

Commercial Compliance Handbook



Environmental Responsibility

Contains Allied Petroleum Customer Information and
Material Safety Data Sheets (MSDS) 2014

Allied Petroleum Commercial Compliance Handbook

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Introduction

Under the Hazardous Substances and New Organisms (HSNO) Act 1996 you have legal obligations in relation to the handling and storage of fuel. In addition, you are also required to provide a safe place of work under the Health and Safety in Employment Act 1992.

The purpose of this handbook is to assist you in complying with HSNO Regulations and managing the hazards associated with fuel storage.

This handbook, whilst providing best practise, is not endorsed as a means of compliance with HSNO Regulations or the Resource Management Act.

Allied Petroleum reserves the right to change any portion of this handbook without further notice.

SECTION 1 – RISKS

1. Health Risks

Diesel is known to cause skin dryness or cracking through repeated exposure. It may cause irritation to the eyes, nose and throat through inhaling diesel vapours, mists and fumes.

It is a possible cancer hazard, particularly when linked to high levels of exposure.

Advice on how to treat exposure to diesel can be obtained from the Material Safety Data Sheet in Appendix E.

Petrol contains aromatic hydrocarbons. Some of these substances are the same chemicals found in glues and solvents and inhaling petrol vapours should be avoided.

The short-term effects from inhaling petrol vapours are dizziness, nausea, headache and vomiting. Anyone suffering from the effects of petrol vapours should remove themselves from the area and avoid activities such as driving vehicles and operating machinery.

Do not use petrol to remove grease, paint or glue from your hands and otherwise avoid absorption of petrol through the skin. If skin contact occurs, wash with soap and water.

Advice on how to treat exposure to diesel can be obtained from the Material Safety Data Sheet in Appendix F.

2. Environmental Risks

Contamination of the soil or waterways as a result of leaks or spills from fuel storage is subject to the enforcement provisions of the Resource Management Act. A discharge can result in prosecution, incurring fines and costs for cleaning up the spill or leak. These costs may be far in excess of the value of any lost fuel.

You should be careful to ensure that your fuel tanks are both used and maintained so that no ground or waterway contamination occurs.

SECTION 2 – EMERGENCY

1. General Safety Information

- Never smoke when refuelling a vehicle.
- Never climb or try to stand on top of the tank – it is a slip hazard.
- Do not use a mobile phone when refuelling the tank.
- Turn off vehicles when refuelling.
- Do not let children play on or around the tank.

2. Fire

In the case of a fire involving fuel, the prime concern is the safety of any people near the emergency.



The immediate remedial action is to evacuate people from the immediate area, if *safe* to do so

Then:

- Raise the alarm by calling 111 and asking for the Fire Service
- Fight the fire *only* if you consider it safe to do so and as a last resort

3. Spill

In the case of a spill or leak of diesel fuel, the prime concern is the safety of any persons and the preservation of the environment near the emergency.



The immediate remedial action is to stop the spill or leak at the source, if *safe* to do so

Then:

- Stop the product escaping to drains or waterways
- Clean it up if safe to do so
- In the event of a spill that exhibits significant imminent danger to people and/or the environment, call ECL Group Helpdesk directly on 0800 830 831 then,
- Contact the appropriate Regional Pollution Hotline then,
- Contact Allied Petroleum on 0800 383 566

4. 24 Hour Regional Emergency Pollution Hotline

Note the hotline that is appropriate for your region.

Region	Local Number	Toll Free Number
Northland		0800 504 639
Auckland	09 377 3107	
Waikato		0800 800 401
Bay of Plenty		0800 884 883
Gisborne	06 867 2049	0800 653 800
Hawkes Bay	06 835 9200	0800 108 838
Region	Local Number	Toll Free Number
Taranaki		0800 736 222
Manawatu- Wanganui	06 765 7127	0508 800 800
Wellington		0800 496 734
Tasman	03 543 8400	
Nelson	03 546 0200	
Marlborough	03 520 7400	
West Coast		0508 800 118
Canterbury	03 366 4663	0800 765 588
Otago		0800 800 033
Southland	03 211 5225	0800 768 845

With a petrol spill, special care should be taken to avoid any action that could cause ignition of the petrol vapours. This includes not using communication equipment within 15 metres of the petrol spill.

