

# KUMHO PETROCHEMICAL

## SAFETY DATA SHEET SOL-6270SL

According to Regulation (EU) No 453/2010

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product name SOL-6270SL

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

Identified uses Raw materials for tires, shoes  
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  
Universitaet des Saarlandes  
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.  
118, Yeosusandan 3-ro, Yeosu-si,  
Jeollanam-do, 555-280, Korea  
+82 61 688 3060-9  
+82 61 688 3168

#### 1.4. Emergency telephone number

+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 and Chemical Hazards Not classified.  
Human health Not classified.  
Environment Aquatic Chronic 3 - H412  
Classification (1999/45/EEC) R52/53.  
The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

#### 2.2. Label elements

Contains Styrene-Butadiene Copolymer  
TDAE Oil  
BHT

Label In Accordance With (EC) No. 1272/2008  
No pictogram required.

#### Hazard Statements

H412 Harmful to aquatic life with long lasting effects.

#### Precautionary Statements

P501 Dispose of contents/container to ...

#### Supplementary Precautionary Statements

P273 Avoid release to the environment.

#### 2.3. Other hazards

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.2. Mixtures**

<b>Styrene-Butadiene Copolymer</b>		<b>60-100%</b>
<b>CAS-No.: 9003-55-8</b>	<b>EC No.:</b>	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.	
<b>TDAE Oil</b>		<b>10-30%</b>
<b>CAS-No.: 64741-88-4</b>	<b>EC No.: 265-090-8</b>	
Classification (EC 1272/2008) Asp. Tox. 1 - H304	Classification (67/548/EEC) Xn;R65.	
<b>BHT</b>		<b>&lt; 1%</b>
<b>CAS-No.: 128-37-0</b>	<b>EC No.: 204-881-4</b>	
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: FIRST AID MEASURES

**4.1. Description of first aid measures****General information**

Get medical attention if any discomfort continues.

**Inhalation**

Move into fresh air and keep at rest.

If respiratory problems, artificial respiration/oxygen.

If breathing stops, provide artificial respiration.

**Ingestion**

Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious.

If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Skin contact**

Promptly wash contaminated skin with water. Promptly remove clothing if soaked through and wash the skin with water.

Continue to rinse for at least 15 minutes.

Wash contaminated clothing before reuse.

**Eye contact**

Do not rub eye. Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes.

**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**

Treatment may vary with condition of victim and specifics of incident.

## SECTION 5: FIREFIGHTING MEASURES

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**5.1. Extinguishing media****Extinguishing media**

Dry chemicals. Carbon dioxide (CO<sub>2</sub>). Water. Foam.

**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****Hazardous combustion products**

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. When heated and in case of fire, irritating vapours/gases may be formed.

**Unusual Fire & Explosion Hazards**

May explode when heated or when exposed to flames or sparks. Dust/air mixtures may ignite or explode. Heat may cause the containers to explode. Partly flammable but does not simply ignite.

**Specific hazards**

Dust or gas may ignite by flames. Vapours may cause drowsiness and dizziness.

**5.3. Advice for firefighters****Special Fire Fighting Procedures**

Keep up-wind to avoid fumes. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Keep unnecessary people away, isolate hazard area and deny entry. Fight advanced or massive fires from safe distance or protected location. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of materials or combustion by-products.

**Protective equipment for fire-fighters**

Wear appropriate protective equipment.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid heat, flames and other sources of ignition. Keep upwind. Do not handle broken packages without protective equipment. Stop leak if possible without risk. Avoid contact with skin and eyes.

**6.2. 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**

Large Spillages: Build dikes to control spillage. Small Spillages: Collect spilled material in appropriate container for disposal. Dispose of contents/containers in accordance with local/regional/national/international regulations. Avoid lowland and keep upwind.

**6.4. 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**

Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid heat, flames and other sources of ignition. Do not act pressure, cutting, welding, soldering, drilling, grinding, etc. Wash thoroughly after handling.

**7.2. Conditions for safe storage, including any incompatibilities**

Store and handle in accordance with all current regulations and standards. Avoid contact with moisture. Protect against direct sunlight. Flammable/combustible - Keep away from oxidisers, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place.

