Kamco Limited
MATERIAL SAFETY DATA SHEET

WAXBREAKER GOLD

Revision date: 22/9/2011

Section 1: Identification of the substance/mixture and of the company undertaking

1.1. Product identifier

Product name: WAXBREAKER GOLD

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

Use of substance / mixture: Diesel fuel additive.

1.3. Details of the supplier of the safety data sheet

Company name: Kamco Ltd
Unit 9, Curo Park
Frogmore
St Albans
Herts
AL2 2DD

Tel: 01727 875020

Fax: 01727 875335

Email: info@kamco.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

	Kerosene:	Isobutyl Methyl Ketone:
Classification under CHIP:	R10, Xi;R38, Xn;R65, R67, N;R51/53	F;R11, Xn;R20, Xi;R36/37, R66
Classification under CLP:		
Physical:	Flammable liquids: Cat.3 - H226	Flammable liquids: Cat.2 – H225
Health:	Skin corrosion/irritation: Cat.2 – H315 Aspiration hazard: Cat.1 – H304 Specific target organ toxicity (single exposure): Cat.3 – H336	EUH066; Acute Toxicity: Cat.4 – H332 Eye irritation: Cat.2 – H319 STOT SE: Cat.3 – H335
Environmental:	Hazardous to aquatic environment, chronic toxicity: Cat.2 – H411	Not classified

2.2. Label elements

Label elements under CLP:

Hazard statements:
H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.
EUH066: Repeated exposure may cause skin dryness or cracking.
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.

Signal words: DANGER

Hazard pictograms:
GHS02: FLAME
GHS08: HEALTH HAZARD
GHS09: ENVIRONMENT

Precautionary statements:
P102: Keep out of reach of children.
P210: Keep away from heat/sparks/open flames/hot surfaces. – NO SMOKING.
P243: Take precautionary measures against static discharge.
P260: Do not breathe dust/fume/gas/mist/vapours/ spray.
P280: Wear protective gloves / protective clothing / eye protection / face protection.
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P313: Get medical advice/attention.
P331: Do NOT induce vomiting.
P501: Dispose of contents/container to approved disposal facility.

2.3. Other hazards

Other hazards: Does not meet the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB) substances.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

KEROSENE: C9-16

EINECS	CAS	CHIP Classification	CLP Classification	Concentration
232-366-4	8008-20-6	Xn;R65	H304	100
Total Sulphur: < 0.1 wt%				

ISOBUTYL METHYL KETONE

203-550-1	108-10-1		-	

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately and flush with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Eye contact: If irritation or redness develops from exposure, immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses, if present and safe to do so, and open eyes wide apart. Get medical attention if any discomfort continues.

Ingestion: Aspiration hazard: Do NOT induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention. First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Acute: Minor respiratory irritation at high vapour concentrations.

Delayed: Dry skin and possible irritation with repeated or prolonged exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys foam. Water may be ineffective for extinguishment, unless used under favourable conditions by experienced fire fighters.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion hazards: Flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapours may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapour/air explosion hazard indoors, in confined spaces, outdoors or in sewers. This product will float and can be reignited on surface water. Vapours are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products:	Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulphur may also be formed.

5.3. Advice for fire-fighters

Advice for fire-fighters:	For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area and keep unauthorised personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Cool equipment exposed to fire with water, if it can be done safely.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:	Flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material. For larger spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorised personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

6.2. Environmental precautions

Environmental precautions:	Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorised drainage systems, and natural waterways. Use foam on spills to minimise vapours. Use water sparingly to minimise environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

6.3. Methods and material for containment and cleaning up

Clean-up procedures:	Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local authority regulations. Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of MSDS

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Take precautionary measures against static discharge. Non-sparking tools should be used. Keep away from ignition sources such as heat/sparks/open flame – No smoking. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Wear protective gloves.

Flammable. May vaporise easily at ambient temperatures. The vapour is heavier than air and may create an explosive mixture of vapour and air. Beware of accumulation in confined spaces and low-lying areas. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes for specific bonding/grounding requirements). Do not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g. carbon monoxide, oxides of sulphur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

7.2. Conditions for safe storage, including and incompatibilities

Storage conditions: Keep container(s) tightly closed and properly labelled. Use and store this material in cool, dry well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area “No Smoking or Open Flame”. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

“Empty” containers retain residue and may be dangerous. Do not pressurise, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. “Empty” drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to appropriate guidance pertaining to cleaning, repairing, welding, or other contemplated operations. Outdoor or detached storage is preferred. Indoor storage should meet Country or Committee standards and appropriate fire codes.

7.3. Specific end use(s)

Specific end uses(s): Diesel fuel additive.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits			
Component	**US-ACGIH**	**UK-EH40**	**Other**
Kerosene C9-16	TWA: 200 mg/m³ Skin	None	None

Biological Limit Values			
Component	**US-ACGIH**	**EU 98/24/EC**	**UK-EH40**
Kerosene C9-16	None	None	None

Component	Std	TWA – 8 hours		Stel – 15 min	
Isobutyl Methyl Ketone	WEL	50	208	100	416

8.2. Exposure controls

Engineering measures: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Respiratory protection: Where there is potential for airborne exposure above the exposure limit an approved air purifying respirator equipped with Type A, organic gases and vapour filters (as specified by the manufacturer) may be used.

A respiratory protection program that follows recommendations for the selection, use, care and maintenance of respiratory protective devices in EN529:2005 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health.

Skin/Hand protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact (e.g. solvent resistant gloves). Users should check with manufacturers to confirm the breakthrough performance of their products.

Eye/Face protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation or injury. Depending on conditions of use, a face shield may be necessary.

