

**Section 1. Identification**

Product Identification: Kerosene  
 Other Means of Identification: Kerosene Burner Fuel  
 (hydrocarbon mixtures paraffins, olefins and aromatics +0.04 to 3% sulfur). ca>98%  
 Recommended use of the chemical and restrictions on use: Industrial use. For professional use only.  
 Manufacturer/Supplier Name: Kaohsiung Refinery, Chinese Petroleum Corporation  
 No.2 Tso-nau Road, Kaohsung, Taiwan 813 Republic of China  
**Emergency Telephone Number: CHEMTREC 1-800-424-9300**

**Section 2. Hazard(s) Identification**

GHS Classification of the Substance or Mixture:

Flam. Liq. 3	H226
Skin Irrit. 2	H315
STOT SE 3	H336
Aquatic Chronic 2	H411

Label Elements:

GHS-US Labeling  
 Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

Warning

Hazard Statements (GHS-US):

H226 – Flammable liquid and vapor.  
 H315 – Causes skin irritation.  
 H336 – May cause drowsiness or dizziness.  
 H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210 – Keep away from heat, sparks, open flames, hot surfaces. – No smoking.  
 P233 – Keep container tightly closed.  
 P235 – Keep cool.  
 P240 – Ground/bond container and receiving equipment.  
 P241 – Use explosion-proof electrical, ventilating, and lighting equipment.  
 P242 – Use only non-sparking tools.  
 P243 – Take precautionary measures against static discharge.  
 P261 – Avoid breathing vapors, mist, spray.  
 P264 – Wash hands, forearms, and other exposed areas thoroughly after handling.  
 P271 – Use only outdoors or in a well-ventilated area.  
 P273 – Avoid release to the environment.  
 P280 – Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.  
 P302+P352 – IF ON SKIN (or hair): Wash with plenty of soap and water.  
 P303+P361+P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340 – IN INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P312 – Call a POISON CENTER/doctor/physician if you feel unwell.  
 P321- Specific treatment (see section 4).  
 P332+P313 – If skin irritation occurs: Get medical advice/attention.  
 P362 – Take off all contaminated clothing and wash before reuse.

P370+P378 – In case of fire: Use appropriate media for extinction.  
P391 – Collect spillage.  
P403+P233 – Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 – Store in a well-ventilated place. Keep cool.  
P405 – Store locked up.  
P501 – Dispose of contents/container to a local, regional, national, territorial, provincial and international regulations.

Section 3. Composition/Information on Ingredients

Substances:

Cas. No.: 8008-20-6

Hazardous component: Kerosene, ca>98%

OSHA Pel 100 PPM

Threshold Limit Value (units): not established

Classification (GHS-US): Flammable Liq. 3 – H226, Skin Irrit. 2 – H315, STOT SE 3 – H336, Aquatic Chronic 2 – H411

\*This Product is a thermometer and is in a glass housing. The glass is not expected to present any hazards under normal conditions of use. If broken, shards of glass may be sharp and cause cuts.

Section 4. First Aid Measures

Description of First Aid Measures:

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if in pain, blinking or redness persist.

**Ingestion:** Rinse mouth. Do not induce vomiting. Seek medical attention.

Most Important Symptoms and Effects Both Acute and Delayed:

**General:** Causes skin irritation. May cause drowsiness and dizziness.

**Inhalation:** Prolonged exposure to liquid may cause a mild irritation. May cause drowsiness and dizziness.

**Skin Contact:** Causes skin irritation.

**Eye Contact:** May cause slight irritation.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Not available.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

If you feel unwell, seek medical advice (show the label where possible).

Section 5. Fire-Fighting Measures

Extinguishing Media:

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire. For small fires, use dry chemical, carbon dioxide, water spray or regular foam. For large fires use water spray, fog or regular foam. Use a "smothering technique".

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazard Arising From the Substance or Mixture:

**Fire Hazard:** Flammable liquid.

**Explosion Hazard:** May form flammable/explosive vapor mixture.

**Reactivity:** Hazardous reactions will not occur under normal circumstances.

Advice for Firefighters:

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections:

Refer to Section 9 for flammability properties.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapors, mist, spray).

For Non-Emergency Personnel:

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

For Emergency Personnel:

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

Environmental Precautions:

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or steams.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

Reference to Other Sections:

See Section 8, Exposure Controls/Personal Protection.

Section 7. Handling and Storage

Precautions for Safe Handling:

**Additional Hazards When Processed:** When heated to decomposition, emits toxic fumes, flammable gas. The glass is not expected to present any hazards under normal conditions of use. If broken shards of glass may be sharp and cause cuts.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities:

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep/Store away from extremely high or low temperatures, incompatible materials. Store in a well-ventilated place. Keep container tightly closed.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s):

Industrial use. For professional use only.

Section 8. Exposure Controls/Personal Protection

Control Parameters:

Exposure Controls:

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection. Protective goggles.

