

# MARINE FORMULA FW1 WAX

Chemwatch Material Safety Data Sheet  
Issue Date: 12-May-2009  
NC477ECP

CHEMWATCH 21-0246  
Version No:2.0  
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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

MARINE FORMULA FW1 WAX

### STATEMENT OF HAZARDOUS NATURE

**Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.**

### PROPER SHIPPING NAME

AEROSOLS

### PRODUCT USE

» Application is by spray atomisation from a hand held aerosol pack.  
Water-based wax.

### SUPPLIER

Company: Pro-Sales Direct Ltd  
Address:  
Suite G, 1 Kingdon Street  
Newmarket  
Auckland,  
NZL  
Telephone: +64 9520 1900  
Fax: +64 9520 1905

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## Section 2 - HAZARDS IDENTIFICATION

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### GHS Classification

Acute Aquatic Hazard Category 2  
Eye Irritation Category 2B  
Skin Corrosion/Irritation Category 2

### EMERGENCY OVERVIEW

#### HAZARD

#### WARNING

Determined by Chemwatch using GHS/HSNO criteria:  
9.1B 6.3A 6.4A

Toxic to aquatic life  
Causes skin irritation  
Causes eye irritation

### PRECAUTIONARY STATEMENTS

#### Prevention

Wash thoroughly after handling.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

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Section 2 - HAZARDS IDENTIFICATION

## Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
isoparaffins petroleum hydrotreated HFP	64742-47-8.	5-10
heptane	142-82-5	5-10
hydrocarbon propellant	68476-85-7.	5-10
water	7732-18-5	N/S

## Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

### SWALLOWED

» Not considered a normal route of entry.

### EYE

» If aerosols come in contact with the eyes:

- Immediately hold the eyelids apart and flush the eye with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

» If solids or aerosol mists are deposited upon the skin:

- Flush skin and hair with running water (and soap if available).
- Remove any adhering solids with industrial skin cleansing cream.
- DO NOT use solvents.
- Seek medical attention in the event of irritation.

### INHALED

» If aerosols, fumes or combustion products are inhaled:

- Remove to fresh air.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

### NOTES TO PHYSICIAN

» Treat symptomatically.

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves

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Section 4 - FIRST AID MEASURES

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clearance.

- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
  - Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
  - Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology].
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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

» SMALL FIRE:

- Water spray, dry chemical or CO<sub>2</sub>

LARGE FIRE:

- Water spray or fog.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

### FIRE/EXPLOSION HAZARD

» WARNING: In use may form flammable/ explosive vapour-air mixtures.

- Non combustible, carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

Other decomposition products include:

### FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### Personal Protective Equipment

Gas tight chemical resistant suit.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.

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Section 6 - ACCIDENTAL RELEASE MEASURES

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- Undamaged cans should be gathered and stowed safely.

## MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse / absorb vapour.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.
- Collect residues and seal in labelled drums for disposal.

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- DO NOT incinerate or puncture aerosol cans.
- DO NOT spray directly on humans, exposed food or food utensils.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

- Aerosol dispenser.
- Check that containers are clearly labelled.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.

### STORAGE REQUIREMENTS

- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>
New Zealand Workplace Exposure Standards (WES)	isoparaffins petroleum hydrotreated HFP (Oil mist, mineral)		5		10
New Zealand Workplace Exposure Standards (WES)	heptane (Heptane (n-Heptane))	400	1,640	500	2,050
New Zealand Workplace Exposure Standards (WES)	hydrocarbon propellant (LPG (Liquefied petroleum gas))	1,000	1,800		

The following materials had no OELs on our records

- water: CAS:7732-18-5

### EMERGENCY EXPOSURE LIMITS

Material heptane Material

### MATERIAL DATA

» Not available. Refer to individual constituents.

### INGREDIENT DATA

ISOPARAFFINS PETROLEUM HYDROTREATED HFP:

» Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

for petroleum distillates:

CEL TWA: 500 ppm, 2000 mg/m<sup>3</sup> (compare OSHA TWA).

REL TWA: 300 ppm [EXXON]

HEPTANE:

» for heptane (all isomers)

The TLV-TWA is protective against narcotic and irritant effects which are greater than those of pentane or n-hexane but less than those of octane. The TLV-TWA applies to all isomers.

Inhalation by humans of 1000 ppm for 6 minutes produced slight dizziness. Higher concentrations for shorter periods produce marked vertigo, incoordination and hilarity. Signs of central nervous system depression occur in the absence of mucous membrane irritation. Brief exposures to high levels (5000 ppm for 4

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

minutes) produce nausea, loss of appetite and a "gasoline-like" taste in the mouth that persists for many hours after exposure ceases.

### WATER:

- » No exposure limits set by NOHSC or ACGIH.

## PERSONAL PROTECTION

### EYE

- » No special equipment for minor exposure i.e. when handling small quantities.