**7.3. Specific end use(s)**

Not available.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
BHT	ACGIH		2 mg/m <sup>3</sup>			

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ACGIH = American Conference of Governmental Industrial Hygienists.

### **Ingredient Comments**

No exposure limits noted for ingredient(s).

## **8.2. Exposure controls**

### **Protective equipment**



### **Process conditions**

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash, quick drench.

### **Engineering measures**

Provide adequate general and local exhaust ventilation.

### **Respiratory equipment**

Wear suitable respiratory protection. Under frequent use or heavy exposure, respiratory protection may be needed. In case of dust formation, wear respirator with particle filter.

### **Hand protection**

Wear appropriate chemical resistant gloves.

### **Eye protection**

Wear safety glasses with side-shields conforming to EN166.

### **Hygiene measures**

Wash hands after handling.

### **Skin protection**

Wear appropriate chemical resistant clothing. Wear face protection.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Solid
<b>Colour</b>	Dark brown.
<b>Odour</b>	Mild.
<b>Solubility</b>	Insoluble in water
<b>Initial boiling point and boiling range (°C)</b>	
Not available.	
<b>Melting point (°C)</b>	
Not available.	
<b>Relative density</b>	0.91~0.97 at 20°C
<b>Vapour density (air=1)</b>	
Not available.	
<b>Vapour pressure</b>	
Not available.	
<b>Evaporation rate</b>	
Not available.	
<b>pH-Value, Conc. Solution</b>	
Not available.	
<b>Viscosity</b>	
Not available.	
<b>Decomposition temperature (°C)</b>	
Not available.	
<b>Flash point (°C)</b>	
Not available.	
<b>Auto Ignition Temperature (°C)</b>	
Not available.	
<b>Partition Coefficient (N-Octanol/Water)</b>	
Not available.	

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**Oxidising properties**

Not available.

**9.2. Other information****Mol. Weight**

Not available.

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

Not available.

**10.2. Chemical stability**

Stable under normal temperature conditions and recommended use. Avoid above 316 °C.

**10.3. Possibility of hazardous reactions**

Will not occur.

**10.4. Conditions to avoid**

Avoid heat, flames and other sources of ignition. Avoid contact with incompatible materials.

**10.5. Incompatible materials****Materials To Avoid**

Acids, bases, oxidizing agents. Hydrogen cyanide (HCN).

**10.6. Hazardous decomposition products**During fire, toxic gases (CO, CO<sub>2</sub>) are formed. Smoke. Carbon oxides. Hydrogen cyanide (HCN). Aldehydes.**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Toxicological information on ingredients.****Styrene-Butadiene Copolymer (CAS: 9003-55-8)****Carcinogenicity:**

Butadiene Styrene : IARC group 3

**BHT (CAS: 128-37-0)****Acute toxicity:****Acute Toxicity (Oral LD<sub>50</sub>)**

&gt; 6000 mg/kg Rat

**Acute Toxicity (Dermal LD<sub>50</sub>)**

&gt; 2000 mg/kg Rat

**Acute Toxicity (Inhalation LC<sub>50</sub>)**

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

**Skin Corrosion/Irritation:**

Non-irritant (rabbit)

**Serious eye damage/irritation:**

Not Irritating.

**SOL-6270SL**  
**TDAE Oil (CAS: 64741-88-4)**

**Acute toxicity:****Acute Toxicity (Oral LD50)**

> 5000 mg/kg Rat

**Acute Toxicity (Dermal LD50)**

> 5000 mg/kg Rabbit

**Acute Toxicity (Inhalation LC50)**

> 5.53 mg/l (dust/mist) Rat 4 hours

**Skin Corrosion/Irritation:****Primary dermal irritation index (PDI)**

≈ 0.6

Not irritating.

**Serious eye damage/irritation:**

Not Irritating.

**Respiratory or skin sensitisation:**

Not Sensitising.

**Germ cell mutagenicity:****Genotoxicity - In Vitro**

Chromosome aberration:

Species : Chinese Hamster Ovary (CHO).

Negative.

