

Safety Data Sheet (SDS) for Kerosene Thermometers

Per OSHA HCS 2012 (29 CFR 1910.1200)



Industrial and educational thermometers are considered "manufactured articles," and as such, do not require a SDS. Per 29CFR 1910.1200(c), "Definitions. Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk..." This SDS is provided for information only.

If broken, the thermometer may release a small quantity of liquid, which should be dealt with using the information provided in this SDS (see Section 6 "Accidental Release Measures").

SECTION 1-IDENTIFICATION

Product name: Kerosene Thermometer
Other names:- Student Thermometer
Proper shipping name: Dangerous Goods in Apparatus
Recommended use of the article and restrictions on use: Thermometer (temperature measurement) Temperature range for use of the thermometer is marked on the article. Do not subject the thermometer to temperatures outside the marked range.
Manufacturer/Supplier Name: United Scientific Supplies, Inc. 3055 N. Oak Grove Ave., Waukegan, IL 60087 USA
Emergency phone No.: 1-800-222-1222 (American Association of Poison Control Centers)

SECTION 2-HAZARDS IDENTIFICATION

GHS Classification (kerosene filling, CAS 8008-20-6):	Flammable Liquid Category 3 H226 Skin Irritant Category 2 H315
For text of H-phrases see section 16	
GHS Label elements(kerosene filling, CAS 8008-20-6):	
Hazard symbols	 
Signal word	Warning
Hazard statements	H226 - Flammable liquid and H315 - Causes skin irritation
Precautionary statements	P210 – Keep away from heat, sparks, open flames, and hot surfaces. No smoking. P233 – Keep containers tightly closed P240 – Ground/bond container and receiving equipment P241 – Use explosion-proof electrical/ventilation/lighting/... equipment P242 – Use only non-sparking tools P243 – Take precautionary measures against static discharge
Other hazards: —	No additional information available

SECTION 3-COMPOSITION/INFORMATION ON INGREDIENTS

The thermometer body material is glass, judged non-hazardous. The thermometric liquid is kerosene blended with <0.1% red dye for visibility. The quantity of red dye is below the reporting level.

CAS No.	Chemical Name	wt% by weight	Classification (GHS-US)
8008-20-6	Kerosene	100.0	Flammable liquid 3, H226 Skin irritant 2, H315 Aspiration toxicity 1, H304 Aquatic chronic hazard 2, H411
Synonyms	Kerosine, Lamp oil, Paraffin (UK)		

SECTION 4-FIRST AID MEASURES
Description of necessary first aid measures
General:

1. Never give anything by mouth to an unconscious person.
2. If the patient feels unwell, seek medical attention and show this SDS if possible.

Eye:

Rinse immediately with copious warm water. Obtain medical attention if pain, blinking, or redness persist

Skin:

1. Remove contaminated clothing, shoes, and leathery articles, use cleaning procedure before reuse or waste treatment.
2. Wash affected area thoroughly with soap and water.
3. Call a Physician if irritation develops or persists.

Ingestion:

1. Rinse mouth. Do NOT induce vomiting.
2. Seek medical attention.

Inhalation:

1. Remove from further exposure and allow to breathe fresh air.
2. Lay patient down. Keep warm and rested.

Most important symptoms/effects, acute and delayed

After skin contact: Causes skin irritation

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically

SECTION 5-FIRE FIGHTING MEASURES
Extinguishing media

Suitable extinguishing media: Foam, dry powder, carbon dioxide, water spray, sand.

Unsuitable extinguishing media: Do not use a heavy water stream

Special hazards arising from the substance

1. Liquid and vapor are flammable.
2. May form a flammable or explosive vapor/air mixture.
3. Reactivity: This substance is stable under normal handling and storage conditions.

SECTION 6-ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedure

1. Personal protective equipment (See also specifications in Section 8)
 - Eyes: Chemical safety goggles are recommended.
 - Skin: Wear appropriate protective gloves to avoid skin contact.
 - Clothing: When direct contact is likely, use rubberized clothing, apron and boots.
 - Respiratory: When limits are exceeded, wear a respirator approved by NIOSH/MSHA for protection against organic dust, mists and vapors.
2. Remove all sources of ignition. No smoking, naked lights or ignition sources. Ventilate area of leak or spill.
3. Keep unnecessary and unprotected personnel from entering. Evacuate personnel from the danger area. Consult with an expert about the emergency procedures.