In the case of a fire, raise the alarm, call 111, ask for Fire Service

- Ensure all people in the area are safe
- Do not put yourself at risk
- Fight the fire only if you consider it safe to do so and as a last resort

5. Emergency Response Plans

Where more than 2000 litres of petrol and/or diesel are stored, then you must provide an Emergency Response Plan.

The Emergency Response Plan is a document that contains the information required to respond to an emergency involving petrol and/or diesel.

An Emergency Response Plan must:

- Describe all of the reasonable likely emergencies involving the fuel storage facility
- Describe the actions to be taken in each of the likely emergencies
- Identify the people with responsibilities for response in each identified emergency and the skills that they are required to have
- Describe where to find the information and equipment required to respond to each identified emergency
- How to contact the emergency services

The Emergency Response Plan should be tested every 12 months and a written record kept for at least two years.

For help with your Emergency Response Plan contact **Allied Petroleum** and we can supply you with a template.

Material Safety Data Sheets (MSDS) will be provided by Allied Petroleum for each of the fuels supplied and these should be kept within 10 minutes of the fuel storage area. If you need a new copy of a MSDS, refer to Appendixes E and F or contact Allied Petroleum and we can e-mail or post a replacement copy.

The MSDS and Emergency Response Plan should be stored together.

SECTION 3 – HSNO REQUIREMENTS

The Hazardous Substances and New Organisms (HSNO) Regulations have certain requirements from both the person in charge and the supplier.

These include:

- Supply information
- Fire extinguishers
- Emergency Response Plans
- Signage
- Secondary containment

1. HSNO Controls for Diesel Storage

Amount of Diesel stored (litres)	Fuel Supplier must supply Documentation	Documentation (Person in charge)	Fire Extinguishers (number)	Signage	Emergency Response Plans	Secondary Containment	Stationary Container System Test Certificate
1	Yes	Yes					
100	Yes	Yes					
200	Yes	Yes					
250	Yes	Yes					
500	Yes	Yes	2				
1000	Yes	Yes	2				
2000	Yes	Yes	2				
5000	Yes	Yes	2				
10000+	Yes	Yes	2	Yes	Yes	Yes	Yes

2. HSNO Controls for Petrol Storage

Amount of Petrol stored (litres)	Fuel Supplier must supply Documentation	Documentation (Person in charge)	Training / Approved Handler requirements	Fire Extinguishers (number)	Signage	Emergency Response Plans	Secondary Containment	Location Test Certificate	Stationary Container System Test Certificate
1	Yes	Yes	Yes						
100	Yes	Yes	Yes	1	Yes	Yes	Yes	Yes	
200	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	
250	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	
500	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	
1000	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	
2500	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	Yes
5000+	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	Yes

3. Separation of Flammable Liquids

The storage and handling of fuels has hazards due to their flammable nature. The risks associated with these hazards are managed through the use of separation distances.

The rules state that an above ground stationary tank that contains a class 3.1 hazardous substance must be separated from:

1. An area of **high intensity land use** by not less than the distance specified in the table below
2. An area of **low intensity land use** by not less than the distance specified in the table below

Areas of **high intensity land use** include areas of **regular habitation**, structures made of (or containing) combustible materials that would sustain a significant fire and high density traffic routes.

Examples include wooden buildings, packing sheds, cool storage facilities, hay sheds, other petrochemical storage and agricultural stores.

Areas of **regular habitation** are buildings used for accommodation (i.e. include cooking, sleeping and ablution facilities) as well as areas where people regularly meet.

Examples include homes, staff accommodation, child care facilities, 'smoko' rooms and 'sleep outs'.

Areas of **low intensity land use** include areas where people may be legally present occasionally, public parks, reserves and low or medium density traffic routes. Areas of low intensity land use do not include areas of regular habitation.