OTHERWISE: For potentially moderate or heavy exposures:

- Safety glasses with side shields.

• NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.

### HANDS/FEET

- No special equipment needed when handling small quantities.

• OTHERWISE:

• For potentially moderate exposures:

- Wear general protective gloves, eg. light weight rubber gloves.

• For potentially heavy exposures:

- Wear chemical protective gloves, eg. PVC. and safety footwear.

### OTHER

- » No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.

- Skin cleansing cream.

- Eyewash unit.

- Do not spray on hot surfaces.

### RESPIRATOR

» Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	AX- AUS	-
1000	50	-	AX- AUS
5000	50	Airline *	-
5000	100	-	AX- 2
10000	100	-	AX- 3
	100+		Airline**

\* - Continuous Flow

\*\* - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

## ENGINEERING CONTROLS

» General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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Provide adequate ventilation in warehouse or closed storage areas.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Clear liquid spray with a slight ammonia odour; mixes with water.

### PHYSICAL PROPERTIES

Liquid.

Gas.

Mixes with water.

Molecular Weight: Not Applicable

Melting Range (°C): Not Available

Solubility in water (g/L): Miscible

pH (1% solution): Not Available

Volatile Component (%vol): <10 (VOC)

Relative Vapour Density (air=1): >1

Lower Explosive Limit (%): Not Available

Autoignition Temp (°C): Not Available

State: Liquid

Boiling Range (°C): 100 (concentrate)

Specific Gravity (water= 1): 1.0

pH (as supplied): Not Available

Vapour Pressure (kPa): Not Available

Evaporation Rate: >1 BuAC = 1

Flash Point (°C): Not Available

Upper Explosive Limit (%): Not Available

Decomposition Temp (°C): Not Available

Viscosity: Not Available

Material

Value

HEPTANE:

log Kow

4.66

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Elevated temperatures.
- Presence of open flame.
- Product is considered stable.
- Hazardous polymerisation will not occur.

*For incompatible materials - refer to Section 7 - Handling and Storage.*

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

» Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

» Not normally a hazard due to physical form of product.

» Considered an unlikely route of entry in commercial/industrial environments.

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## Section 11 - TOXICOLOGICAL INFORMATION

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» Ingestion may result in nausea, abdominal irritation, pain and vomiting.

### EYE

» Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

### SKIN

» The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

» Spray mist may produce discomfort.

» Open cuts, abraded or irritated skin should not be exposed to this material.

### INHALED

» The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

» The vapour is discomforting.

» WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

### CHRONIC HEALTH EFFECTS

» Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

WARNING: Aerosol containers may present pressure related hazards.

### TOXICITY AND IRRITATION

» Not available. Refer to individual constituents.

### ISOPARAFFINS PETROLEUM HYDROTREATED HFP:

» No significant acute toxicological data identified in literature search.

### HEPTANE:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

### TOXICITY

Inhalation (human) TCl<sub>o</sub>: 1000 ppm/6m

### IRRITATION

Nil Reported

### HYDROCARBON PROPELLANT:

» Not available. Refer to individual constituents.

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## Section 12 - ECOLOGICAL INFORMATION

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

» DO NOT discharge into sewer or waterways.

Refer to data for ingredients, which follows:

### ISOPARAFFINS PETROLEUM HYDROTREATED HFP:

### HEPTANE:

» Fish LC50 (96hr.) (mg/l): 4924

» log Kow (Sangster 1997): 4.66

» BOD5: 1.92

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Section 12 - ECOLOGICAL INFORMATION

» COD: 0.06

» Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

» Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

» For n-heptane:

log Kow : 4.66

Koc : 2400-8100

Half-life (hr) air : 52.8

Half-life (hr) H<sub>2</sub>O surface water : 2.9-312

Henry's atm m<sup>3</sup> /mol: 2.06

BOD 5 if unstated: 1.92

COD : 0.06

BCF : 340-2000

log BCF : 2.53-3.31

Environmental fate:

Photolysis or hydrolysis of n-heptane are not expected to be important environmental fate processes.

Biodegradation of n-heptane may occur in soil and water, however volatilisation and adsorption are expected to be more important fate processes. A high Koc (2400-8200) indicates n-heptane will be slightly mobile to immobile in soil. In aquatic systems n-heptane may partition from the water column to organic matter in sediments and suspended solids. The bioconcentration of n-heptane may be important in aquatic environments. The Henry's Law constant suggests rapid volatilisation from environmental waters and surface soils. The volatilisation half-lives from a model river and a model pond (the latter considers the effect of adsorption) have been estimated to be 2.9 hr and 13 days, respectively.

n-Heptane is expected to exist entirely in the vapour phase in ambient air. Reactions with photochemically produced hydroxyl radicals in the atmosphere have been shown to be important (estimated half-life of 2.4 days calculated from its rate constant of  $7.15 \times 10^{-12}$  cu cm/molecule-sec at 25 deg C). Data also suggests that night-time reactions with nitrate radicals may contribute to the atmospheric transformation of n-heptane, especially in urban environments. n-Heptane does not contain chromophores that absorb at wavelengths >290 nm and therefore is not expected to be susceptible to direct photolysis by sunlight

An estimated BCF of 2,000 using log Kow suggests the potential for bioconcentration in aquatic organisms is very high. Based on 100% degradation after 4 days in water inoculated with gasoline contaminated soil and 100% degradation after 25 days in water inoculated with activated sewage sludge, biodegradation is expected to be an important fate process for n-heptane in water.