Environmental precautions

1. Prevent spillage from entering drains, surface, and groundwater.
2. Contain and recover liquid when possible. Use non-sparking tools and equipment.
3. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth), and place in a chemical waste container.
4. Report large accidental spills/releases (multiple thermometer contents) to local/State government.

Special protective equipment and precautions for fire-fighters

1. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering the environment.
2. Use caution when fighting any chemical fire.
3. Do not enter the fire area without proper protective equipment, including respiratory protection

Methods and materials for containment and cleaning up

1. Remove all ignition sources.
2. Clean up all spills immediately.
3. Avoid breathing vapors and contact with skin and eyes.
4. Control personal contact by using protective equipment.
5. Contain and absorb small quantities with vermiculite or other absorbent material.
6. Wipe up.
7. Collect residues in a container for flammable waste

SECTION 7-HANDLING AND STORAGE
Precautions for safe handling of liquid from broken thermometers

1. Avoid sources of ignition or sparking.
2. Clean up spilled liquid immediately as described in the previous section
3. Avoid contact with broken glass pieces. Store glass pieces in absorbent material for safe disposal
4. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

1. Store thermometers in original containers. Protect from mechanical shocks – glass is fragile.
2. No smoking, naked lights, heat or ignition sources near broken thermometers.
3. Store away from incompatible materials in a cool, dry well ventilated area.
Incompatible materials (released liquid) : strong bases, strong acids
Incompatible conditions: direct sunlight, heat sources

SECTION 8-EXPOSURE CONTROLS, PERSONAL PROTECTION
Control Parameters:

Kerosene thermometer: ACGIH: not applicable; OSHA: not applicable

Kerosene (8008-20-6): ACGIH TWA (mg/m³): 200; OSHA: not applicable

Engineering Controls: Provide adequate general and local exhaust ventilation

Personal Protective Equipment: Protective clothing, Protective goggles

Hand protection: Not required under normal conditions of use

Eye protection: Where eye contact may occur, wear eye protection

Skin/body protection: Not required under normal conditions of use

Respiratory protection: Where exposure through inhalation may occur,
respiratory protection equipment is recommended

Other information: Do not eat, drink, or smoke during use.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Transparent red liquid	Upper/lower explosive limits : 0.7%/5%
Odor : no data available	Vapor Pressure : 1 mmHg @ 20°C
Odor threshold : no data available	Vapor Density : 4.5 (air=1)
pH : No data available	Relative density (water=1): approximately 0.84
Melting/Freezing Point: No data available	Solubility in water : insoluble in water (mixture)
Initial boiling point/boiling range: 175 - 325°C	Solubility in water: ≤0.0007g/100ml (components)
Flash point : 38°C	Auto-ignition temperature : 210°C
Evaporation Rate (butyl acetate=1) : No data available	Decomposition temperature : No data available
Flammability (solid/gas) : No data available	Viscosity : No data available
Molecular Formula : Mixture of alkanes C _n H _(2n+2)	Molecular Weight : Not applicable

SECTION 10-STABILITY AND REACTIVITY
Reactivity

Thermometric liquid is stable under normal handling and storage conditions

Chemical stability

Liquid and vapor are flammable. May form flammable/explosive vapor/air mixture

Possibility of hazardous reaction

Has not been reported.

Condition to avoid

Direct sunlight, extremely high or low temperatures, open flame, overheating, heat, sparks

Incompatible materials

Strong acids, strong bases

Hazardous decomposition products

Fumes, carbon monoxide, carbon dioxide, flammable hydrocarbons.

SECTION 11-TOXICOLOGICAL INFORMATION
Toxicological effects:

Acute toxicity: Not classified (Based on available data, the classification criteria are not met)

Kerosene (8008-20-6)

LD50 oral rat: >5000mg/kg (rat)
 LD50 dermal rat: >2000mg/kg (rat)
 LD50 dermal rabbit: >2000mg/kg (rabbit)
 LC50 inhalation rat: >5.28mg/l/4h (rat)

Skin corrosion/irritation: Causes skin irritation

Serious eye damage/irritation: Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity: Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity: Not classified (Based on available data, the classification criteria are not met)

IARC group: 3 – Not classifiable

Reproductive toxicity: Not classified (Based on available data, the classification criteria are not met)

Specific organ toxicity (single exposure): Not classified (Based on available data, the classification criteria are not met)

Specific organ toxicity (repeated exposure): Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard: Not classified (Based on available data, the classification criteria are not met)