Tank Capacity (litres)	Area of high intensity land use (metres)		Area of low intensity land use (metres)
	Class 3.1 A-C	Class 3.1 D	Class 3.1 A-C
Up to 600	2	0	0
1,000	2	1.5	0
2,500	3	2	0
5,000	4	3	2
25,000	5	4	3
50,000	6	5	4
100,000	7	6	4
250,000	8	7	4.5
500,000	10	8	5

4. Documentation

Under the Hazardous Substances (Emergency Management) Regulations 2001 you are required to ensure that documentation providing the following information is available to any person who may handle the fuel:

- Product information
- Symptoms of exposure
- Emergency management actions

The Material Safety Data Sheet (MSDS) supplied by Allied Petroleum for petrol and/or diesel will provide this information and these should be kept within 10 minutes of where the fuel is stored.

If you need a new copy of a MSDS, refer to Appendixes E and F or contact Allied Petroleum and we can e-mail or post a replacement copy.

The MSDS and Emergency Response Plan should be stored together.

5. Fire Extinguishers

It is the responsibility of the **person in charge** to ensure that fire extinguishers are present and that they are annually checked.

You will need **one** fire extinguisher if you have between 50 and 200 litres of petrol.

You will need **two** fire extinguishers if you have more than 500 litres of diesel and/or more than 200 litres of petrol.

The HSNO Act requires you to use at least 2kg dry powder or 9kg foam fire extinguishers **with a rating of 30B**. We recommend the dry powder models as they are multipurpose.

The fire extinguishers should be located within *30 metres* of where the fuel is stored, but should not be attached to the fuel tank. Keep in mind that this is the minimum number and size of fire extinguishers required by legislation and may be insufficient for your quantity of fuel stored.

6. Secondary Containment

Secondary containment is a system that contains fuel spills and protects your property and the environment. The containment must be capable of holding 110% of the capacity of the largest tank in the containment.

Secondary containment can be either a bund or a double skinned tank. It must be constructed of non-flammable material and effectively retain the fuel if there is a spill.

- If your tank was installed **before 2004**, secondary containment is required for diesel tanks over 2,500 litres and petrol tanks over 2000 litres.
- For all tanks installed **after 2004**, secondary containment is required for petrol and diesel tanks over 2000 litres.
- Where the total amount of fuel stored is less than 2000 litres, the storage must be located so that a spill will not be an environmental risk.

On bunds, the bung may be removed to drain water from the containment area, but ensure that the bung is replaced and **kept in place at all times** and that the bund is free of all rubbish.

If the bund contains oil or an oil/water mixture, contact Environmental Recovery Services on 0800 835 645 or your local waste oil specialist to have it removed. Do not release this mixture from the containment area into the environment.

7. Spills and Leaks

Spills and leaks are costing you **money** and damaging your property and the environment!!

Stock Reconciliations

It is your responsibility to record **weekly stock reconciliations**. These records should be kept for at least two years and be able to be presented to a Council Representative if required. These records will also help detect spills, leaks and theft.

Stock Reconciliation sheets are included in Appendix D of this compliance handbook. If you require additional copies, contact Allied Petroleum and we can e-mail or post out more sheets. If you require help with your stock reconciliations contact Allied Petroleum on 0800 383 566.

What Does Your Insurance Policy Cover?

Check your insurance policy for details on fuel spills, fires and compliance. It is possible that in the event of a fuel incident that your insurance company may check your fuel storage compliance and may refuse to pay out if you are found to be non-compliant.

8. Spill Kits

Basic spill kits may assist containment and clean-up of spills from a fuel tank and should be essential for any fuel storage area.

There are many types of spill kits available for purchase, or you can create one yourself that may contain sand or another type of absorbing material to soak up a spill before it endangers the environment.

If you are putting together a spill kit, contact Allied Petroleum on 0800 383 566 to find out the essentials.

