

# SAFETY DATA SHEET

## KUMANOX-3020

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Version: R0003.0001

### 1. IDENTIFICATION

#### A. Product name

- KUMANOX-3020

#### B. Recommended use and restriction on use

- General use : Antioxidant for rubber product  
- Restriction on use : Not available

#### C. Manufacturer / Supplier / Distributor information

##### ○ Manufacturer information

- Company name : Kumho Petrochemical Co., Ltd. Yeosu Specialty chemicals Plant  
- Address : 227, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Korea  
- Dept. : Production Technology Team  
- Telephone number : +82-61-688-3920  
- Emergency telephone number : +82-61-688-3931~4  
- Fax number : +82-61-688-3939  
- E-mail address : kwseo08@kkpc.com

##### ○ Supplier/Distributor information

- Company name  
- Address  
- Dept.  
- Telephone number  
- Emergency telephone number  
- Fax number  
- E-mail address

### 2. HAZARD IDENTIFICATION

#### A. GHS Classification

- Not applicable

#### B. GHS label elements

- Hazard symbols
  - Not applicable
- Signal words
  - Not applicable
- Hazard statements
  - Not applicable
- Precautionary statements
  - 1) Prevention
    - Not applicable
  - 2) Response
    - Not applicable
  - 3) Storage
    - Not applicable
  - 4) Disposal
    - Not applicable

#### C. Other hazards which do not result in classification : (NFPA Classification)

## ○ NFPA grade (0 ~ 4 level)

- Health : 0, Flammability : 1, Reactivity : 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
2-Methyl-4,6-Bis-Octylthio-methyl Phenol	-	110553-27-0	98
2-methyl-6-((octylthio)methyl)phenol	-	155441-08-0	2

**4. FIRST AID MEASURES****A. Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15minutes and call a doctor/physician.

**B. Skin contact**

- Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.

**C. Inhalation contact**

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

**D. Ingestion contact**

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.

**E. Delayed and immediate effects and also chronic effects from short and long term exposure**

- Not available

**F. Notes to physician**

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

**5. FIREFIGHTING MEASURES****A. Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

**B. Specific hazards arising from the chemical**

- Not available

**C. Special protective actions for firefighters**

- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

**6. ACCIDENTAL RELEASE MEASURES****A. Personal precautions, protective equipment and emergency procedures**

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Must work against the wind, let the upwind people to evacuate.
- Move container to safe area from the leak area.

- Do not direct water at spill or source of leak.

### **B. Environmental precautions**

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

### **C. Methods and materials for containment and cleaning up**

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.

## **7. HANDLING AND STORAGE**

### **A. Precautions for safe handling**

- Avoid direct physical contact.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Avoid contact with incompatible materials.
- Get the manual before use.
- Do not inhale the steam prolonged or repeated.

### **B. Conditions for safe storage, including any incompatibilities**

- Do not apply any physical shock to container.
- Avoid direct sunlight.
- Keep in the original container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Keep sealed when not in use.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **A. Exposure limits**

- o **ACGIH TLV**
  - Not available
- o **OSHA PEL**
  - Not available

### **B. Engineering controls**

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. 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.

### **C. Personal protective equipment**

#### o **Respiratory protection**

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vaporcartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

#### o **Eye protection**

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

#### o **Hand protection**

- Wear appropriate glove.
- **Skin protection**
  - Wear appropriate clothing.
- **Others**
  - Not available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid
- Color	Pale yellow
B. Odor	very slightly odor
C. Odor threshold	Not available
D. pH	1% soluble suspension
E. Melting point/Freezing point	14 °C
F. Initial Boiling Point/Boiling Ranges	178 °C
G. Flash point	230 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not applicable
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	2x10e-7 hPa
L. Solubility	Insoluble in water(<0.01 % water at 20 °C)
M. Vapour density	>1(air=1)
N. Specific gravity	0.975~0.985 @ 20 °C
O. Partition coefficient of n-octanol/water	log Pow > 6
P. Autoignition temperature	330 °C
Q. Decomposition temperature	Not available
R. Viscosity	85~90 mPa.s at 20 °C
S. Molecular weight	455.21

## 10. STABILITY AND REACTIVITY

### A. Chemical stability

- This material is stable under recommended storage and handling conditions.

### B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

### C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

### D. Incompatible materials

- Acids, bases, oxidizing agents.

