

# KUMHO PETROCHEMICAL

## SAFETY DATA SHEET SOL-C6270L

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 SOL-C6270L

#### 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

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.

**SOL-C6270L**

**Supplementary precautionary statements** P273 Avoid release to the environment.

**2.3. Other hazards****SECTION 3: Composition/information on ingredients****3.2. Mixtures**

<b>Styrene-Butadiene Copolymer</b>		<b>60-100%</b>
CAS number: 9003-55-8		
<b>Classification</b> Not Classified		
<b>TDAE Oil</b>		<b>10-30%</b>
CAS number: 64741-88-4	EC number: 265-090-8	
<b>Classification</b> Asp. Tox. 1 - H304		
<b>BHT</b>		<b>&lt;1%</b>
CAS number: 128-37-0	EC number: 204-881-4	
M factor (Chronic) = 1		
<b>Classification</b> Aquatic Chronic 1 - H410		

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

**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>General information</b>	Get medical attention if any discomfort continues.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration.
<b>Ingestion</b>	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.
<b>Skin contact</b>	Remove contaminated clothing and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Do not rub eye. 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.

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

**SECTION 5: Firefighting measures**

## SOL-C6270L

### 5.1. Extinguishing media

**Suitable 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

**Specific hazards** Dust or gas may ignite by flames. Vapours may cause drowsiness and dizziness. May explode when heated or when exposed to flames or sparks. Dust/air mixtures may ignite or explode. Containers can burst violently or explode when heated, due to excessive pressure build-up. Partly flammable but does not simply ignite.

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

### 5.3. Advice for firefighters

**Protective actions during firefighting** Keep up-wind to avoid fumes. Move containers 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.

**Special protective equipment for firefighters** Wear appropriate protective equipment.

## 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 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

**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: 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

**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. Provide adequate ventilation. Storage tanks and other containers must be earthed. Product residues retained in emptied containers can be hazardous. Wash contaminated skin thoroughly after handling. Avoid above 316 °C.

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

## SOL-C6270L

**Storage precautions** Keep away from oxidising materials, heat and flames. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures not exceeding 50°C. Do not keep under incandescent and mercury lamps that emit ultraviolet light.

### 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

##### BHT

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m<sup>3</sup>

ACGIH = American Conference of Governmental Industrial Hygienists.

**Ingredient comments** No exposure limits known for ingredient(s).

### 8.2. Exposure controls

#### Protective equipment



**Appropriate engineering controls**

Provide adequate general and local exhaust ventilation.

**Eye/face protection**

Wear safety glasses with side-shields conforming to EN166.

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other skin and body protection**

Wear appropriate chemical resistant clothing. Wear face protection.

**Hygiene measures**

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

**Respiratory protection**

If ventilation is inadequate, suitable respiratory protection must be worn. Under frequent use or heavy exposure, respiratory protection may be needed. In case of dust formation, wear respirator with particle filter.

## 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>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Vapour pressure</b>	Not available.

**SOL-C6270L**

<b>Vapour density</b>	Not available.
<b>Relative density</b>	0.91~0.97 @ at 20°C°C
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Oxidising properties</b>	Not available.

**9.2. Other information**

<b>Molecular weight</b>	Not available.
-------------------------	----------------

**SECTION 10: Stability and reactivity****10.1. Reactivity**

<b>Reactivity</b>	Not available.
-------------------	----------------

**10.2. Chemical stability**

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Avoid above 316 °C.
------------------	---

**10.3. Possibility of hazardous reactions**

<b>Possibility of hazardous reactions</b>	Will not occur.
---	-----------------

**10.4. Conditions to avoid**

<b>Conditions to avoid</b>	Avoid heat, flames and other sources of ignition. Avoid contact with incompatible materials. Avoid exposure to high temperatures or direct sunlight. Keep at temperature not exceeding 50°C.
----------------------------	--

**10.5. Incompatible materials**

<b>Materials to avoid</b>	Hydrogen cyanide (HCN). Acid anhydrides. Avoid contact with acids and alkalis. Acid chlorides (Acyl chlorides). Peroxides. Copper. steel Common metals.
---------------------------	---

**10.6. Hazardous decomposition products**

<b>Hazardous decomposition products</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Smoke. Carbon oxides. Hydrogen cyanide (HCN). Aldehydes. Aromatic hydrocarbons. Asphyxiating gases.
---	--

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity - oral**

<b>Notes (oral LD<sub>50</sub>)</b>	Not available.
-------------------------------------	----------------

**Acute toxicity - dermal**

<b>Notes (dermal LD<sub>50</sub>)</b>	Not available.
---------------------------------------	----------------

**Acute toxicity - inhalation**

<b>Notes (inhalation LC<sub>50</sub>)</b>	Not available.
---	----------------

**Skin corrosion/irritation**

**SOL-C6270L**

**Skin corrosion/irritation** Not available.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Not available.

**Respiratory sensitisation**

**Respiratory sensitisation** Not available.

**Skin sensitisation**

**Skin sensitisation** 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.

**Toxicological information on ingredients.****Styrene-Butadiene Copolymer****Carcinogenicity**

**Carcinogenicity** Butadiene Styrene : IARC group 3

**TDAE Oil****Acute toxicity - oral**

**Notes (oral LD<sub>50</sub>)** > 5000 mg/kg, Oral, Rat

**Acute toxicity - dermal**

**Notes (dermal LD<sub>50</sub>)** > 5000 mg/kg, Dermal, Rabbit

**Acute toxicity - inhalation**

**Notes (inhalation LC<sub>50</sub>)** > 5.53 mg/l, Inhalation, Rat

**Skin corrosion/irritation**

**Animal data** Primary dermal irritation index: ≈ 0.6 Not irritating.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Not irritating.

