

 **Green Flame** Material Safety Data Sheet

Version 1. Effective Date 23.06.2009 according to directive 91/155/EEC - 2001/58/EC UK

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name :	GreenFlame
Chemical product name :	Preparation
Product type and main use :	Fuel
Supplier :	Ebony Solutions Ltd Wincham Lane, Wincham Northwich, Cheshire CW9 6DE
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2. HAZARDS IDENTIFICATION

The substance is classified as dangerous according to Directive 67/548/EEC and its amendments.

Classification :	Carc. Cat. 3; R40 Xn; R65 Xi; R38 R66 N; R51/53
Physical/chemical hazards :	The product is not classified as flammable but consists of hydro-carbons and can burn. Vapours may form explosive mixtures with air.
Health hazard :	May cause irreversible effects. Aspiration of product into the lungs, either directly or as a consequence of vomiting following ingestion, may result in damage to lung tissue. Vapours may irritate eyes and respiratory system. High doses may cause nausea and headaches.
Environmental hazards :	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Release of the product into water will result in a film of hydrocarbons floating on the surface. Due to low water solubility the predominant loss is through volatilisation. Molecules with higher molecular weight will be absorbed on sediment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation :

Preparation

Chemical name*	CAS no.	EC Number	%	Classification
Diesel, fuels	68334-30-5	269-822-7	60 - 80	Carc. Cat. 3; R40 Xn; R65 R66
Kerosine (petroleum),	8008-20-6	232-366-4	20 - 40	Xn; R65 Xi; R38 N; R51/53

See Section 16 for the full text of the R Phrases declared above, if applicable.

* Occupational Exposure Limit(s), if available, are listed in Section 8

4. FIRST AID MEASURES

Inhalation :

If symptoms arise from inhalation of the product, remove to fresh air. Keep the casualty warm and at rest. If unconscious place in recovery position and give oxygen if possible. Monitor breathing and pulse. If necessary assist breathing. Give external cardiac massage if possible. Get medical attention immediately.

Eye Contact :

Wash eyes with plenty of water for at least 10 minutes, making sure the eyelids are kept open. If irritation persists, seek medical attention.

Skin contact:

Remove contaminated clothing and shoes. Wash contaminated skin with soap and water. If irritation persists, seek medical attention. In case of contact with hot product, rinse with plenty of water.

Ingestion :

Do not give anything by mouth. Do not induce vomiting. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable :	In case of fire, use water spray (fog), foam, dry chemical or CO ₂ .
Not Suitable :	Do not use water jet.
Hazardous thermal decomposition products :	Burning product gives rise to a complex mixture of gases and airborne particles including carbon monoxide and sulphur oxides.
Special fire-fighting procedures :	Cool closed containers exposed to fire with water.
Protection of fire-fighters :	Proper protective equipment including breathing apparatus for both organic vapours and aerosols.
Specific hazard :	Risk of explosion due to increased pressure if product containers or tanks become heated due to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions :	Eliminate all ignition sources. Evacuate people to upwind from leakage area. Do not allow water or any liquid to contact with hot product since this could cause splashing of hot material or boil-over.
Environmental precautions :	Do not allow to enter drains or watercourses.
Clean-up methods :	Consider the health and physical hazards of the product. Start immediately to clean up the product and contaminated soil. Small quantities can be absorbed with absorbent material (earth, sand, etc). If spill is large, call for rescue service. It is recommended to handle product remnants as hazardous waste.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling :	Keep away from sources of ignition. Electrostatic charges may be generated during pumping and tank filling operations. Ensure electrical continuity of all equipment by proper bonding. Vapours can spread at ground level and in low areas and form explosive mixture with air. When handling indoors, ensure good ventilation.
Storage :	Store in properly labelled containers intended for this product. Do never enter a storage tank without breathing apparatus unless the tank has been well ventilated and gas checked.
Recommended use:	Use original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures :	In situations where significant fume/vapour is generated and cannot be eliminated through engineering modifications, local/general exhaust ventilation is required in order to maintain airborne concentrations below recommended exposure limits.
Hygiene measures :	Avoid exposure by inhalation and skin contact. Remove contaminated clothing and shoes. Wash contaminated skin with soap and water.

