

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product Identifier**

Trade Name: Furnace Flame
Contains: Fuels, diesel
Kerosine, petroleum

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

Product Type and main use: Fuel for use in boilers, gas turbines and other combustion equipment.
Follow supplier's recommendations on correct use of the product.
Uses advised against: Not to be used as a fuel for any engine, motor or other machinery.

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Watson Fuels
Supplier address: Callow Park
Callow Hill
Brinkworth
Chippenhams
Wiltshire
SN15 5FD
UK
Tel: ++44 1666 510 345
Email: hse@watsonfuels.co.uk

1.4 Emergency Telephone (24hr): +44 (0)333 333 9957 (24/7)

SECTION 2.**2.1 Classification of the substance or mixture**

According to Regulation (EC) No 1272/2008 (CLP)

Flam. Liquid 3 – H226
Asp. Tox. 1 – H304
Skin Irrit. 2 – H315
Acute Tox. 4 – H332
STOT SE 3 – H336
Carc. 2 - H351
STOT RE2 – H373
Aquatic Chronic 2 – H411

Please see section 16 for full hazard statements

SAFETY DATA SHEET – FURNACE FLAME

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Pictogram(s): GHS02, GHS07, GHS08, GHS09



Signal Word: Danger

H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure. (Thymus, liver, bone marrow).
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a doctor.
P331	Do NOT induce vomiting.
P405	Store locked up.
P501	Dispose of contents/container to hazardous waste collection point for disposal in accordance with local, regional, national or international regulations.

2.3 OTHER HAZARDS

Human Health Hazards:

Slightly irritating to respiratory system. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light headedness, headache and nausea. Irritating to skin. Harmful: may cause lung damage if swallowed.

Safety Hazards:

Liquid evaporates quickly and can ignite leading to a flash fire, or an explosion in a confined space. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapour concentrations are within the flammability range. Flammable. Electrostatic charges may be generated during handling. Electrostatic discharge may cause fire. May ignite on surfaces at temperatures above auto-ignition temperature. Spillages may be slippery.

SAFETY DATA SHEET – FURNACE FLAME

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 MIXTURES

Chemical Name	% w/w	Index Number	CAS Number	EC Number	Classification
Fuels, diesel [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163°C to 357°C (325°F to 675°F).]	<100	649-224-00-6	68334-30-5	269-822-7	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Acute Tox. 4 H332 Carc. 2 H351 STOT RE 2, H373 (Thymus, liver, bone marrow) Aquatic Chronic 2, H411
Kerosine (petroleum) [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150°C to 290°C (320°F to 554°F).]	<100	649-404-00-4	8008-20-6	232-336-4	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411

Please see section 16 for full hazard statements.

SECTION 4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General notes

No action shall be taken involving any personal risk or where suitable training has not been provided.

Inhalation:

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion:

Wash out mouth with water. Remove dentures, if any and easy to do. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact:

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

SAFETY DATA SHEET – FURNACE FLAME

Eye contact:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Acute Effects:

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, drowsiness, dizziness, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure.

Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light headedness, headache, nausea and loss of coordination.

Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

Eye contact may cause slight irritation, watering, redness and pain.

Ingestion may cause irritation of the mouth and digestive tract. If swallowed, aspiration into lungs may result in chemical pneumonia.

Delayed or Chronic Effects:

May cause damage to organs through prolonged or repeated exposure. (Thymus, liver, bone marrow). Repeated exposure may cause skin dryness or cracking. Suspected of causing cancer.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

If swallowed, patient should be taken immediately to hospital and monitored for signs of breathing difficulty as effects of aspiration may be delayed for up to 48 hours. If breathing is laboured, oxygen should be administered by qualified personnel.

High pressure injection injuries require prompt medical attention.

SECTION 5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable: Use water spray, carbon dioxide, foam or dry chemical.

Not suitable: Do not use a direct water jet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Will float and can be reignited on surface water. Flammable vapours may be present even at temperatures below the flash point. The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Hazardous combustion products may include: A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides, nitrogen oxides, hydrogen sulphide and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

5.3 ADVICE FOR FIRE-FIGHTERS

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Firefighting measures:

Isolate the source of the combustible product. If fire cannot be extinguished, allow it to die out in a controlled manner. Use water

SAFETY DATA SHEET – FURNACE FLAME

to cool down equipment and items exposed to fire.