9. Training and Approved Handlers

You need to ensure that anyone who is required to use the fuel storage system on your site has been properly trained in:

- How to use the fuel storage facility safely
- What the potential hazards are when using the fuel storage system
- The precautions needed to be taken and the correct Personal Protective Equipment (PPE) to used when operating the fuel storage system
- What to do in the case of emergency

You also need to ensure that where petrol is stored in any quantity an Approved Handler is available to provide assistance, if necessary, while petrol is being handled. The Approved Handler may be the person handling the petrol, someone available on the site, or someone contactable by phone.

An Approved Handler is not required for diesel.

An Approved Handler is a person who has been certified as having met the requirements of Regulation 5 of the HSNO (Personal Qualifications) Regulation 2001 for experience and training in handling petrol.

Allied Petroleum Delivery Drivers and Territory Managers are Approved Handlers.

10. Site Signage

Signs notify employees, emergency services and other people of the presence of hazardous substances at your site.

When your Allied Petroleum tank is installed, it will be provided with the required signage. It is your responsibility to ensure that the signage remains on the tank and to let us know if it requires replacing.

Signage is required when:

- More than 50 litres of petrol is stored
- More than 10,000 litres of diesel is stored

The signs must display:

- That the contents are hazardous and the nature of them.
- Describe the precautions needed to safely manage and avoid ignition.
- Identify who to call in an emergency.
- Provide sufficient information and be of at least A3 size

Example tank labels are shown in Appendix A for diesel fuel and Appendix B for petrol. Where the tank contains low flashpoint diesel, the characters 3[Y] must be replaced by 3[YE].

11. Location Test Certificates

A location Test Certificate verifies that hazardous substances are stored away from other structures, combustible materials, dwellings and ignition sources. They are issued by Test Certifiers.

Storage of diesel does not require a Location Test Certificate.

A Location Test Certificate will be required for petrol if:

- The quantity exceeds 100 litres; or
- Storage is below ground

12. Stationary Container System Test Certificates

A Stationary Container System Test Certificate verifies that a stationary container system (tank) meets the legal requirements specified in Schedule 8 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004 (as amended). The certification is done by a Test Certifier.

Above ground storage of diesel in tanks greater than 5000 litres will require a Stationary Container System Test Certificate.

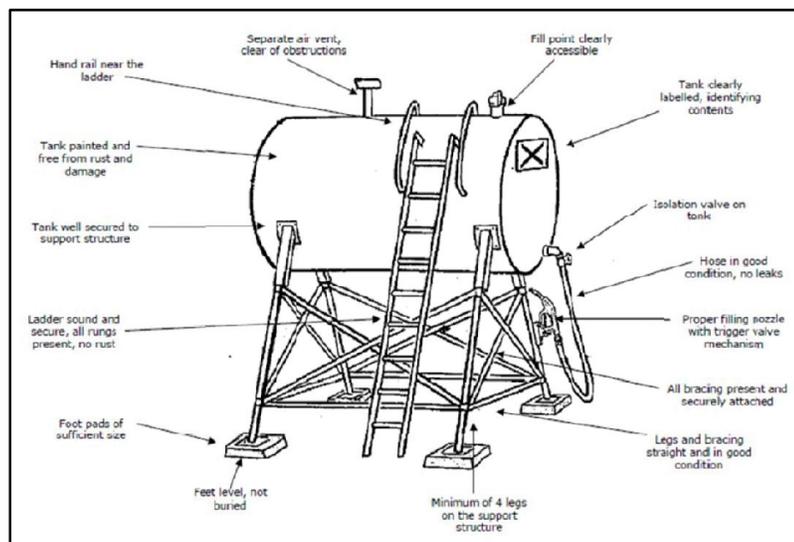
Above ground storage of petrol in tanks greater than 2500 litres will require a Stationary Container System Test Certificate.

Allied Petroleum can provide you with a list of Test Certifiers in your area if required.

