



MATERIAL SAFETY DATA SHEET

HEALTH, SAFETY AND ENVIRONMENTAL DATA

Material	Marine Gas Oil	
Reference	ISO 8217 Grade DMA	
Synonyms	Gas Oil, MGO	
Product Register	FC12	
SC (C&P)	22110-22642 23510-23740	
Manufacturer/Supplier	Tramp Oil & Marine Limited	
Application	Fuel for diesel engines or heating/boiler plant	
Typical Physical Characteristics	Appearance:	Clear and bright, yellow/light -brown, low viscosity liquid having characteristic petroleum odour - may be dyed (normally red or blue)
	Density at 15°C kg /l:	0.85
	Boiling range °C:	160-385
	Flash point PMCC °C:	70 (60 min)
	Viscosity at 40°C CST:	4
	Auto Ignition Temp °C (in air):	230
	Cetane number:	48 (40 min)
	Vapour pressure mm Hg @ 20°C:	negligible to 1
	Vapour density P:	heavier than air
	Solubility in water:	negligible
Chemical Composition	Complex mixture of mainly middle distillate hydrocarbons in C10 -C28 range of paraffinic, naphthenic, or aromatic types. Additives may be included, commonly flow improvers (generally ethylene vinyl acetate co-polymers) or ignition improvers (generally octyl nitrates). CAS No. *68334 -30-5	
Hazardous Components	Cracked components containing polycyclic aromatic hydrocarbon compounds may be present some of which have been shown to induce skin cancer in laboratory animals.	
Reactivity	Stable, but avoid strong oxidizing agents.	

<p>Potential Hazards</p>	<p>Health:</p> <p>Professional assessment of available data, including limited information on the biological activity of the material and its components indicates that this material:</p> <ul style="list-style-type: none"> • will be unlikely to cause harm to the skin on brief or occasional contact but may cause dermatitis and serious irreversible skin disorders on repeated or prolonged contact. • it is unlikely to cause sensitization by skin contact. • will be unlikely to cause more than transient stinging or redness if accidental eye contact occurs. • may be irritating to the eyes if exposed to vapours, mist or fumes. • will be unlikely to cause harm if accidentally swallowed, although ingestion of large amounts may cause gastro-intestinal effects such as discomfort, nausea, vomiting and diarrhoea. • will injure the lungs if aspiration occurs, e.g. during vomiting. • inhalation of mists, vapours or fumes may cause irritation to the nose and throat. <p>Estimated rat oral LD50 greater than 5g/kg. Estimated rabbit dermal LD50 greater than 4g/kg.</p> <p>Safety:</p> <p>Bulk liquids will present virtually no fire hazard but trace quantities of low boiling hydrocarbons can build up in the vapour space of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point of the fuel; (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in fuel oil tank headspaces).</p> <p>Will present a flammability hazard if heated above flash point, if fuel contacts hot surfaces or leaks from high pressure fuel pipes, vapours and/or mists can be generated which can create a flammability or explosion hazard.</p> <p>Combustion produces carbon dioxide, nitrogen oxides, sulphur oxides and water vapour. Potentially harmful carbon monoxide may be formed where combustion efficiency is poor.</p> <p>Environment:</p> <p>Moderately toxic to aquatic life.</p>
<p>Exposure Limits</p>	<p>None established. Control mists to below 5mg/m³.</p>

<p>Precautions</p>	<p>Avoid skin contact and observe good personal hygiene. Change heavily contaminated clothing. Wash hands before eating and drinking. Avoid contact with eyes. Avoid inhalation of mist, fumes, vapours and products of combustion. Ensure efficient ventilation of areas where marine gas oils are utilized.</p> <p>Containers should be labelled correctly and kept closed when not in use. Care should be taken to avoid high pressure fuel injection injuries (e.g. from fuel injection nozzles).</p> <p>Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations of less than 1 per cent of the lower flammability limit and an oxygen concentration of at least 20 per cent volume.</p> <p>A check must always be made for the presence of hydrogen sulphide (H₂S) prior to tank entry. If there is any doubt about the tank atmosphere and/or if H₂S is present at above 10 ppm volume concentration, only enter using a positive pressure breathing apparatus. Continue to ventilate the tank and check that it remains H₂S free.</p> <p>Always have sufficient people standing by outside the tank with breathing apparatus and appropriate equipment to effect a quick rescue.</p>
<p>Protective Clothing</p>	<p>Wear impervious protective clothing, including gloves, if skin contact is likely during handling or use. Wear eye protection (face visor or goggles) if splashing can occur. Full face dust respirators and protective clothing, including gloves, should be worn when removing deposits from engine/boiler combustion and exhaust spaces.</p> <p>Approved positive pressure breathing apparatus must be used when entering storage tanks if hydrogen sulphide is present at above 10 ppm volume concentration.</p>
<p>First Aid/Action on Contact</p>	<p>Skin:</p> <p>Wash skin thoroughly with soap and water after contact. Change contaminated clothing and launder before re-use. Medical advice must be obtained urgently if fuel under high pressure has been injected through the skin.</p> <p>Eye:</p> <p>Wash eye thoroughly with water. Seek medical advice if pain or redness develops and persists.</p> <p>Ingestion:</p> <p>If contamination of the mouth occurs, wash it out thoroughly with water. Seek medical advice if large amounts are swallowed - do not induce vomiting because of the risk of aspiration into the lungs.</p>