Section 9. Physical and Chemical Properties	
Information on Basic Physical and Chemical Properties:	
Physical State: Liquid	Vapor Pressure(mm Hg): 68°F (20°C) = 5
Appearance: Red or blue liquid	Vapor Density (Air = 1): 4.5
Odor: Characteristic, petroleum	Density: 0.80 at 68°F
Odor Threshold: 1 ppm	Specific Gravity: Not available
pH: Not available	Solubility in Water: Insoluble
Melting Point: Not available	Viscosity: 32
Freezing Point: ≤22°F (≤30°C)	Explosion Data – Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact.
Boiling Point: 347-617°F (175 to 325°C)	Explosion Decomposition Products: Not expected to present an explosion hazard due to static discharge.
Flash Point: 100°F (38°C)	
Auto-ignition Temperature: 444°F (228°C)	
Decomposition Temperature: Not available	
Flammability (solid, gas): Not available	
Lower Flammable Limit in Air: 0.7% v/v	
Upper Flammable Limit in Air: 5% v/v	

Section 10. Stability and Reactivity
<b>Reactivity:</b> Hazardous reactions will not occur under normal circumstances.
<b>Chemical Stability:</b> Stable at standard temperature and pressure.
<b>Possibly Hazardous Reactions:</b> Hazardous polymerization will not occur.
<b>Conditions to Avoid:</b> Extremely high or low temperatures. Direct sunlight. Incompatible materials.
<b>Incompatible Materials:</b> Strong acids, strong bases, strong oxidizers.
<b>Hazardous Decomposition Products:</b> Toxic vapors. Acrid vapors. Carbon oxides (CO, CO <sub>2</sub> ).

Section 11. Toxicology Information
Information on Toxicology Effects – Product
<b>Acute Toxicity:</b> Not classified
<b>LD50 and LC50 Data:</b> Not available
<b>Skin Corrosion/Irritation:</b> Causes skin irritation. Chronic skin contact leaves skin dry and cracked, easily irritated, and prone to infection from other agents. Chronic dermatitis may result from long-term skin exposure.
<b>Serious Eye Damage/Irritation:</b> Not classified
<b>Respiratory of Skin Sensitization:</b> Not classified
<b>Germ Cell Mutagenicity:</b> Not classified
<b>Teratogenicity:</b> Not available
<b>Carcinogenicity:</b> Not classified. In 1990 Reports, the IARC lists kerosene as Class 7 (substance not assigned an overall evaluation), although occupational exposure in petroleum refining are listed as Class 5 (carcinogenic, animal evidence limited). Since kerosene is obtained during petroleum refining, consider this data.
<b>Specific Organ Toxicity (Repeated Exposure):</b> Not classified
<b>Reproductive Toxicity:</b> Not classified
<b>Specific Target Organ Toxicity (Single Exposure):</b> May cause drowsiness or dizziness.
<b>Aspiration Hazard:</b> Not classified
<b>Summary of Risk:</b> Kerosene burn fuel toxicity varies widely based on methods of manufacture and usage. The deodorized and refined kerosenes are least toxic. Those containing benzenes can cause hematopic (formative red blood cell) problems and exposure to large amounts to renal (kidney) injury. Miner exposure to kerosene can cause irritation and headache.
<b>Primary Entry Routes:</b> Inhalation, skin contact, ingestion.

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**Acute Effects:** Inhalation of kerosene mists can cause mucous membrane irritation, headache, and drowsiness. High concentration can lead to suffocation, coma, and death by respiratory arrest. Aspiration of vomitus (after ingestion) can lead to serious pneumonitis (inflammation of the lungs) and pulmonary hemorrhage (bleeding lungs). Ingestion can cause gastrointestinal (GI tract irritation, vomiting, and diarrhea. Skin contact with kerosene can cause immediate defatting of skin, leaving it dry and cracked.

**Symptoms/Injuries After Inhalation:** Prolonged exposure to liquid may cause a mild irritation, may cause drowsiness or dizziness.

**Symptoms/Injuries After Skin Contact:** Causes skin irritation

**Symptoms/Injuries After Eye Contact:** May cause slight irritation.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to have adverse or harmful effects.

Information on Toxicological Effects – Ingredient(s)

**LD50 and LC50 Data:** Not available

Section 12. Ecological Information

Toxicity:

**Ecology – General:** Toxic to aquatic life with long lasting effects.

Persistence and Degradability:

**Red Spirit Thermometer Persistence and Degradability:** May cause long-term adverse effects in the environment.

**Bioaccumulative Potential:** Not available

**Mobility in Soil:** Not available

Other Adverse Effects:

**Other information:** Avoid release to the environment.

Section 13. Disposal Considerations

**Waste Disposal Recommendation:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Section 14. Transport Information

Proper Shipping Name: Kerosene  
United Nation UN No.: 1223  
Hazard Classification: 3  
Packing Group: III  
EQ: E1  
SubSection 2.7: Dangerous Goods in Excepted Quantities  
Inner Packing Limit: 30 mL  
Outer Packaging Limit: 1L  
Hazardous Labels: Excepted Quantities Label (2.7.6)

Land/Ocean: No outer marking required.

Air: Outer marking required - Excepted Quantities Label (2.7.6).

Section 15. Regulatory Information

**US Federal Regulations:** Red Spirit Thermometer

EPA Designations:

**Listed as RCRA Hazardous Waste** (40 CFR 261.21): No. D001, Characteristic in ignitability

**CERLA Hazardous Substance** (40 CFR 302.4): not listed

**SARA Extremely Hazardous Substance** (40 CFR 355): Not listed

**SARA Toxic Chemical** (40 CFR 372.65): Not listed

**Air Contaminant** (29 CFR 1910.1000, Subpart Z): Not listed



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## SAFETY DATA SHEET

Spirit Thermometer

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Section 16. Other Information
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Revision Date: 6/1/2015

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document:

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*This information is based on our current knowledge and is intended to describe the product for purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*