Ecotoxicity:

Fish LC<sub>50</sub> (48 h): goldfish (*Carrasius auratus*) 4 mg/l; golden orfe (*Idus melanotus*) 2940 mg/l; western

mosquitofish (*Gambusia affinis*) 4924 mg/l

Daphnia LC<sub>50</sub> (24 h): >10 mg/l

Daphnia EC<sub>50</sub> (96 h): 82 mg/l (immobilisation)

Opposum shrimp (*Mysidopsis bahia*) LC<sub>50</sub> (96 h): 0.1 mg/l

Snail EC<sub>50</sub> (96 h): 472 mg/l.

### HYDROCARBON PROPELLANT:

Marine Pollutant: Not Determined

» For hydrocarbons:

Environmental fate:

The lower molecular weight hydrocarbons are expected to form a "slick" on the surface of waters after release in calm sea conditions. This is expected to evaporate and enter the atmosphere where it will be degraded through reaction with hydroxy radicals.

Some hydrocarbon will become associated with benthic sediments, and it is likely to be spread over a fairly wide area of sea floor. Marine sediments may be either aerobic or anaerobic. The material, in probability, is biodegradable, under aerobic conditions (isomerised olefins and alkenes show variable results). Evidence also suggests that the hydrocarbons may be degradable under anaerobic conditions although such degradation in benthic sediments may be a relatively slow process.

Under aerobic conditions hydrocarbons degrade to water and carbon dioxide, while under anaerobic processes they produce water, methane and carbon dioxide.

Alkenes have low log octanol/water partition coefficients (Kow) of about 1 and estimated bioconcentration

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Section 12 - ECOLOGICAL INFORMATION

factors (BCF) of about 10; aromatics have intermediate values (log Kow values of 2-3 and BCF values of 20-200), while C5 and greater alkanes have fairly high values (log Kow values of about 3-4.5 and BCF values of 100-1,500)

The estimated volatilisation half-lives for alkanes and benzene, toluene, ethylbenzene, xylene (BTEX) components were predicted as 7 days in ponds, 1.5 days in rivers, and 6 days in lakes. The volatilisation rate of naphthalene and its substituted derivatives were estimated to be slower

Indigenous microbes found in many natural settings (e.g., soils, groundwater, ponds) have been shown to be capable of degrading organic compounds. Unlike other fate processes that disperse contaminants in the environment, biodegradation can eliminate the contaminants without transferring them across media.

The final products of microbial degradation are carbon dioxide, water, and microbial biomass. The rate of hydrocarbon degradation depends on the chemical composition of the product released to the environment as well as site-specific environmental factors. Generally the straight chain hydrocarbons and the aromatics are degraded more readily than the highly branched aliphatic compounds. The n-alkanes, n-alkyl aromatics, and the aromatics in the C10-C22 range are the most readily biodegradable; n-alkanes, n-alkyl aromatics, and aromatics in the C5-C9 range are biodegradable at low concentrations by some microorganisms, but are generally preferentially removed by volatilisation and thus are unavailable in most environments; n-alkanes in the C1-C4 ranges are biodegradable only by a narrow range of specialised hydrocarbon degraders; and n-alkanes, n-alkyl aromatics, and aromatics above C22 are generally not available to degrading microorganisms. Hydrocarbons with condensed ring structures, such as PAHs with four or more rings, have been shown to be relatively resistant to biodegradation. PAHs with only 2 or 3 rings (e.g., naphthalene, anthracene) are more easily biodegraded. In almost all cases, the presence of oxygen is essential for effective biodegradation of oil. The ideal pH range to promote biodegradation is close to neutral (6-8). For most species, the optimal pH is slightly alkaline, that is, greater than 7.

All biological transformations are affected by temperature. Generally, as the temperature increases, biological activity tends to increase up to a temperature where enzyme denaturation occurs.

Atmospheric fate: Alkanes, isoalkanes, and cycloalkanes have half-lives on the order of 1-10 days, whereas alkenes, cycloalkenes, and substituted benzenes have half-lives of 1 day or less. Photochemical oxidation products include aldehydes, hydroxy compounds, nitro compounds, and peroxyacyl nitrates. Alkenes, certain substituted aromatics, and naphthalene are potentially susceptible to direct photolysis.