### E. Hazardous decomposition products

- Sulphurous gases (SOx). Carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

### A. Information on the likely routes of exposure

- **(Respiratory tracts)**
  - Not available
- **(Oral)**
  - Not available
- **(Eye·Skin)**
  - Not available

**B. Delayed and immediate effects and also chronic effects from short and long term exposure**

- **Acute toxicity**
  - \* **Oral**
    - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : LD50(rat) > 5000 mg/kg
  - \* **Dermal**
    - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : LD50(rat) > 2000 mg/kg
  - \* **Inhalation**
    - Not available
- **Skin corrosion/irritation**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : rabbit test - No irritating
- **Serious eye damage/irritation**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : rabbit test - No irritating
- **Respiratory sensitization**
  - Not available
- **Skin sensitization**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : Guinea pig Maximization test(GPMT) - Not sensitizing
- **Carcinogenicity**
  - \* **IARC**
    - Not available
  - \* **OSHA**
    - Not available
  - \* **ACGIH**
    - Not available
  - \* **NTP**
    - Not available
  - \* **EU CLP**
    - Not available
- **Germ cell mutagenicity**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : bacterial mutagenetic test (Salmonella typhimurium 1A 98, 1A 100, 1A 1535, 1A 1537) - negative,  
chromosome aberration test - negative
- **Reproductive toxicity**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : teratogenicity tests using rats did not affect reproductive capacity or fetal development in weak maternal effective dose ranges. One generation study: NOAEL=200 mg/kg/day Oral Rat P, Developmental toxicity : NOEL >= 300 mg/kg/day Oral Rat
- **STOT-single exposure**
  - Not available
- **STOT-repeated exposure**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : Salivation, increased liver weight is observed, but not observed pathological abnormality.
- **Aspiration hazard**
  - Not available

**12. ECOLOGICAL INFORMATION****A. Ecotoxicity**

- **Fish**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : LC50 > 100 mg/l/72hr, Brachdanio rerio (Zebra Fish)
- **Crustaceans**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : NOEC 21 days >= 0.0088 mg/l, Daphnia magna
- **Algae**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : EC50 > 100mg/l/72hr, Scenedesmus subspicatus

**B. Persistence and degradability**

- **Persistence**
  - [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : Log Pow >6
- **Degradability**
  - Not available

**C. Bioaccumulative potential**

- **Bioaccumulative potential**

- [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : BCF 39.03 (QSAR est.)

○ **Biodegration**

- [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : (3~4%) 28 days

**D. Mobility in soil**

- [2-Methyl-4,6-Bis-Octylthio-methyl Phenol] : Koc 99 (45°C)

**E. Other adverse effects**

- Not available

**13. DISPOSAL CONSIDERATIONS**

**A. Disposal methods**

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

**B. Special precautions for disposal**

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

**14. TRANSPORT INFORMATION**

**A. UN number**

- Not available

**B. Proper shipping name**

- Not available

**C. Hazard class**

- Not available

**D. Packing group**

- Not available

**E. Marine pollutant**

- Not applicable

**F. Special precautions for user related to transport or transportation measures**

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

**15. REGULATORY INFORMATION**

**A. National and/or international regulatory information**

○ **POPs Management Law**

- Not applicable

○ **Proposition 65**

- \* **Chemicals known to cause cancer:** Substance is not listed.
- \* **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- \* **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- \* **Chemicals known to cause developmental toxicity:** Substance is not listed.

○ **U.S. Federal regulations**

\* **OSHA PROCESS SAFETY (29CFR1910.119)**

- Not applicable

- \* **CERCLA Section 103 (40CFR302.4)**
  - Not applicable
- \* **EPCRA Section 302 (40CFR355.30)**
  - Not applicable
- \* **EPCRA Section 304 (40CFR355.40)**
  - Not applicable
- \* **EPCRA Section 313 (40CFR372.65)**
  - Not applicable
- \* **EPCRA Section 355 (extremely hazardous substances)**
  - Not applicable
- o **Rotterdam Convention listed ingredients**
  - Not applicable
- o **Stockholm Convention listed ingredients**
  - Not applicable
- o **Montreal Protocol listed ingredients**
  - Not applicable
- o **Chemical Inventories**
  - Australia - AICS
  - Canada - DSL/NDSL
  - EU - ELINCS
  - China - IECSC
  - Korea - ECL
  - New Zealand - NZIOC
  - USA - TSCA
  - Philippines - PICCS

## 16. OTHER INFORMATION

### A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

### B. Issue date

- 2013-06-13

### C. Revision number and Last date revised

- 2 times, 2018-08-30

### D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).