Potential adverse human health effects

and symptoms: Not classified (Based on available data, the classification criteria are not met)

Symptoms/injuries after skin contact: Causes skin irritation

SECTION 12-ECOLOGICAL INFORMATION
Ecotoxicity

Ecology: water: Toxic to aquatic life with long lasting effects

Kerosene (8008-20-6)

LC50 Fish 1: 18-25 mg/l (96 h; Pisces)
 LC50 Other aquatic organisms 1: 1-100 mg/l
 EC50 Daphnia 1: 1.4-21 mg/l (Daphnia magna)
 LC50 Fish 2: 45 mg/l (Pimephales promelas)
 TLM Fish 1: 2990 ppm (24 h: Lepomis macrochirus)
 Threshold limit other aquatic organisms 1: 1-100
 Threshold limit algae 1: 4-8 (algae)

Persistence and degradability

Kerosene Thermometer: May cause long term adverse effects in the environment

Kerosene (8008-20-6): Biodegradable in water. Readily biodegradable in water under anaerobic conditions. Forms sediment in water. Biodegradable in soil. Biodegradable in soil under anaerobic conditions. Adsorbs into soil.

Bioaccumulative potential : **Kerosene Thermometer:** Not established.
Kerosene (8008-20-6): Log Pow: 3.3-6 (calculated); Bioaccumulative.

Mobility in soil: Kerosene (8008-20-6): Surface tension: 0.02-0.03 N/m

Other adverse effects: Kerosene Thermometer:

Effect on the ozone layer: Not applicable

Effect on the global warming: No known ecological damage caused by this product

Other information: Avoid release of thermometric liquid to the environment



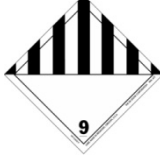

Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC (DPD) (kerosene):

Xi: R38
N: R51/53
R10

SECTION 13-DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Dispose in a safe manner in accordance with local/state/national regulations
 Additional information: Handle broken glass thermometers with care – glass may be contaminated with liquid.
 Ecology – waste materials: Avoid releases to the environment.


SECTION 14-TRANSPORTATION INFORMATION

US DOT	Shipping Name	Dangerous Goods in Apparatus	Hazard Labels	
	Hazard Class	9		
	UN Number	3363		
	Packing Group	n/a		
Sea(IMO/IMDG)	Shipping Name	Dangerous Goods in Apparatus	Hazard Labels	
	Hazard Class	9		
	UN Number	3663		
	Packing Group	n/a		
	MARPOL	Not a DOT "Marine Pollutant" per 49 CFR 171.8.		
Air(ICA0/IATA)	Shipping Name	Dangerous Goods in Apparatus	Hazard Labels	
	Hazard Class	9		
	Subsidiary Class	n/a		
	Packing Group	n/a		
RID/ ADR	No information available.			
Canadian TDG	Shipping Name	Dangerous Goods in Apparatus	Hazard Labels	
	Hazard Class	9		
	UN Number	3363		
	Packing Group	n/a		
	Subsidiary Class	n/a		

SECTION 15-REGULATORY INFORMATION

US Federal Regulations: Kerosene Thermometer: None known Kerosene (8008-20-6): Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
International Regulations: Canada: No additional information available EU Regulations: No additional information available Classification according to EC Regulation No.1272/2008 (CLP) (kerosene):	
	Flammable Liquid 3 H226 Skin irritant 2 H315 Aquatic chronic 2 H411

SECTION 16-OTHER INFORMATION

Full Text of H-phrases:		
Aquatic Chronic 2	Hazardous to the aquatic environment – chronic hazard category 2	
Asp. Tox.1	Aspiration hazard category 1	
Flammable liquid 3	Flammable liquids category 3	
Skin irritant 2	Skin corrosion/irritation category 2	
H226	Flammable liquid and vapor	
H304	May be fatal if swallowed and enters airways	
H315	Causes skin irritation	
H411	Toxic to aquatic life with long lasting effects	
NFPA Hazard Classification (kerosene):		
Health:	1- Exposure could cause irritation but only minor residual injury even if no treatment is given.	
Fire:	3- Liquids and solids that can be ignited under almost all ambient conditions.	
Reactivity:	0- Normally stable, even under fire exposure conditions, and not reactive with water.	
		
References and sources		
1. Chemwatch Data Bank, 2005-1		
2. SDS, GHS HazCom 2012		
3. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008		
Version	Date	Remark
Version 3	11/032022	Update.
Prepared by	United Scientific Supplies, Inc..	

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