



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 10-Jan-2025

Revision Number 1.01

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Product Code(s)                 | ALK-IOSU-100                          |
| Product Name                    | Sulfur @ 0.075% (750ppm) in Isooctane |
| Form                            | Not applicable                        |
| Unique Formula Identifier (UFI) | SHK5-20QE-6000-QFPE                   |
| Pure substance/mixture          | Mixture                               |

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

|                      |                          |
|----------------------|--------------------------|
| Recommended use      | Laboratory use           |
| Uses advised against | No information available |

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

LGC Limited  
Queens Road  
Teddington  
Middlesex TW11 0LY  
UNITED KINGDOM  
:+44 (0) 20 8943 7000  
Fax :+44 (0) 20 8943 2767  
eMail : gb@lgcstandards.com

Web : [www.lgcstandards.com](http://www.lgcstandards.com)

For further information, please contact

**E-mail address** sds-request@lgcstandards.com

### 1.4. Emergency telephone number

|                     |                                                                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emergency Telephone | For Hazardous Materials or Dangerous Goods Incident<br>Spill, Leak, Fire Exposure, or Accident<br>Call CHEMTREC:<br>USA & Canada 1-800-424-9300<br>Rest of the world +1 703-741-3877 |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



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|                                           |                          |
|-------------------------------------------|--------------------------|
| Emergency Telephone - §45 - (EC)1272/2008 |                          |
| Europe                                    | 112                      |
| Austria                                   | No information available |
| Bulgaria                                  |                          |
| Croatia                                   |                          |
| Cyprus                                    |                          |
| Czech Republic                            |                          |
| Denmark                                   |                          |
| France                                    |                          |
| Hungary                                   |                          |
| Ireland                                   |                          |
| Italy                                     |                          |
| Lithuania                                 |                          |
| Luxembourg                                |                          |
| Netherlands                               |                          |
| Norway                                    |                          |
| Portugal                                  |                          |
| Romania                                   |                          |
| Slovakia                                  |                          |
| Slovenia                                  |                          |
| Spain                                     |                          |
| Sweden                                    |                          |
| Switzerland                               |                          |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to

Regulation (EC) No. 1272/2008 [CLP]

|                                                  |                     |
|--------------------------------------------------|---------------------|
| Aspiration hazard                                | Category 1 - (H304) |
| Skin corrosion/irritation                        | Category 2 - (H315) |
| Specific target organ toxicity (single exposure) | Category 3 - (H336) |
| Category 3 Narcotic effects                      |                     |
| Hazardous to the aquatic environment - acute     | Category 1 - (H400) |
| Hazardous to the aquatic environment - chronic   | Category 1 - (H410) |
| Flammable liquids                                | Category 2 - (H225) |

### 2.2. Label elements

Contains 2,2,4-Trimethylpentane



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**Signal word**  
Danger

## Hazard statements

H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H336 - May cause drowsiness or dizziness  
H410 - Very toxic to aquatic life with long lasting effects  
H225 - Highly flammable liquid and vapour

## Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P273 - Avoid release to the environment  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor  
P331 - Do NOT induce vomiting  
P370 + P378 - In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam to extinguish  
P391 - Collect spillage  
P403 + P235 - Store in a well-ventilated place. Keep cool

## 2.3. Other hazards

No information available.

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

| Chemical name          | EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances |
|------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 2,2,4-Trimethylpentane | -                                                                                                                   | -                                                                          |
| Dibutyl sulphide       | -                                                                                                                   | -                                                                          |

## SECTION 3: Composition/information on ingredients

### 3.1 Substances



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Not applicable

### 3.2 Mixtures

**Chemical nature** Mixture of organic compounds.

| Chemical name                      | Weight-% | REACH registration number | EC No (EU Index No)         | Classification according to Regulation (EC) No. 1272/2008 [CLP]                                                                             | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------------------|----------|---------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------|----------------------|
| 2,2,4-Trimethylpentane<br>540-84-1 | 80 - 100 | -                         | 208-759-1<br>(601-009-00-8) | Flam. Liq. 2 (H225)<br>Skin Irrit. 2 (H315)<br>STOT SE 3 (H336)<br>Asp. Tox. 1 (H304)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) |                                    |          |                      |
| Dibutyl sulphide<br>544-40-1       | 0.1 - 1  | -                         | 208-870-5                   | Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)                                                                                                 |                                    |          |                      |