**Genotoxicity - In Vivo**

Chromosome aberration:

Species : mouse.

Negative.

**Reproductive Toxicity:****Reproductive Toxicity - Fertility**

Screening: NOAEL ≥1000 mg/kg/day Oral Rat P

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**SOL-6270SL****Ecological information on ingredients.****BHT (CAS: 128-37-0)****Acute Toxicity - Fish**

LC50 96 hours 0.199 mg/l

(Calculated from QSAR approach)

**Acute Toxicity - Aquatic Invertebrates**

EC50 48 hours 0.77 mg/l Daphnia magna

**Acute Toxicity - Aquatic Plants**

EC50 96 hours 0.758 mg/l

(Calculated from QSAR approach)

**Acute Toxicity - Microorganisms**

EC50 1.7 mg/l

Exposure duration : 24hr

**Toxicity to soil:**

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

**Toxicity to terrestrial plants:**

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

**TDAE Oil (CAS: 64741-88-4)****Acute Toxicity - Fish**

96 hours &gt; 100 mg/l Pimephales promelas (Fat-head Minnow)

Endpoint : LL50.

**Acute Toxicity - Aquatic Invertebrates**

96 hours &gt; 10000 mg/l

Endpoint : LL50. Test species : Gammarus pulex.

**Acute Toxicity - Aquatic Plants**

72 hours &gt; =100 mg/l

Endpoint : NOEL. Test species : Pseudokirchnerella subcapitata, based on algal growth rate.

**Acute Toxicity - Microorganisms**

96 hours &gt; 1.93 mg/l

Endpoint : NOEL. Test species : Mineral oil contaminated soil bacterium, Photobacterium phosphoreum, and Acetobacter methanolicus MB58.

**Chronic Toxicity - Aquatic Invertebrates**

21 days 10 mg/l Daphnia magna

Endpoint : NOEL.

**Toxicity to soil:**

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

**Toxicity to terrestrial plants:**

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

**12.2. Persistence and degradability****Ecological information on ingredients.****BHT (CAS: 128-37-0)****Phototransformation**

Air. Half-life: 0.585 days

**Biodegradation**

Water and Sediment

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

Soil Degradation (77~92%) 1 days

**12.3. Bioaccumulative potential****Partition coefficient**

Not available.

**SOL-6270SL****Ecological information on ingredients.****Bioaccumulation factor**

BCF 598.4

**BHT (CAS: 128-37-0)****Bioaccumulative potential**

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

**TDAE Oil (CAS: 64741-88-4)****12.4. Mobility in soil****Ecological information on ingredients.****Adsorption/Desorption Coefficient**

log Koc 4.362

Calculated using PCKOCWIN v1.66 model.

**Henry's Law Constant**8.928E-005 atm m<sup>3</sup>/mol

Calculated using HENRYWIN v3.10 model.

**BHT (CAS: 128-37-0)****TDAE Oil (CAS: 64741-88-4)**

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

**12.5. Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB substances.

**12.6. Other adverse effects**

Not available.

**SECTION 13: DISPOSAL CONSIDERATIONS****General information**

Dispose of contents/containers in accordance with local/regional/national/international regulations. Dispose of the waste by oneself or contact disposal company.

**13.1. Waste treatment methods**

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 the waste by oil/water separation.

**SECTION 14: TRANSPORT INFORMATION****General**

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

**14.1. UN number**

Not a dangerous goods.

**14.2. UN proper shipping name**

Not a dangerous goods.

**14.3. Transport hazard class(es)**

Not a dangerous goods.

**14.4. Packing group**

Not a dangerous goods.

**14.5. Environmental hazards****Environmentally Hazardous Substance/Marine Pollutant**

No.

**14.6. Special precautions for user**



**SOL-6270SL**

Not a dangerous goods.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 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 noted for this product.

**Restrictions (Title VIII Regulation 1907/2006)**

No specific restrictions of use are noted 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** 0

**Safety Data Sheet Status** Approved.

**Date** 31.03.2015

**Risk Phrases In Full**

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

NC Not classified.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Hazard Statements In Full**

H304 May be fatal if swallowed and enters airways.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

**Disclaimer**

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.