SECTION 4 – HAZARDS

When tanks are mounted on stands in order to make use of gravity feed to fuel vehicles and machines, hazards are created that require managing. The hazards associated with above ground tanks are:

- Tank supporting structure
- Tank support foundation
- Ladders
- The storage tank
- Corrosion of fuel tanks
- Tank ventilation
- Fittings, pumps and hoses



1. Tank Supporting Structure

The stand is a very important part of the setup of your tank and is holding up a lot of valuable fuel. You don't want it to fall over!

Wear and tear can substantially reduce the structural integrity of the tank stand over time. The legs on the support stand should be straight – no bending or buckling of the legs should be allowed.

Don't wait for our Driver to arrive and say it's not safe to fill – report any damage to your Territory Manager so that it can be repaired

Note that tanks with **Tripod Support Structures** do not comply with approved HSNO design requirements.

2. Tank Support Foundations

All tanks must be installed on foundations that will prevent subsidence. This is best achieved by mounting the tank legs on a concrete pad, concrete footings or compacted ground that is well drained and won't become boggy when wet.

It is important that the feet of the support structure are attached to the foundation or the ground so that the structure will not tip when being climbed. This can be achieved by anchor bolts in concrete or by tying to posts or waratahs on compacted ground.

3. Ladders

Access to overhead tanks is usually through the use of a ladder, either attached to the structure or free-standing. Because of a number of accidents involving fuel drivers falling from free-standing ladders when filling tanks, it is preferable to use fixed ladders.

Newly commissioned overhead fuel tanks will have fixed ladders attached to the structure.

If a freestanding (portable) ladder is to be used, it must be free from any obstructions and set on a stable footing

4. The Storage Tank

The tank must be of sound construction. This means:

- There is no serious corrosion that could affect the tank's integrity.
- There are no major dents or cracks.
- The attachment between the legs and the tank must be solid and not corroded.

If the tank is structurally damaged or compromised, contact your Allied Petroleum Territory Manager.

5. Corrosion of Fuel Tanks

Rust can have a major impact on the soundness of a fuel tank.

Areas at risk of rust damage are:

- On top of the tank.
- On the underside of the tank.
- Around the fill point and the drain plug.
- On the welded seams.
- At the joints between the tank and the support structure.

Rust present on the tank could also be surface rust that has no impact on the tanks structural integrity. If you are concerned about rust on your tank, contact your Territory Manager.

6. Tank Ventilation

Adequate ventilation of the tank is required to prevent splash back during tank filling and to prevent unsafe pressure developing in the tank.

The ventilation pipe must be free from obstructions and have a minimum diameter of 25mm.

The ventilation pipe must be fitted with gauze. For petrol tanks this should be of 500 micron brass wire to act as a flame arrestor in case of flashback. Diesel gauze can be coarser as the main purpose is to prevent material entering the vent.

7. Fittings, Pumps and Hoses

- The tank hose should be of a suitable material for the fuel being stored and be free of any perishing.
- There should be an isolation valve on the tank outlet before the dispensing hose to ensure there is a means to isolate the tank contents should the dispensing hose or nozzle develop a leak.
- The hose should be fitted with a proper fitting nozzle with a trigger valve mechanism.
- All fittings, pumps, valves and hoses should be free from any leaks.

Under the Resource Management Act 1991, it is illegal to discharge unauthorised contaminants to land and water. This includes allowing leaks from fuel storage tanks.

If there are any leaks, contact your Territory Manager to arrange to have these repaired.

SECTION 5 – ACCESS

Delivering fuel when you need it is something we're serious about and we have summed it up in three words: Never Run Out. We require your help to make sure our large fuel tankers have safe and clear access to your fuel storage. There are four aspects to safe access for fuel delivery

1. Access to the Site from a Public Road

The delivery tanker should be able to safely enter your property off a public road.

2. Access to the Fuel Tank Site via the Site Road

The access track should be constructed so that it can be used in all weathers.

The access track for the delivery tanker should be in a state of good repair with all overhanging trees trimmed back to avoid damage to the truck. Care should be taken with any overhead power lines.