Additional Advice:

Keep adjacent containers cool by spraying with water. If possible, remove containers from the danger zone. If the fire cannot be extinguished the only course of action is to evacuate immediately.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Remove all possible sources of ignition in the surrounding area. Evacuate all personnel. Do not breathe fumes or vapour. Do not operate electrical equipment nearby. Ground/bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid contact with skin, eyes, and clothing. Ventilate contaminated area thoroughly. Wear chemical resistant knee length safety boots and PVC jacket and trousers. Wear safety glasses or full-face shield if splashes are likely to occur. Caution – spillage area may be slippery.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent from spreading or entering drains and surface waters (e.g. lakes, ponds, ditches, rivers and streams) by using sand, earth, or other appropriate non-combustible barriers. Inform local authorities if impacts cannot be prevented.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING

UPClean-up Methods - Small Spillages:

To minimize soil and groundwater contamination, absorb liquid with sand, earth or other recommended absorbent material, as soon as possible. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations. Do not disperse using water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

Clean-up Methods - Large Spillages:

Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Retain as contaminated waste. Dispose of as for small spills.

Maritime Spillages:

Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

Other Information:

Local authorities should be advised if significant spillages cannot be contained. Observe all relevant local regulations.

6.4 REFERENCE TO OTHER SECTIONS

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SAFETY DATA SHEET – FURNACE FLAME

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Exposures in Normal Use:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapours or contact with material. Only use in well-ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Prevent spillages. For comprehensive advice on handling, product transfer, storage and tank cleaning refer to the product supplier.

Handling:

Avoid naked flames. The vapour is heavier than air, spreads along the ground and distant ignition is possible. When using do not eat, drink or smoke. Only use in well-ventilated areas. Take precautionary measures against static discharges. Ensure all equipment is properly earthed. Use non-sparking tools. If using pressurised equipment, take extra care to avoid injection under the skin. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Avoid prolonged or repeated contact with skin. Prevent spillages. Spillages may be slippery.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

This product must never be stored in buildings occupied by people. Drums and small containers should be stored in well ventilated areas, flameproof cabinets or stores. Keep container tightly closed in a dry, well ventilated place away from direct sunlight and other sources of heat or ignition. Keep in a bunded area with a sealed (low permeability) floor, to provide containment against spillage. Stack drums to a height not exceeding 3 metres without the use of racking. Locate tanks away from heat and other sources of ignition. Seek specialist advice for the design, construction and operation of bulk storage facilities.

Storage Temperatures:

Ambient.

Product Transfer:

Electrostatic charges may be generated during pumping. Ensure electrical continuity by bonding all equipment. Avoid splash filling. Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care.

Tank Cleaning:

Cleaning, inspection and maintenance of storage tanks is a specialist operation that requires the implementation of strict procedures and precautions. These include issuing of work permits, gas freeing of tanks, using a manned harness, lifelines, and wearing air supplied breathing apparatus. Prior to entry and whilst cleaning is underway, the atmosphere within the tank must be monitored using an oxygen meter and explosimeter. Additional precautions are required where the tank may previously have contained leaded gasoline.

Recommended Materials:

For containers, or container linings use carbon steel and low alloy steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard. For container linings the following may also be used: Plasticised polyvinyl chloride (U-PVC), Fluoropolymers (PTFE), Polyvinylidene fluoride (PVDF), Polyetheretherketone (PEEK), Polyamide (PA-11). For seals and gaskets use: Fluoroelastomer (FKM), Viton A, and Viton B, Nitrile butadiene (NBR), Buna-N. For coating (paint) materials use: High build, amine adduct- cured epoxy.

Unsuitable Materials:

For containers or container linings, examples of materials to avoid are: Polyethylene (PE, HDPE), Polypropylene (PP), Polymethyl methacrylate (PMMA), Acrylonitrile butadiene styrene (ABS). For seals and gaskets, examples of materials to avoid are: Natural rubber (NR), Ethylene Propylene (EPDM), Polychloroprene (CR) Neoprene, Butyl (IIR), Chlorosulphonated

SAFETY DATA SHEET – FURNACE FLAME

Container advice:

polyethylene (CSM), e.g. Hypalon.

Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

7.3 SPECIFIC END USE(S)

Fuel for use in boilers, gas turbines and other combustion equipment. Follow supplier's recommendations on correct use of the product. Not to be used as a fuel for any engine, motor or other machinery.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Workplace exposure limit values

Substance	Regulations	Exposure Duration	Exposure Limit	Notation
Kerosene	ACGIH	TWA	200mg/m ³	P: Application restricted to conditions in which there are negligible aerosol exposures, as total hydrocarbon vapour
	ACGIH	SKIN_DES		Can be absorbed through the skin, as total hydrocarbon vapour

Additional Information:

In the absence of a national exposure limit, the American Conference of Governmental Industrial Hygienists (ACGIH) recommends the following values for Kerosene: TWA – 200 mg/m³. Critical effects based on skin irritation and central nervous system.

