and corrosive vapours/gases. Non flammable Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Styrene. Phenol. Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Fight advanced or massive fires from safe distance or protected location. Keep up-wind to avoid fumes. Avoid heat, flames and other sources of ignition. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Keep unauthorized personnel out.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

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. Keep away from sources of ignition - No smoking. Keep upwind. Avoid generation and spreading of dust.

6.2. Environmental precautions

Environmental precautions Store away from waterwork or drainage system. Prevent run-off from entering ground, storm sewers and ditches which lead to natural waterways. If large spills, call emergency services to get advice.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Large Spillages: Avoid lowland and keep upwind. Disposal to licensed waste disposal site in accordance with local waste disposal authority. Sweep up and shovel. Keep in suitable, closed containers for disposal. Cover powdered spills with plastic sheet or tarpaulin to minimise spreading and protect from water. Wear protective clothing as described in Section 8 of this safety data sheet.

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. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Anti-static boots. Anti-static suit. Wash thoroughly after handling. Avoid handling which leads to dust formation.

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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Earth container and transfer equipment to eliminate sparks from static electricity. Keep container tightly sealed when not in use. Store in a cool and well-ventilated place. Avoid contact with oxidizing agent, acids, alkali, moisture, heat, direct sunlight or other ignition sources.

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

Workplace Exposure Limit (WEL)

Silicon dioxide

Long-term exposure limit (8-hour TWA): OEL 10 mg/m³ total dust

OEL = Occupational Exposure Limit.

ACGIH

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles.

Hand protection

Wear suitable gloves.

Other skin and body protection

Wear suitable protective clothing.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Under frequent use or heavy exposure, respiratory protection may be needed. Wear a suitable dust mask.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Dusty powder.
Colour	White.
Odour	Odourless.
Odour threshold	Not available. Not available.
pH	pH (concentrated solution): 7 2.47
Melting point	Not applicable.
Initial boiling point and range	Not applicable.

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Flash point	180°C
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Not available. Not available.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Other information	Specific gravity : 1.27 ~ 1.39
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.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Will not occur.
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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 temperature over 75°C.
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10.5. Incompatible materials

Materials to avoid	Acids. Alkalis. Oxidizing Agent
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10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon oxides. Styrene. Phenol.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

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

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Notes (dermal LD₅₀) Not available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not available.

Skin corrosion/irritation

Animal data 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.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

Reproductive toxicity - development Not available.

Aspiration hazard

Aspiration hazard Not available.

SECTION 12: Ecological Information

Ecotoxicity There are no data on the ecotoxicity of this product.

12.1. Toxicity

Acute toxicity - fish Not available.
LC₅₀, 96 hours: mg/l, Fish

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

Acute toxicity - microorganisms Not available.

Chronic toxicity - fish early life stage Not available.

Short term toxicity - embryo and sac fry stages Not available.

Chronic toxicity - aquatic invertebrates Not available.

Toxicity to soil Not available.

Toxicity to terrestrial plants Not available.

Ecological information on ingredients.

Styrenated phenol

Acute toxicity - fish LC₅₀, 96 hours: 1.77 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 4.6 mg/l, Daphnia magna

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Acute toxicity - aquatic plants EC₅₀, 96 hours: 20.4 mg/l, Freshwater algae

Acute toxicity - microorganisms EL50, 3 hours: >100 mg/l,

Silicon dioxide

Acute toxicity - fish , 96 hours: 10000 mg/l, Brachydanio rerio (Zebra Fish)
Endpoint : LL0.

Acute toxicity - aquatic invertebrates , >: > 1000 mg/l, Daphnia magna
Endpoint : EL50.
Exposure duration : 24hr

Acute toxicity - aquatic plants Scientifically unjustified.

12.2. Persistence and degradability

Persistence and degradability Not available.
Phototransformation Not available.
Stability (hydrolysis) Not available.
Biodegradation Not available.
Water - 2.47 : 2.47

Ecological information on ingredients.

Styrenated phenol

Biodegradation Water - Degradation (%) 4.75: 5 days

Silicon dioxide

Persistence and degradability Not available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Partition coefficient Not applicable.

Ecological information on ingredients.

Styrenated phenol

Bioaccumulative potential BCF: 165, Cyprinus carpio (Common carp)

Silicon dioxide

Bioaccumulative potential Endpoint waived according to REACH Annex VII, IX or XI.

12.4. Mobility in soil

Mobility Not available

Ecological information on ingredients.

Styrenated phenol

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Adsorption/desorption coefficient - Koc: 1324 L/kg @ °C

Henry's law constant 0.0359 Pa m³/mol @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of contents/containers in accordance with local/regional/national/international regulations. Waste is suitable for incineration. If the waste contains designated waste and difficult to separate, incinerate it or reduce the volume following the similar way as incineration. If applicable, pretreat waste with oil/water separation.

Disposal methods Confirm disposal procedures with environmental engineer and local regulations. Dispose of the waste by oneself or contact disposal company.

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

UN No. (ADR/RID) 3077

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, STYRENATED PHENOL, N.O.S

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, STYRENATED PHENOL, N.O.S

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, STYRENATED PHENOL, N.O.S

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, STYRENATED PHENOL, N.O.S

14.3. Transport hazard class(es)

ADR/RID class 9

14.4. Packing group

ADR/RID packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Not applicable.

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

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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

A chemical safety assessment has been carried out with Styrenated phenol (CAS:61788-44-1) and Silicon dioxide (CAS:7631-86-9).

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet IGC50 : The 50% inhibitory growth concentration.

Issued by KIST Europe

Revision date 06/02/2018

Revision 4

SDS status Approved.

Hazard statements in full H411 Toxic 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.