Any culverts or bridges on the access track should be able to take the weight of a fully laden fuel delivery tanker. Note that you have duty to provide safe access to your property which includes ensuring that bridges, culverts etc. can be safely negotiated by fuel tankers. If there is any doubt to the safety of the access to the fuel storage site, Allied Petroleum reserves the right to refuse to deliver fuel to the site.

Consideration should also be given to turnarounds so that the delivery tanker does not have to reverse to the fuel site, thus minimising the necessity for difficult or dangerous reversing and manoeuvring.

3. Access between the Delivery Tanker and the Fuel Tank

The area between the delivery tanker and the filling point on the fuel tank should be clear of all rubbish, obstacles, machinery, junk etc. so that the driver can safely move between the truck and the ladder to the fill point.

4. Access to the Fuel Tank Fill Point

The tank delivery fill point should be clear of anything that prevents the nozzle hose being totally inserted.

SECTION 6 – EQUIPMENT LOAN AGREEMENT

1. Your Responsibilities

Any equipment supplied by Allied Petroleum remains the property of Allied Petroleum Limited and you have a number of responsibilities including the expectation that you look after and maintain it to the best of your ability.

This is only a summary of the equipment loan agreement and for full details you must refer to the original signed document.

Under the terms of your agreement with Allied Petroleum, your responsibilities are:

1. The equipment, as set out in the schedule with the original equipment loan agreement shall only be used for the purpose of receiving, storing, transporting and dispensing Mobil Synergy Diesel purchased from Allied Petroleum in connection with the agreement to supply Allied Petroleum products.
2. All signage on the equipment must be kept visible and legible. You may not affix any other signage to the trailer tank unless by written agreement with Allied Petroleum.
3. The equipment is supplied fully compliant and in good condition. You shall take all reasonable steps to secure and protect the equipment from damage. It is your responsibility to carry out repairs and maintenance, which should be done in an appropriate timeframe. Repairs that may be required due to equipment failure should be arranged in consultation with Allied Petroleum.
4. You shall comply with all statutes, regulations, by-laws and other lawful requirements relating to the use of the equipment. You must not use this equipment until you have read and understood the information contained in this handbook. You acknowledge your responsibility and agree to store fuel in accordance with the HSNO Act and other relevant legislation.
5. You shall be responsible for any product loss and damage caused by, or resulting from the use of the equipment.
6. The ownership of the equipment shall remain with Allied Petroleum at all times.
7. You are responsible for infringements occurred through failure to adhere to the above conditions.
8. On termination of the Equipment Loan Agreement, the equipment shall be returned to Allied Petroleum in the same condition as it was delivered, subject to fair wear and tear.

2. Contact Details

For replacement signage, questions or to order fuel, parts and lubricants, contact:

Allied Petroleum

14 McAlpine Street
Wigram
Christchurch 8042

PO Box 31201
Christchurch 8444

Phone 0800 383 566
Fax 0800 438 355

APPENDIX A – TANK LABEL FOR DIESEL

 <p>ECOTOXIC TO AQUATIC LIFE</p>  <p>FLAMMABLE LIQUID</p>	HAZCHEM
	3[Y] <small>UN No.</small> 1202
	DIESEL
	PROTECT WATERWAYS, ENSURE DRAINS ARE CLOSED
	KEEP AWAY FROM IGNITION SOURCES-NO SMOKING NO NAKED FLAMES
IN EMERGENCY DIAL 111 FIRE, POLICE OR AMBULANCE 24 HR COMPANY CONTACT DIAL _____ REGIONAL COUNCIL POLLUTION RESPONSE SERVICE DIAL _____	

APPENDIX B – TANK LABEL FOR PETROL

	<h1>HAZCHEM</h1>
<p>ECOTOXIC TO AQUATIC LIFE</p>	<h1>3[YE] ^{UN No.} 1203</h1>
	<h1>PETROL</h1>
<p>FLAMMABLE LIQUID</p>	<p>PROTECT WATERWAYS, ENSURE DRAINS ARE CLOSED</p>
	<p>KEEP AWAY FROM IGNITION SOURCES-NO SMOKING NO NAKED FLAMES</p>
	<p>IN EMERGENCY DIAL 111 FIRE, POLICE OR AMBULANCE 24 HR COMPANY CONTACT</p> <p>DIAL _____</p> <p>REGIONAL COUNCIL POLLUTION RESPONSE SERVICE</p> <p>DIAL _____</p>