Biological Exposure Index (BEI): No biological limit allocated.

Derived No Effect Levels (DNELs), Workers:

Substance	Exposure Route	Systemic Effects		Local Effects	
		Acute / Short-term Exposure	Chronic / Long -term Exposure	Acute / Short-term Exposure	Chronic / Long -term Exposure
Fuels, diesel	Inhalation	4300 mg/m ³	68.3 mg/m ³	No hazard identified	No hazard identified
	Dermal	No hazard identified	2.9 mg/kg bw/day	Low hazard	High hazard
	Eyes	No hazard identified			

Predicted No Effect Concentrations (PNECs):

Hazard	Fuels, diesel	Kerosene
Freshwater	21 µg/L	No data available: testing technically not feasible.
Marine water	No data: aquatic toxicity unlikely	
Sediment, Freshwater	No exposure of sediment expected	
Sediment, Marine water	No exposure of sediment expected	
STP	No data available: testing technically not feasible	
Soil	No exposure of soil expected	

SAFETY DATA SHEET – FURNACE FLAME

8.2 EXPOSURE CONTROLS

The level of personal protection and the types of controls necessary will vary depending on exposure conditions. Select controls based on a risk assessment of local circumstances. Use sealed systems as far as possible. Use local, intrinsically safe, exhaust ventilation if there is a risk of inhalation of vapours, mists, or aerosols. Provide eye washes and showers for emergency use.

Personal Protective Equipment

Respiratory Protection

Care should be taken to keep exposures below applicable occupational exposure limits. If this cannot be achieved, use of a respirator (EN140) fitted with an organic vapour cartridge combined with a particulate pre-filter (e.g. A2P3 filter, or ABEK-P3 filter, EN14387) should be considered. Where air filtering respirators are unsuitable (e.g. where airborne concentrations are high, there is a confined space or a risk of oxygen deficiency) use appropriate positive pressure breathing apparatus.

Hand Protection

Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile, Neoprene or PVC gloves may be suitable. (Breakthrough time of > 240 minutes). Breakthrough times for gloves vary depending on, e.g. chemical resistance, material thickness, frequency and duration of contact. Selection should also consider other usage requirements, e.g. dexterity, heat resistance, other chemical substances handled. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection

Wear safety glasses or full-face shield if splashes are likely to occur. Approved to EU Standard EN166.

Body Protection

Minimise all forms of skin contact. In the event of risk from splashing wear e.g. Nitrile, PVC, or neoprene rubber apron. Wear safety shoes or boots which are chemical and petroleum distillate resistant.

Environmental Exposure Controls

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Data given below are typical values.

Appearance:	Clear, pale yellow to brown liquid
Odour:	Characteristic hydrocarbon
Odour Threshold:	Not determined
pH	Not applicable
Melting/Freezing Point:	No data available
Initial Boiling Point/Range:	150 – 300 °C
Flash Point:	> 50 °C (Typical 55°C).
Evaporation Rate:	No data available.
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	No data available
Vapour Pressure:	No data available
Vapour Density:	> 1 (Air = 1)
Solubility:	Soluble in hydrocarbons; insoluble in water
Relative Density:	0.82 @ 15°C (Water = 1)
Partition Coefficient: n-octanol/water:	Not applicable, substance is a hydrocarbon UVCB.
Auto-ignition Temperature:	>220 °C
Decomposition Temperature:	No data available
Viscosity:	Dynamic: No data available

SAFETY DATA SHEET – FURNACE FLAME

Explosive Properties:
Oxidising Properties:

Kinematic: 2 – 5 mm²/s (40°C)
Not explosive. Vapour may form explosive mixture in air.
Not oxidizing.

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Reacts with oxidising agents

10.2 CHEMICAL STABILITY

The product is stable under normal use conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 CONDITIONS TO AVOID

Keep away from sources of ignition, hot surfaces, direct sunlight. Prevent accumulation of vapours.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents e.g. chlorates and ammonium nitrate. Reducing agents

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides, nitrogen oxides, hydrogen sulphide and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Basis for Assessment: Information given is based on product data, knowledge of the components and the toxicology of similar or read across products.