**Full text of H- and EUH-phrases: see section 16**

#### Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                      | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|------------------------------------|-----------------|-------------------|---------------------------------------------|------------------------------------------|--------------------------------------|
| 2,2,4-Trimethylpentane<br>540-84-1 | 5000            | 2000              | 33.52                                       | No data available                        | No data available                    |
| Dibutyl sulphide<br>544-40-1       | 2220            | No data available | No data available                           | No data available                        | No data available                    |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures



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|                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.                                                                                                                                                                                                                                                                                                |
| Inhalation                         | Remove to fresh air. Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention. Delayed pulmonary edema may occur.    |
| Eye contact                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.                                                                                                                                                                                                                                             |
| Skin contact                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.                                                                                                                                                                                                                                 |
| Ingestion                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical attention.                                                                                                                    |
| Self-protection of the first aider | Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. |

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

|          |                                                                                                                                                                                      |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms | Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                 |                                                                                                                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note to doctors | Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substances. |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------|
| Suitable Extinguishing Media   | Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam. |
| Large Fire                     | CAUTION: Use of water spray when fighting fire may be inefficient.                    |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams.                     |

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## 5.2. Special hazards arising from the substance or mixture

### **Specific hazards arising from the chemical**

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## 5.3. Advice for firefighters

### **Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

#### **Other information**

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

#### **For emergency responders**

Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

#### **Environmental precautions**

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### 6.3. Methods and material for containment and cleaning up

#### **Methods for containment**

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

#### **Methods for cleaning up**

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

#### **Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections



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**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

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

**Storage Conditions** Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store away from other materials.

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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### Exposure Limits

| Chemical name                      | European Union                                                           | Austria                                                                                     | Belgium                                                                                    | Bulgaria                                                                                      | Croatia                                                                                      |
|------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 2,2,4-Trimethylpentane<br>540-84-1 | -                                                                        | TWA: 300 ppm<br>TWA: 1400 mg/m <sup>3</sup><br>STEL 1200 ppm<br>STEL 5600 mg/m <sup>3</sup> | -                                                                                          | -                                                                                             | -                                                                                            |
| Chemical name                      | Cyprus                                                                   | Czech Republic                                                                              | Denmark                                                                                    | Estonia                                                                                       | Finland                                                                                      |
| 2,2,4-Trimethylpentane<br>540-84-1 | -                                                                        | -                                                                                           | -                                                                                          | TWA: 200 ppm<br>TWA: 900 mg/m <sup>3</sup><br>STEL: 300 ppm<br>STEL: 1400 mg/m <sup>3</sup>   | TWA: 300 ppm<br>TWA: 1400 mg/m <sup>3</sup><br>STEL: 380 ppm<br>STEL: 1800 mg/m <sup>3</sup> |
| Chemical name                      | France                                                                   | Germany TRGS                                                                                | Germany DFG                                                                                | Greece                                                                                        | Hungary                                                                                      |
| 2,2,4-Trimethylpentane<br>540-84-1 | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>              | -                                                                                           | -                                                                                          | -                                                                                             | TWA: 2350 mg/m <sup>3</sup><br>TWA: 500 ppm                                                  |
| Chemical name                      | Ireland                                                                  | Italy MDLPS                                                                                 | Italy AIDII                                                                                | Latvia                                                                                        | Lithuania                                                                                    |
| 2,2,4-Trimethylpentane<br>540-84-1 | -                                                                        | -                                                                                           | TWA: 300 ppm<br>TWA: 1401 mg/m <sup>3</sup>                                                | TWA: 100 mg/m <sup>3</sup><br>STEL: 300 mg/m <sup>3</sup>                                     | TWA: 200 ppm<br>TWA: 900 mg/m <sup>3</sup><br>STEL: 300 ppm<br>STEL: 1400 mg/m <sup>3</sup>  |
| Dibutyl sulphide<br>544-40-1       | -                                                                        | -                                                                                           | -                                                                                          | -                                                                                             | TWA: 1 ppm                                                                                   |
| Chemical name                      | Luxembourg                                                               | Malta                                                                                       | Netherlands                                                                                | Norway                                                                                        | Poland                                                                                       |
| 2,2,4-Trimethylpentane<br>540-84-1 | -                                                                        | -                                                                                           | -                                                                                          | TWA: 40 ppm<br>TWA: 275 mg/m <sup>3</sup><br>STEL: 60 ppm<br>STEL: 343.75 mg/m <sup>3</sup>   | -                                                                                            |
| Chemical name                      | Portugal                                                                 | Romania                                                                                     | Slovakia                                                                                   | Slovenia                                                                                      | Spain                                                                                        |
| 2,2,4-Trimethylpentane<br>540-84-1 | TWA: 300 ppm                                                             | TWA: 700 mg/m <sup>3</sup><br>STEL: 1000 mg/m <sup>3</sup>                                  | TWA: 200 ppm<br>TWA: 900 mg/m <sup>3</sup>                                                 | TWA: 500 ppm<br>TWA: 2400 mg/m <sup>3</sup><br>STEL: 1000 ppm<br>STEL: 4800 mg/m <sup>3</sup> | TWA: 300 ppm<br>TWA: 1420 mg/m <sup>3</sup>                                                  |
| Chemical name                      | Sweden                                                                   |                                                                                             | Switzerland                                                                                |                                                                                               | United Kingdom                                                                               |
| 2,2,4-Trimethylpentane<br>540-84-1 | NGV: 200 ppm<br>NGV: 900 mg/m <sup>3</sup><br>NGV: 350 mg/m <sup>3</sup> |                                                                                             | TWA: 100 ppm<br>TWA: 470 mg/m <sup>3</sup><br>STEL: 200 ppm<br>STEL: 940 mg/m <sup>3</sup> |                                                                                               | -                                                                                            |
| Dibutyl sulphide<br>544-40-1       | NGV: 1 ppm                                                               |                                                                                             | -                                                                                          |                                                                                               | -                                                                                            |

### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies





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Derived No Effect Level (DNEL) No information available.  
Predicted No Effect Concentration (PNEC) No information available.

### 8.2. Exposure controls

#### Personal protective equipment

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection             | Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.                                                                                                                                                                                                                                                                                              |
| Hand protection                 | Wear protective nitrile rubber gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. Impervious gloves.                                                                                                                                                                                         |
| Skin and body protection        | Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.                                                                                                                                                                                                                                                                                                   |
| Respiratory protection          | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                                                                                                                                                                                                                                |
| General hygiene considerations  | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. |
| Environmental exposure controls | Do not allow into any sewer, on the ground or into any body of water.                                                                                                                                                                                                                                                                                                                                   |

## SECTION 9: Physical and chemical properties

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

|                 |                          |
|-----------------|--------------------------|
| Physical state  | Liquid                   |
| Appearance      | Liquid                   |
| Colour          | colourless               |
| Odour           | Petroleum distillates.   |
| Odour threshold | No information available |

| Property                                | Values  | Remarks • Method |
|-----------------------------------------|---------|------------------|
| Melting point / freezing point          | -107 °C | None known       |
| Initial boiling point and boiling range | 99 °C   | None known       |



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|                                        |                                |                          |
|----------------------------------------|--------------------------------|--------------------------|
| Flammability                           | No data available              | None known               |
| Flammability Limit in Air              |                                | None known               |
| Upper flammability or explosive limits | 6 Vol% - 290 g/m <sup>3</sup>  |                          |
| Lower flammability or explosive limits | 0.7 Vol% - 34 g/m <sup>3</sup> |                          |
| Flash point                            | -9 °C                          | None known               |
| Autoignition temperature               | 410 °C                         | None known               |
| Decomposition temperature              |                                | None known               |
| pH                                     | No data available              | None known               |
| pH (as aqueous solution)               | No data available              | No information available |
| Kinematic viscosity                    | No data available              | None known               |
| Dynamic viscosity                      | 0.501 mPa s                    | @ 20°C                   |
| Water solubility                       | No data available              | None known               |
| Solubility(ies)                        | No data available              | None known               |
| Partition coefficient                  | 4.08                           | None known               |
| Vapour pressure                        | 53 hPa                         | @ 20°C                   |
| Relative density                       | 0.69                           | None known               |
| Bulk density                           | No data available              |                          |
| Liquid Density                         | No data available              |                          |
| Relative vapour density                | 3.94                           | None known               |
| Particle characteristics               |                                |                          |
| Particle Size                          | No information available       |                          |
| Particle Size Distribution             | No information available       |                          |

### 9.2. Other information

#### 9.2.1. Information with regards to physical hazard classes

Not applicable

#### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.