**SOL-C6270L****Skin sensitisation**

<b>Skin sensitisation</b>	Not sensitising.
---------------------------	------------------

**Germ cell mutagenicity**

<b>Genotoxicity - in vitro</b>	Chromosome aberration: Negative.
--------------------------------	----------------------------------

<b>Genotoxicity - in vivo</b>	Chromosome aberration: Negative.
-------------------------------	----------------------------------

**Carcinogenicity**

<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
-----------------------------	--

**Reproductive toxicity**

<b>Reproductive toxicity - fertility</b>	Screening: - NOAEL $\geq$ 1000 mg/kg/day, Oral, Rat P
--	---

**BHT****Acute toxicity - oral**

<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	6,000.0
--	---------

<b>Species</b>	Rat
----------------	-----

**Acute toxicity - dermal**

<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.0
--	---------

<b>Species</b>	Rat
----------------	-----

**Acute toxicity - inhalation**

<b>Notes (inhalation LC<sub>50</sub>)</b>	Endpoint waived according to REACH Annex VII, IX or XI.
---	---

**Skin corrosion/irritation**

<b>Animal data</b>	Non-irritant (rabbit)
--------------------	-----------------------

**Serious eye damage/irritation**

<b>Serious eye damage/irritation</b>	Not irritating.
--------------------------------------	-----------------

**Carcinogenicity**

<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
-----------------------------	--

**SECTION 12: Ecological Information****12.1. Toxicity**

<b>Acute toxicity - fish</b>	Not available.
------------------------------	----------------

<b>Acute toxicity - aquatic invertebrates</b>	Not available.
---	----------------

<b>Acute toxicity - aquatic plants</b>	Not available.
--	----------------

<b>Acute toxicity - microorganisms</b>	Not available.
--	----------------

<b>Acute toxicity - terrestrial</b>	Not available.
-------------------------------------	----------------

**SOL-C6270L**

**Chronic toxicity - fish early life stage** Not available.

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

**Chronic toxicity - aquatic invertebrates** Not available.

Ecological information on ingredients.

**TDAE Oil**

<b>Acute toxicity - fish</b>	LL <sub>50</sub> , 96 hours: > 100 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	LL <sub>50</sub> , 96 hours: > 10000 mg/l, Gammarus pulex
<b>Acute toxicity - aquatic plants</b>	NOEC, 72 hours: > =100 mg/l, ( based on the growth rate )
<b>Acute toxicity - microorganisms</b>	NOEC, 96 hours: > 1.93 mg/l, Test species : Mineral oil contaminated soil bacterium, Photobacterium phosphoreum, and Acetobacter methanolicus MB58.
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 10 mg/l, Daphnia magna
<b>Toxicity to soil</b>	Endpoint waived according to REACH Annex VII, IX or XI.
<b>Toxicity to terrestrial plants</b>	Endpoint waived according to REACH Annex VII, IX or XI.

**BHT**

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 0.199 mg/l, (Calculated from QSAR approach)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.77 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 96 hours: 0.758 mg/l, (Calculated from QSAR approach)
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 24 hours: 1.7 mg/l,
<u><b>Chronic aquatic toxicity</b></u>	
<b>M factor (Chronic)</b>	1
<b>Toxicity to soil</b>	Endpoint waived according to REACH Annex VII, IX or XI.
<b>Toxicity to terrestrial plants</b>	Endpoint waived according to REACH Annex VII, IX or XI.

**12.2. Persistence and degradability**

**Persistence and degradability** Not available.

Ecological information on ingredients.

**BHT**

<b>Phototransformation</b>	Water - Half-life : 0.585 days Water - :
----------------------------	---



**SOL-C6270L****Biodegradation**

Water - :

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

Water - Degradation (%) 77~92: 1 days

**12.3. Bioaccumulative potential****Partition coefficient** Not available.**Ecological information on ingredients.****TDAE Oil****Bioaccumulative potential** Endpoint waived according to REACH Annex VII, IX or XI.**BHT****Bioaccumulative potential** BCF: 598.4,**12.4. Mobility in soil****Mobility** Not available.**Ecological information on ingredients.****TDAE Oil****Adsorption/desorption coefficient** Endpoint waived according to REACH Annex VII, IX or XI.**BHT****Adsorption/desorption coefficient** - log Koc: 4.362 @ °C Calculated using PCKOCWIN v1.66 model.**Henry's law constant** 8.928E-005 atm m<sup>3</sup>/mol @ °C Calculated using HENRYWIN v3.10 model.**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. Dispose of the waste by oneself or contact disposal company.**Disposal 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 waste with oil/water separation.**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 a dangerous goods.

**SOL-C6270L****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**

Not a dangerous goods.

**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** 18/11/2016**Revision** First Issue**SDS number** 20439**SDS status** Approved.**Hazard statements in full** H304 May be fatal if swallowed and enters airways.  
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.