Acute Toxicity:

Acute Oral Toxicity: Not classified. Based on the available data the classification criteria are not met.

Acute Dermal Toxicity: Not classified. Based on the available data the classification criteria are not met.

Acute Inhalation Toxicity: Harmful if inhaled.
Fuel Diesel, LC50 (Rat, 4 h) 3.6 - 5.4 mg/L air

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Not classified. Based on the available data the classification criteria are not met.

Skin Sensitisation: Not classified. Based on the available data the classification criteria are not met.

Respiratory Sensitisation: Not classified. Based on the available data the classification criteria are not met.

SAFETY DATA SHEET – FURNACE FLAME

Germ Cell Mutagenicity:	Not classified. Based on the available data the classification criteria are not met.
Carcinogenicity:	Suspected of causing cancer. Carcinogenicity: via dermal route, target organ: skin
Reproductive Toxicity:	Development: Not classified. Based on the available data the classification criteria are not met. Fertility: Not classified. Based on the available data the classification criteria are not met. Effects on or via lactation: Not classified. Based on the available data the classification criteria are not met.
STOT - single exposure:	May cause drowsiness or dizziness. Target Organs: Central Nervous System, via inhalation.
STOT – repeated exposure:	May cause damage to organs (thymus, liver, bone marrow and blood) through prolonged or repeated exposure via dermal route. Kidney: caused kidney effects in male rats which is not considered relevant to humans.
Aspiration Hazard:	May be fatal if swallowed and enters airways. Risk of aspiration into lungs resulting in chemical pneumonia (delayed effects up to 48 hours after exposure).

Information on likely routes of exposure:

Routes of entry: Dermal, Inhalation.

Potential health effects:

If swallowed, aspiration into lungs may result in chemical pneumonia. Ingestion may cause irritation of the mouth and digestive tract.
Harmful if inhaled. Inhalation of high concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Causes skin irritation. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials. May cause damage to organs (thymus, liver, bone marrow and blood) through prolonged or repeated exposure. Suspected of causing cancer.

Other Information:

High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

SECTION 12 ECOLOGICAL INFORMATION

Basis for Assessment:	Ecotoxicological data have not been determined specifically for this product. Information given is based on knowledge of the components and the ecotoxicology of similar products.
------------------------------	--

12.1 TOXICITY

Toxic to aquatic life with long lasting effects.

Aquatic toxicity:

Fuels, Diesel:	Short-term toxicity to fish: LL50 (96h) 21 mg/L Short-term toxicity to aquatic invertebrates: EL50 (48 h) 68 mg/L Short-term toxicity to aquatic algae: EL50 (72 h) 22 mg/L (growth rate).
Kerosine (Petroleum):	Short-term toxicity to fish: LL50 (96 h) 2 – 5 mg/L Short-term toxicity to aquatic invertebrates: EL50 (48 h) 1.4 mg/L

SAFETY DATA SHEET – FURNACE FLAME

Long-term toxicity to aquatic invertebrates: EL50 (21 days) 890 µg/L (reproduction)

Short-term toxicity to aquatic algae: EL50 (72 h) 1 – 3 mg/L (growth rate)

12.2 PERSISTENCE AND DEGRADABILITY

Fuels, diesel is considered readily biodegradable.

Kerosine is readily biodegrade in 28 days but not within the 10-day window. Therefore, kerosine is not readily biodegradable, but as it can be degraded by micro-organisms, kerosine is regarded as being inherently biodegradable.

Kerosine oxidises rapidly by photochemical reactions in air. Kerosine persists under anaerobic conditions. The volatile components oxidise rapidly by photochemical reactions in air.

12.3 BIOACCUMULATIVE POTENTIAL

Product contains components with the potential to bioaccumulate. May cause tainting of fish and shellfish.