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## 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

## 10.4. Conditions to avoid

**Conditions to avoid** Heat, flames and sparks.

## 10.5. Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

## 10.6. Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

## **SECTION 11: Toxicological information**

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

##### **Product Information**

|                     |                                                                                                                                                                                                                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause drowsiness or dizziness.                                                                                                               |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. May cause irritation.                                                                                                                                                                                                                                           |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).                                                                                                                                                                                                                  |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. |

#### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.



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### Numerical measures of toxicity

#### Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (oral)                 | 99,999.00 mg/kg |
| ATEmix (dermal)               | 99,999.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 ppm   |
| ATEmix (inhalation-dust/mist) | 99,999.00 mg/l  |
| ATEmix (inhalation-vapour)    | 99,999.00 mg/l  |

#### Component Information

| Chemical name          | Oral LD50            | Dermal LD50             | Inhalation LC50          |
|------------------------|----------------------|-------------------------|--------------------------|
| 2,2,4-Trimethylpentane | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 33.52 mg/L ( Rat ) 4 h |
| Dibutyl sulphide       | = 2220 mg/kg ( Rat ) | > 5000 mg/kg ( Rabbit ) |                          |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                                   |                                                                                 |
|-----------------------------------|---------------------------------------------------------------------------------|
| Skin corrosion/irritation         | Classification based on data available for ingredients. Causes skin irritation. |
| Serious eye damage/eye irritation | No information available.                                                       |
| Respiratory or skin sensitisation | No information available.                                                       |
| Germ cell mutagenicity            | No information available.                                                       |
| Carcinogenicity                   | No information available.                                                       |
| Reproductive toxicity             | No information available.                                                       |
| STOT - single exposure            | May cause drowsiness or dizziness.                                              |



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Revision date 10-Jan-2025

Revision Number 1.01

## ALK-IOU-100 - Sulfur @ 0.075% (750ppm) in Isooctane

STOT - repeated exposure No information available.

Aspiration hazard May be fatal if swallowed and enters airways.

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

#### 11.2.2. Other information

Other adverse effects No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

| Chemical name          | Algae/aquatic plants | Fish                                         | Toxicity to microorganisms | Crustacea                               |
|------------------------|----------------------|----------------------------------------------|----------------------------|-----------------------------------------|
| 2,2,4-Trimethylpentane | -                    | LC50:=18.4mg/L (96h, Oncorhynchus mykiss)    | -                          | EC50: =0.02856mg/L (48h, Daphnia magna) |
| Dibutyl sulphide       | -                    | LC50: = 3.58 mg/L (96h, Pimephales promelas) | -                          | -                                       |

### 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

### Component Information

| Chemical name          | Partition coefficient |
|------------------------|-----------------------|
| 2,2,4-Trimethylpentane | 4.08                  |

### 12.4. Mobility in soil

Mobility in soil No information available.



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## 12.5. Results of PBT and vPvB assessment

### PBT and vPvB assessment

| Chemical name          | PBT and vPvB assessment         |
|------------------------|---------------------------------|
| 2,2,4-Trimethylpentane | The substance is not PBT / vPvB |

## 12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

## 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                     |                                                                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste from residues/unused products | Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging              | Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.                                                        |

## SECTION 14: Transport information

### IATA

|                                   |                                |
|-----------------------------------|--------------------------------|
| 14.1 UN number or ID number       | UN1262                         |
| 14.2 UN proper shipping name      | Octanes mixture                |
| 14.3 Transport hazard class(es)   | 3                              |
| 14.4 Packing group                | II                             |
| Description                       | UN1262, Octanes mixture, 3, II |
| 14.5 Environmental hazards        | Yes                            |
| 14.6 Special precautions for user |                                |
| Special Provisions                | None                           |
| ERG Code                          | 3H                             |

### IMDG

|                                 |                 |
|---------------------------------|-----------------|
| 14.1 UN number or ID number     | UN1262          |
| 14.2 UN proper shipping name    | Octanes mixture |
| 14.3 Transport hazard class(es) | 3               |