Ingredient name	Occupational exposure limits
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Oil mist	EH40-WEL (United Kingdom (UK), 2002). STEL: 10 mg/m ³ 15 minute(s). TWA: 5 mg/m ³ 8 hour(s).
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Personal protective equipment

Respiratory system :	Wear appropriate respirator when ventilation is inadequate (e.g. breathing apparatus or face mask with breathing through cartridge / filter type "A" (brown for organic vapours).
Skin and body :	One-piece protective coverall. Chemical resistant shoes or boots.
Hands :	Wear oil-resistant protective gloves (e.g. nitril rubber).
Eyes :	Tightly fitted goggles or safety glasses with side shields. In situations where misting or splashing into eyes is possible, goggles or face shield shall be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state :	Liquid.
Odour :	Solvent.
Flash point :	Closed cup: >61°C (>141.8°F)
Solubility :	Not available.
Octanol/water partition coefficient :	The product is more soluble in octanol; log(octanol/water) = 3.9 to 6
Viscosity :	Kinematic (40C): 3 to 6 cSt

10. STABILITY AND REACTIVITY

Stability :	The product is stable.
Conditions to avoid :	Heating causes evaporation of flammable vapours.
Materials to avoid :	Strong oxidising materials
Hazardous decomposition products :	Burning product gives rise to a complex mixture of gases and airborne particles including carbon monoxide and sulphur oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity :	Due to low viscosity there is a risk of aspiration if the product enters the lungs. Data show that the product is of low toxicity order, following dermal and oral exposure. Studies indicate dermal and oral LD50 > 2000 mg/kg.
Inhalation :	Vapours may irritate eyes and respiratory system. Over-exposure could cause nausea, headache and dizziness.
Sensitization and irritation :	Repeated exposure may cause skin dryness or cracking. May cause skin irritation. There is no indication that the product is a sensitiser.
Chronic toxicity :	Harmful: possible risk of irreversible effects in contact with skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity data :	No data available. Due to the low water solubility the product is not expected to cause acute aquatic toxicity.
Mobility :	In soil and sediment the product will show low mobility with adsorption being the predominant physical process. In water the product will float and spread over the surface.
Persistence/degradability :	No data available. The product is not considered to be ready biodegradable.
Bio-accumulation. :	The product has a potential to bioaccumulate. Log Kow 3.9 - 6
Other environmental effects :	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product emits Volatile Organic Compounds to the atmosphere. Release of the product into water will result in a film of hydrocarbons floating on the surface. The main fate process is expected to be slow biodegradation in soil and sediment.

13. DISPOSAL CONSIDERATIONS

Methods of disposal	
Waste of residues :	Recycling (redistillation) or incineration.
Contaminated packaging :	Through authorized contractor or collector.
European waste catalogue (EWC) :	13 07 03* other fuels (including mixtures)
Hazardous waste :	It is recommended to handle product remnants as hazardous waste.

14. TRANSPORT INFORMATION

International transport regulations

Regulatory Info	UN No.	Shipping name	Class	PG*	Label
ADR/RID Class	1202	GreenFlame or Diesel Fuel or Heating Oil, Light (flashpoint more than 61°C and not more than 100°C).	3	III	Flammable Liquid
IMDG / ADNR Class	1202	GreenFlame or Diesel Fuel or Heating Oil, Light (flashpoint more than 61°C and not more than 100°C)	3	III	Flammable Liquid
IATA Class	1202	GreenFlame or Diesel Fuel or Heating Oil, Light (flashpoint more than 61°C and not more than 100°C)	3	III	Flammable Liquid

PG* : Packing group

15. REGULATORY INFORMATION

Hazard symbol or symbols :	Harmful, Dangerous for the environment
Risk phrases :	R38- Irritating to skin. R40- Limited evidence of a carcinogenic effect. R65- Harmful: may cause lung damage if swallowed. R66- Repeated exposure may cause skin dryness or cracking. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases :	S24- Avoid contact with skin. S36/37- Wear suitable protective clothing and gloves. S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Contains :	Diesel, fuels 269-822-7
Product use :	Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use. Industrial applications.
Additional warning phrases :	Industrial use only.

16. OTHER INFORMATION

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK):

R38- Irritating to skin.

R40- Limited evidence of a carcinogenic effect.

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65- Harmful: may cause lung damage if swallowed.

R66- Repeated exposure may cause skin dryness or cracking.

Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK):

Carc. Cat. 3 - Carcinogen Category 3

Xn - Harmful

Xi - Irritant

N - Dangerous for the environment.

References :

CONCAWE report 01/53 - Classification and labelling of petroleum substances according to the EU dangerous substances directive.

CONCAWE report 01/54 - Environmental classification of petroleum substances - summary data and rationale.

CONCAWE product dossier 97/108 - Lubricating oil basestocks.

CONCAWE report 6/05 - Classification and labelling of petroleum substances according to the EU dangerous substance directive. (CONCAWE recommendations - July 2005).

Notice to reader

The advice given in this safety data sheet reflects the current knowledge of the hazards and risks associate 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 which might arise.