Other protective Equipment Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Amber liquid

Physical Form:	Liquid
Odour:	Kerosene
Odour Threshold:	Not determined
pH:	N/A
Melting/Freezing Point:	<-47ºC
Initial Boiling Point/Range:	140-300ºC
Flash Point:	>38ºC
Evaporation Rate (nBuAc=1):	Not determined
Flammability (solid, gas):	Flammable
Upper Explosive Limits (vol % in air):	6.0
Lower Explosive Limits (vol % in air):	0.5
Vapour Pressure:	3 kPa@20ºC
Relative Vapour Density (air-1):	>1
Relative Density (water=1):	0.77-0.82 @ 15ºC
Solubility (ies):	Solubility in water: Negligible @20ºC
Partition Coefficient (n-octanol/water) (Kow):	Not determined
Auto-ignition Temperature:	250ºC
Decomposition Temperature:	Not determined
Viscosity:	1.3-2.9 mm²/s @ 20ºC
Explosive Properties:	N/A
Oxidising Properties:	N/A

9.2. Other information

Pour point:	<-47ºC

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity:	Not chemically reactive.

10.2. Chemical stability

Chemical stability:	Stable under normal ambient and anticipated conditions of use.

10.3. Possibility of hazardous reactions

Hazardous reactions:	Hazardous reactions not anticipated.

10.4. Conditions to avoid

Conditions to avoid:	Avoid high temperatures and all sources of ignition. Prevent vapour accumulation.

10.5. Incompatible materials

Materials to avoid:	Avoid contact with strong oxidising agents and strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products:	Oxides of: Carbon.

Section 11: Toxicological information

11.1. Information on toxicological effects

Substance/Mixture

Acute toxicity	Hazard	LC50/LD50 Data
Inhalation	Unlikely to be harmful	>5.2 mg/L (mist)
Skin Absorption	Unlikely to be harmful	> 2 g/kg
Ingestion (swallowing)	Unlikely to be harmful	> 5 g/kg

Symptoms / routes of exposure

Aspiration Hazard: May be fatal if swallowed and enters airways.

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Causes mild eye irritation.

Signs and Symptoms: While significant vapour concentrations are not likely, high concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, nausea, diarrhoea, and vomiting.

Skin Sensitisation: Not expected to be a skin sensitiser.

Respiratory Sensitisation: No information available.

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness and dizziness.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Carcinogenicity: Not expected to cause cancer. Petroleum middle distillates have been shown to cause skin tumours in mice following repeated and prolonged skin contact. Follow-up studies have shown that these tumours are produced through a non-genotoxic mechanism associated with frequent cell damage and repair, and that they are not likely to cause tumours in the absence of prolonged skin irritation. Middle distillates with low polynuclear aromatic hydrocarbon content have not been identified as a carcinogen by IARC.

Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

Section 12: Ecological information

12.1. Toxicity

Toxicity: Acute aquatic toxicity studies on samples of jet fuel and kerosene streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions, in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. Kerosenes should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.

H411; Chronic Cat 2.

12.2. Persistence and degradability

Persistence and degradability:	The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.
Persistence per IOPC Fund definition:	Non-persistent.

12.3. Bioaccumulative potential

Bioaccumulative potential:	Hydrocarbon constituents of kerosene show measured or predicted Log Kow values ranging from 3 to 6 and above and therefore would be regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

12.4. Mobility in soil

Mobility:	On release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilization to air. It is possible that some of the higher molecular weight hydrocarbons will be absorbed on sediment. Biodegradation in water is a minor loss process. In air, the hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 0.1 to 0.7 days,

12.5. Results of PBT and vPvB assessment

PBT or vPvB identification:	Not a PBT or vPvB substance.

12.6. Other adverse effects

Other adverse effects:	None anticipated.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations:	European Waste Code: 13 07 03 other fuels (including mixtures. This material, if discarded as produced, would be considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies. This code has been assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste generators/producers are responsible for assessing the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code. Disposal must be in accordance with Directive 2006/12/EC and other applicable national or regional provisions, and based upon material characteristics at time of disposal. For incineration of waste, follow Directive 2000/76/EC. For landfill of waste, follow Directive 1999/31/EC.
Disposal of packaging:	Container contents should be completely used and containers emptied prior to discard. Empty drums should be properly sealed and promptly returned to the drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with applicable regulations.

Section 14: Transport information

UN number:	UN1993
UN proper shipping name:	WAXBREAKER GOLD
Transport class:	3
Packing Group:	III
Environmental hazards:	Marine pollutant
Special precautions for user:	**If transported in bulk by marine vessel in international waters product is being carried under the scope of MARPOL Annex 1.**
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	N/A

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EC1272/2008 – Classification, labelling and packaging of substances and mixtures.

EN166:2002 Eye Protection

EN529:2005 Respiratory Protective Devices

BS EN 374-1:2003 Protective gloves against chemicals and microorganisms.

Workplace Exposure Limits, EH40/2005, Control of Substances Hazardous to Health

Directive 91/689/EEC on Hazardous Waste (European Waste Codes)

Directive 2000/76/EC on incineration of waste

Directive 1999/31/EC on landfill of waste

Export rating: No Licence required.

15.2. Chemical Safety Assessment

Chemical safety assessment:	A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

List of relevant hazard statements:	H226: Flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation H336: May cause drowsiness or dizziness. H411: Toxic to aquatic life with long lasting effects. R10: Flammable R38: Irritating to skin. R65: Harmful: may cause lung damage if swallowed. R67: Vapours may cause drowsiness and dizziness. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Legal disclaimer:	The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Kamco Limited shall not be held liable for any damage resulting from handling or from contact with the above product.