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**14.4 Packing group** II  
**Description** UN1262, Octanes mixture, 3, II, (-9°C c.c.), Marine pollutant  
**14.5 Environmental hazards** Yes  
**14.6 Special precautions for user**  
**Special Provisions** None  
**EmS-No.** F-E, S-E  
**14.7 Maritime transport in bulk according to IMO instruments** No information available

### RID

**14.1 UN number or ID number** UN1262  
**14.2 UN proper shipping name** Octanes mixture  
**14.3 Transport hazard class(es)** 3  
**14.4 Packing group** II  
**Description** UN1262, Octanes mixture, 3, II, Environmentally Hazardous  
**14.5 Environmental hazards** Yes  
**14.6 Special precautions for user**  
**Special Provisions** None  
**Classification code** F1

### ADR

**14.1 UN number or ID number** UN1262  
**14.2 UN proper shipping name** Octanes mixture  
**14.3 Transport hazard class(es)** 3  
**14.4 Packing group** II  
**Description** UN1262, Octanes mixture, 3, II, (D/E), Environmentally Hazardous  
**14.5 Environmental hazards** Yes  
**14.6 Special precautions for user**  
**Special Provisions** None  
**Classification code** F1  
**Tunnel restriction code** (D/E)

### ADN

**14.1 UN number or ID number** UN1262  
**14.2 UN proper shipping name** Octanes  
**14.3 Transport hazard class(es)** 3  
**14.4 Packing group** II  
**Description** UN1262, Octanes, 3, II, Environmentally Hazardous  
**14.5 Environmental hazard** Yes  
**14.6 Special precautions for user**  
**Special Provisions** None  
**Classification code** F1  
**Ventilation** VE01  
**Equipment Requirements** PP, EX, A

## SECTION 15: Regulatory information



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## 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### National regulations

#### Germany

Water hazard class (WGK) obviously hazardous to water (WGK 2)

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

#### DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

| Chemical name                     | Restricted substance per REACH Annex XVII | Substance subject to authorisation per REACH Annex XIV |
|-----------------------------------|-------------------------------------------|--------------------------------------------------------|
| 2,2,4-Trimethylpentane - 540-84-1 | 75                                        |                                                        |

#### Persistent Organic Pollutants

Not applicable

#### Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

#### Ozone-depleting substances (ODS) regulation (EC) 2024/590

Not applicable

### International Inventories

TSCA

LGC, to the best of its ability, has confirmed that the chemical substances in this product are





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DSL/NDL  
EINECS/ELINCS  
ENCS  
IECSC  
KECL  
PICCS  
AICS

listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021."

Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status  
Contact supplier for inventory compliance status

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing Chemicals Inventory  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### 15.2. Chemical safety assessment

#### Chemical Safety Report

A Chemical Safety Assessment is not required for this substance

## SECTION 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H225 - Highly flammable liquid and vapour  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

#### Legend

SVHC: Substances of Very High Concern for Authorisation:

#### Legend Section 8: Exposure controls/personal protection

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | Sk*  | Skin designation                 |



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| Classification procedure                                        |                       |
|-----------------------------------------------------------------|-----------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used           |
| Acute oral toxicity                                             | Calculation method    |
| Acute dermal toxicity                                           | Calculation method    |
| Acute inhalation toxicity - gas                                 | Calculation method    |
| Acute inhalation toxicity - vapour                              | Calculation method    |
| Acute inhalation toxicity - dust/mist                           | Calculation method    |
| Skin corrosion/irritation                                       | Calculation method    |
| Serious eye damage/eye irritation                               | Calculation method    |
| Respiratory sensitisation                                       | Calculation method    |
| Skin sensitisation                                              | Calculation method    |
| Mutagenicity                                                    | Calculation method    |
| Carcinogenicity                                                 | Calculation method    |
| Reproductive toxicity                                           | Calculation method    |
| STOT - single exposure                                          | Calculation method    |
| STOT - repeated exposure                                        | Calculation method    |
| Chronic aquatic toxicity                                        | Calculation method    |
| Acute aquatic toxicity                                          | Calculation method    |
| Aspiration hazard                                               | Calculation method    |
| Ozone                                                           | Calculation method    |
| Flammable liquids                                               | On basis of test data |

### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AELG(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization



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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

### Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

**End of Safety Data Sheet**