12.4 MOBILITY IN SOIL

Floats on water. Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. Large volumes may penetrate soil and could contaminate groundwater.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

12.6 OTHER ADVERSE EFFECTS

Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Waste Disposal:	Where possible, arrange for product to be recycled. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor to deal satisfactorily with this type of product should be established beforehand. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.
Product Disposal:	As for waste disposal.
Container Disposal:	Recycle or dispose of in accordance with the legislation in force.
Suggested EU Waste Code:	13 07 03* (other fuels, including mixtures).
NOTE:	Deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14 TRANSPORT INFORMATION

ADR / RID / ADN /IATA / IMDG

14.1 UN NUMBER

UN1202

14.2 UN PROPER SHIPPING NAME

HEATING OIL, LIGHT (flash point not more than 60 °C)

14.3 TRANSPORT HAZARD CLASS(ES)

3

SAFETY DATA SHEET – FURNACE FLAME

14.4 PACKING GROUP

III

14.5 ENVIRONMENTAL HAZARDS

ADR / RID / ADN / IATA: YES

IMDG CODE: MARINE POLLUTANT

14.6 SPECIAL PRECAUTIONS FOR THE USER

ADR

Emergency Action Code: 3Y

Hazard Identification Number 30

Transport Category: 3

Tunnel Code: D/E

Limited quantity: 5 litres

IMDG CODE

Emergency schedules (EmS): F-E, S-E

Stowage and Handling: Category A

IATA

Passenger and Cargo Aircraft

Max Quantity: 60L

Packaging instructions: 355

Limited quantity: 10L

Packaging instructions: Y344

Cargo Aircraft Only

Quantity limitation: 220L

Packaging instructions: 366

REFER TO SECTION 7, HANDLING & STORAGE, FOR SPECIAL PRECAUTIONS WHICH A USER NEEDS TO BE AWARE OF OR NEEDS TO COMPLY WITH IN CONNECTION WITH TRANSPORT.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

MARPOL annex 1 rules apply for bulk shipments by sea.

SECTION 15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

This Safety Data Sheet was prepared in accordance with EC Regulation (EC) No. 1907/2006 as amended. The product has been classified in accordance with Regulation (EC) No. 1272/2008 (CLP), Directive 67/548/EEC & Directive 1999/45/EC.

15.2 CHEMICAL SAFETY ASSESSMENT

REACH Information: A Chemical Safety Assessment has been carried out for one or more substances present in the material. A Chemical Safety Assessment has not been carried out for the mixture itself.

SECTION 16. OTHER INFORMATION

SDS Distribution

This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

References

Concawe Report 01/97 - Petroleum Products - First Aid Emergency and Medical Advice.

Concawe Report 00/56 - Revised Preparations - Summary Data and Rationale.

CENELEC CLC/TR 50404 Electrostatics - Code of Practice for the Avoidance of Hazards Due to Static Electricity. United Nations - Recommendations on the Transport of Dangerous Goods, Model Regulations. Vol 1 & 2.

International Air Transport Association - Dangerous Goods Regulations.

International Maritime Organisation-International Maritime Dangerous Goods Code. Vol 1&2.

European Model Code of Safe Practice in the Storage and Handling of Petroleum Products. Associated Octel Company UK - Leaded Gasoline Tank Cleaning and Disposal of Sludge (Booklet OIP/5 (5/99)).

Concawe Product Dossier 94/106 - Kerosines.

ECHA REACH dossier.

SAFETY DATA SHEET – FURNACE FLAME

Full text of Hazard Statements

H226:	Flammable liquid and vapour.
H304:	May be fatal if swallowed and enters airways.
H315:	Causes skin irritation.
H332:	Harmful if inhaled.
H336:	May cause drowsiness or dizziness.
H351:	Suspected of causing cancer.
H373:	May cause damage to organs through prolonged or repeated exposure. (Thymus, liver, bone marrow).
H411:	Toxic to aquatic life with long lasting effects.

Abbreviations:

CAS:	Chemical Abstracts Service
LC50:	Lethal Concentration 50%
LD50	Lethal Dose 50%
NOELR:	No Observed Effect Level Rate
PNEC:	Predicted No Effect Concentration
DNEL:	Derived No Effect Level
LTEL:	Long term exposure limit
STEL:	Short term exposure limit
TWA:	Time Weighted Average
dw:	Dry weight
bw:	Body weight
EC:	EINECS Number (European Inventory of Existing Commercial Substances)
PBT:	Persistent, Bioaccumulative and Toxic.
vPvB:	Very Persistent and Very Bioaccumulative
STOT:	Specific Target Organ Toxicity
UVCB:	substance of unknown or variable composition, complex reaction products or biological materials

Restrictions

This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier. If used for any other purpose than detailed above, such as in open systems or as a spray, ignition and exposure risks will increase and a careful risk assessment should be carried out.

History

V1.0 Issued: 13/02/2019: First Release.

The advice given in this safety data sheet reflects the current knowledge of the hazards and risks associated with the handling of the product. If the product is mixed with other materials the users shall take these into account in identifying any additional hazards and risks might arise.