First Aid/Action on Contact contd...	<p>Inhalation:</p> <p>If inhalation of mists, fumes or vapour causes irritation to the nose and throat, or coughing, remove to fresh air. Seek medical attention if symptoms persist. If the casualty is unconscious but breathing, place in the unconscious (recovery) position. If the casualty is not breathing, give mouth to mouth ventilation and external cardiac massage as necessary.</p>
Medical Advice	<p>If ingested, do not induce vomiting. Milk or liquid paraffin may be beneficial.</p> <p>Oil can be aspirated following regurgitation of stomach contents and can cause severe and potentially fatal chemical pneumonitis, which may require treatment with antibiotic and corticosteroid therapy. Because of the risk of aspiration, gastric lavage should be avoided - if deemed necessary undertake only after endotracheal intubation.</p> <p>Fuel injection through the skin from contact with high pressure/velocity fuel sprays are serious medical emergencies. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Emergency surgical exploration and thorough cleansing of the wound and underlying tissues is necessary to minimise necrosis and tissue loss. Note: high pressure may force fluid considerable distances along tissue planes.</p>
Emergency Action	<p>Fire:</p> <p>Extinguish using dry powder, foam, BCF, CO₂ or water fog (not water jet). Use breathing apparatus in enclosed spaces. Cool tanks and containers exposed to fire with water but ensure the water does not spread fire over a large area. Ensure an escape path is always available from any fire.</p> <p>Spillage:</p> <p>Isolate spillage from all ignition sources. Contain spillages and recover using sand, or non-combustible absorbent material for disposal according to local regulations or into port-approved disposal facilities. Do not wash into any drainage system and prevent entry into surface water sources.</p>
Environmental Data	<p>Moderately toxic to aquatic life. Fresh spillages may cause mortality of aquatic organisms and be harmful to wildlife, particularly birds. May lead to a reduction in amenity uses of water bodies and if allowed to enter aquatic sediments, contamination may be long-term. Advise appropriate authority of spillages into surface water or water courses.</p>
Disposal	<p>At sea, unusable oils should be sorted for eventual discharge into port-approved waste oil disposal facilities. (MARPOL regulations stipulate all major ports must provide facilities for the removal and disposal of unwanted hydrocarbon materials from all vessels). General disposal by incineration or use as land-fill at suitable tip under conditions approved by the local authorities.</p>

Labelling Classification	<p>EEC Labelling</p> <p>Indication of danger - Xn (harmful) Symbol - St Andrew's C cross (black on orange)</p> <p>Risk (R) Phrases:</p> <p>R40 - Possible risk of irreversible effects</p> <p>Safety (S) phrases:</p> <p>S43 - In case of fire use foam/dry powder/CO₂/halon. Never use water.</p> <p>S42 - Avoid contact with skin.</p> <p>S46 - If swallowed, seek medical advice immediately and show this container or label.</p> <p>- Do not induce vomiting. See manufacturer's literature.</p>
Transport Classifications	<p>IMCO: Class 3.3</p> <p>United Nations No: 1202 Class 3.3</p> <p>ADR/RID:P 3,4</p> <p>IATA: 3 (-) Packing Group III</p>
Compiled by	<p>Technical Department Tramp Oil & Marine Limited 1st Floor, Wells House 15/17 Elmfield Road, Bromley Kent, BR1 1LT United Kingdom</p> <p>Telephone: +44 (0)20 8315 7777</p> <p>Date of compilation: May 1997</p>

This data sheet and the health, safety and environmental information it contains is considered to be accurate as of the date specified above. We have reviewed any information contained herein which we received from sources outside Tramp Oil & Marine Limited. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the data and information contained in this data sheet.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission, recommendation or authorisation given or implied to practice any patented invention without a valid licence. Tramp Oil & Marine Limited shall not be responsible for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.