Ecotoxicity:

Based on test results, as well as theoretical considerations, the potential for bioaccumulation may be high. Toxic effects are often observed in species such as blue mussel, daphnia, freshwater green algae, marine copepods and amphipods.

The values of log Kow for individual hydrocarbons increase with increasing carbon number within homologous series of generic types. Quantitative structure activity relationships (QSAR), relating log Kow values of single hydrocarbons to toxicity, show that water solubility decreases more rapidly with increasing Kow than does the concentration causing effects. This relationship varies somewhat with species of hydrocarbon, but it follows that there is a log Kow limit for hydrocarbons, above which, they will not exhibit acute toxicity; this limit is at a log Kow value of about 4 to 5. It has been confirmed experimentally that for fish and invertebrates, paraffinic hydrocarbons with a carbon number of 10 or higher (log Kow >5) show no acute toxicity and that alkylbenzenes with a carbon number of 14 or greater (log Kow >5) similarly show no acute toxicity. QSAR equations for chronic toxicity also suggest that there should be a point where hydrocarbons with high log Kow values become so insoluble in water that they will not cause chronic toxicity, that is, that there is also a solubility cut-off for chronic toxicity. Thus, paraffinic hydrocarbons with carbon numbers of greater than 14 (log Kow >7.3) should show no measurable chronic toxicity.

» Drinking Water Standards: hydrocarbon total: 10 ug/l (UK max.).

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## Section 13 - DISPOSAL CONSIDERATIONS

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- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- DO NOT incinerate or puncture aerosol cans.
- Bury residues and emptied aerosol cans at an approved site.

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## Section 14 - TRANSPORTATION INFORMATION



Labels Required: NON-FLAMMABLE COMPRESSED GAS

HAZCHEM: (1) Not applicable to the carriage of dangerous goods under RID or ADR

Land Transport UNDG:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None
Shipping Name:	AEROSOLS		

Air Transport IATA:

ICAO/IATA Class:	2.2	ICAO/IATA Subrisk:	None
UN/ID Number:	1950	Packing Group:	None
Special provisions:	A98 A145 A153		
Shipping Name:	AEROSOLS, NON-FLAMMABLE		

Maritime Transport IMDG:

IMDG Class:	2.2	IMDG Subrisk:	SP63
UN Number:	1950	Packing Group:	None
EMS Number:	F- D, S- U	Special provisions:	63 190 277 327 959
Limited Quantities:	See SP277		
Shipping Name:	AEROSOLS		

## Section 15 - REGULATORY INFORMATION

### REGULATIONS

Marine Formula FW1 Wax (CAS: None):  
No regulations applicable

Regulations for ingredients

isoparaffins petroleum hydrotreated HFP (CAS: 64742-47-8) is found on the following regulatory lists;  
International Council of Chemical Associations (ICCA) - High Production Volume List  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Pesticides  
New Zealand Inventory of Chemicals (NZIoC)  
New Zealand Workplace Exposure Standards (WES)  
OECD Representative List of High Production Volume (HPV) Chemicals

heptane (CAS: 142-82-5) is found on the following regulatory lists;  
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships  
IMO IBC Code Chapter 17: Summary of minimum requirements  
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances  
IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO  
International Council of Chemical Associations (ICCA) - High Production Volume List  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Pesticides  
New Zealand Inventory of Chemicals (NZIoC)  
New Zealand Workplace Exposure Standards (WES)  
OECD Representative List of High Production Volume (HPV) Chemicals  
heptane (CAS: 31394-54-4) is found on the following regulatory lists;  
New Zealand Inventory of Chemicals (NZIoC)

hydrocarbon propellant (CAS: 68476-85-7) is found on the following regulatory lists;

continued...

# MARINE FORMULA FW1 WAX

## Chemwatch Material Safety Data Sheet

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Section 15 - REGULATORY INFORMATION

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods  
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

OECD Representative List of High Production Volume (HPV) Chemicals

hydrocarbon propellant (CAS: 68476-86-8) is found on the following regulatory lists;

New Zealand Inventory of Chemicals (NZIoC)

OECD Representative List of High Production Volume (HPV) Chemicals

water (CAS: 7732-18-5) is found on the following regulatory lists;

GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships

IMO IBC Code Chapter 18: List of products to which the Code does not apply

New Zealand Inventory of Chemicals (NZIoC)

OECD Representative List of High Production Volume (HPV) Chemicals

Specific advice on controls required for materials used in New Zealand can be found at  
<http://www.ermanz.govt.nz/search/register.html>

## Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE

0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

### INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
heptane	142- 82- 5, 31394- 54- 4
hydrocarbon propellant	68476- 85- 7, 68476- 86- 8

» Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references).

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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