

MATERIAL SAFETY DATA SHEET

KEROSENE

WEKSLER GLASS THERMOMETER CORPORATION
990 SOUTH ROGERS CIRCLE SUITE 10
BOCA RATON, FL 33487

EMERGENCY TELEPHONE NUMBER: CHEMTREC 1-800-424-9300

***** IDENTITY *****

Trade Name: Kerosene Cas. No.: 08008-20-6
Kerosene burner fuel
(hydrocarbon mixtures paraffins, olefins, and aromatics +0.04 to 0.3% sulfur). ca>98%
Manufacturer's Name/Address: Kaohsiung Refinery, Chinese Petroleum Corporation
No.2 Tso-nau Road, Kaohsiung, Taiwan 813 Republic of China
TWA:NIOSH 11 mg/m³ (10 hour)
1985-86 Toxicity data: Man, Intravenous, TD_{Lo}: 403 mg/kg caused distorted perceptions and hallucinations;
Man, Oral, TD_{Lo}: 3750 mg/kg produced coughing, vomiting and increased body temperature; Rat, Oral,
Ld_{Lo}: 800 mg/kg: no toxic effect noted

*****HAZARDOUS INGREDIENTS*****

<u>Hazardous component</u>	<u>Percent</u>	<u>OSHA Pel</u>	<u>Threshold Limit Value(units)</u>
Kerosene	ca >98% 100 PPM		Not Established

*****PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)*****

Boiling Point: 347 to 617°F (175 to 325°C) Vapor Density(Air = 1): 4.5
Freezing Point: <-22°F (<-30°C) Vapor Pressure(mm Hg): 20°C (68°F) = 5
Odor Threshold: 1 ppm Viscosity: 32
Molecular Weight: Variable Density: 0.80 at 68°F
Solubility in Water: Insoluble Other Solubility: Miscible with other petroleum solvent
Appearance and Odor: Red or Blue liquid, mild petroleum odor

Flash Point: 100 to 162°F (43 to 72°C) Flammable Limits in Air: LEL:0.7% v/v, UEL:5% v/v
Autoignition Temperature: 444°F (228°C)

Extinguisher Media: 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. *Caution!! Forced stream of water could scatter flames of burning kerosene.*

Special Fire Fighting Procedures: Since fire may produce toxic thermal decomposition products, wear self-contained breathing apparatus with a full facepiece operated in pressure-demand or positive-pressure mode. Also wear fully protective clothing. If possible without risk, remove container from fire area. Apply cooling water to sides of container until fire is well out. For massive fire in cargo area use monitor nozzles or unmanned hose; if impossible, withdraw from area and let fire burn.

Unusual Fire and Explosive Hazards: If spilled and in the absence of ventilation and good air mixing, vapors may travel to an ignition source and flash back. Container may explode in heat of fire. Kerosene burner fuel poses a vapor explosion hazard indoors, outdoors and in sewers.

***** PHYSICAL HAZARDS *****

Stability/polymerization: Kerosene burner fuel is stable at room temperature in closed containers under normal storage and handling conditions.

Hazardous polymerization cannot occur. Any increase in temperature could lead to increasing instability. Chemical Incompatibilities (materials to avoid): Kerosene burner fuel is incompatible with oxidizing materials. Avoid contact with strong oxidizing agents like Chlorine, Permanganates, and Dichromates as these may cause fire, explosion.

Conditions to avoid: Excessive heat generation and contact with oxidizing materials.

Hazardous Decomposition Products: Thermal oxidate decomposition of kerosene burn fuel can produce Carbon Dioxide (CO₂) and Carbon Monoxide (CO), various hydrocarbons, and small amounts of sulfur dioxide (SO₂) depending on sulfur content.

*****SPECIAL PROTECTION INFORMATION*****

Goggles: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Since contact lens use in industry is controversial, establish your own policy.

Respirator: Seek professional advise prior to respirator selection and use. Follow OSHA respirator (CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based upon its ability to provide adequate worker protection for given work condition, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operation (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. Wearing Air purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, SHA requires a respirator protective program that includes at least: training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Other: Wear chemically protective gloves, boots, apron.

Ventilation: Provide general local explosion-proof exhaust ventilation systems to maintain airborne concentrations below the (Sec. 2). Local exhaust ventilation is preferred since it prevents contamination dispersion into the work area by controlling it at its source.

Safety Station: Make available in the work area emergency eyewash stations, safety/quick drench showers, and washing facilities.

Contaminated Equipment: Separate contaminated work cloths from street cloths. Launder contaminated work clothing before wearing.

Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink or smoke in work area. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using toilet, or applying cosmetics.

*****HEALTH HAZARDS*****

Carcinogenicity: 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 these data.

Summary of Risk: 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 of red blood cell) problems and exposure to large amounts to renal (kidney) injury. Minor exposure to kerosene can cause irritation and headache.

Medical Conditions Aggravated by Long-Term Exposure: None reported.

Primary Entry Routes: Inhalation, skin contact, ingestion.

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 lungs) and pulmonary hemorrhage (bleeding lungs). Ingestion can cause gastrointestinal (GI) tract irritation, vomiting, and diarrhea. Skin contact with kerosene cause immediate defatting of skin, leaving dry and cracked.

Chronic Effects: 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. Chronic overexposure to hydrocarbon vapors may cause neurological impairment.

Emergency and First Aid Procedures: Contact a Qualified Physician

1. Inhalation: Remove exposed person from source of exposure to fresh air and support breathing as needed.
2. Eyes: Gently lift eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical facility. Do not allow victim to rub eyes or keep eyes tightly shut. Consult a physician immediately.
3. Skin: Quickly remove contaminated clothing. Rinse with flooding amounts of water for at least 15 minutes. For reddened or blistered skin, consult a physician. Wash affected area with soap and water.
4. Ingestion: Never give anything by mouth to an unconscious or convulsing person. Consult a poison control center. Unless otherwise advised, do not induce vomiting since aspiration of vomitus can lead to severe pneumonitis. If spontaneous vomiting occurs, hold the victim's head lower than the hips to prevent pulmonary aspiration.

After first aid, get appropriate paramedic or community medical support.

Note to Physicians: Observe pulmonary function and treat accordingly.

*****SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES*****

Precautions to be taken in Handling and Storage: Handle and store thermometer with proper care.

Steps To Be Taken in case Material is Released or Spilled: Immediately notify safety personnel, isolate and ventilate area, deny entry, and stay upwind. Shut off all sources of ignition – no flares, flames, or smoking in hazard area. Cleanup personnel should prevent against contamination. Water spray may reduce vapor, but it may not prevent ignition in closed space. For small spill, using non-sparking tools, take up with earth, sands, vermiculite, or other absorbent, noncombustible material and place in suitable containers for later disposal. For large spill, dike far ahead of liquid spills for later disposal. Follow applicable OSHA regulations (29 CFR 1910.120).

Disposal: Contact your supplier or a licensed contractor for detailed recommendation. Follow applicable Federal, state and local regulations.

EPA Designations:

Listed as a RCRA Hazardous Waste (40 CFR 261.21): No. D001, Characteristic of 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

*****TRANSPORTATION INFORMATION*****

Proper Shipping Name: Kerosene

United Nation UN No.: 1223

Hazard Classification: 3

Packing Group: III

SubSection 2.7: Dangerous Good in Excepted Quantities

Inner Packaging Limit: 30mL

Outer Packaging Limit: 1L

Hazardous Labels: Excepted Quantities Label (2.7.6)

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these or the results to be obtained from the use hereof. Vendor assumes no responsibility for injury to vendee or third persons caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.