APPENDIX C – CHECKLIST FOR SAFE FUEL STORAGE

Issue	Yes	No	N/A ¹	Actions
Location of Flammable Liquids				
Are ignition sources a safe distance away from fuel storage? (over 15 metres for petrol; over 6 metres for diesel)				
Are the petrol tank separation distances correct?				
Are the diesel tank separation distances correct?				
Emergency Response Plans				
If over 100 litres of petrol is stored, is an Emergency Response Plan available?				
If over 5,000 litres of diesel is stored, is an Emergency Response Plan available?				
Has the Emergency Response Plan been tested in the last 12 months?				
Documentation				
Is a Material Safety Data Sheet for petrol and/or diesel available on site? (MSDS should be available within 10 minutes of where the fuel is stored)				
Do all of the employees involved in handling fuel know where the Material Safety Data Sheets are kept?				
Fire Extinguishers				
Are fire extinguishers in place for the following amounts of fuel?				
Petrol: <ul style="list-style-type: none"> • Less than 50 litres = no extinguisher required • Between 50 litres and less than 200 litres = at least one extinguisher • Over 200 litres = two extinguishers 				
Diesel: <ul style="list-style-type: none"> • Less than 500 litres = no extinguisher required • Over 500 litres = two extinguishers required 				
Are the fire extinguishers located within 30 metres of where the fuel is stored?				
Secondary Containment				
Is the fuel located in an area where any spill will not endanger any building, or flow into any stream, lake or natural water?				
If more than 2,000 litres of petrol or diesel is stored, is the storage facility compounded so that it can contain spills?				
Does the compound include a method of draining water?				
Does the compound get regularly cleared of leaves and other debris?				

¹ N/A – Not Applicable

Training and Approved Handlers

Have employees involved in the handling and storage of fuels received training in the safe handling of the fuels?
(Training should include hazards associated with the fuels, safe use and handling and emergency procedures)

If petrol is stored, is an Approved Handler available?

Signage and Labelling

If over 50 litres of petrol and over 5,000 litres of diesel is stored, is signage for the site available?

Is the fuel storage tank labelled clearly with its contents?

Location Test Certificates

If over 50 litres of petrol is stored in an above-ground tank, is a current Location Test Certificate available?
(Location Test Certificates must be reviewed annually)

Stationary Container System (Tank) Test Certificates

If the petrol tank is larger than 2,500 litres, is a Stationary Container System Test Certificate available?

If the diesel tank is larger than 10,000 litres, is a Stationary Container System Test Certificate available?

Tank Ventilation

Is the vent pipe at least half the size of the filling pipe (and no smaller than 25mm diameter)?

Is gauze of the appropriate size fitted over the vent for petrol tanks?

Tank Fill Pipe

(Where verifiable) Does the petrol storage tank fill pipe extend from the fill point to at least 25mm below the lowest level of the liquid in the tank?

Tank Structural Safety

Is the tank supporting structure sound and stable?
(Consider corrosion, buckling or bent legs/bracing. Tripod stands should not be used)

Is the tank support on a solid, level foundation? (Consider stability when a ladder to access the fuel tank is used)

Are ladders in sound condition and secure? (consider corroded, bent or damaged rungs)

Is the storage tank of sound construction? (consider corrosion, leaks and seals)

Are fittings, pumps and hoses free of leaks and undamaged?

Access to Fuel Storage Facility for Drivers

Can the delivery tanker safely access the property off a public road?				
Can the delivery tanker safely access the fuel site from a site road?				
Is the fuel site clear of obstacles, allowing the driver unimpeded access to the tank and access ladder?				
Is the tank fill point clear of debris or obstructions?				

APPENDIX E – DIESEL MATERIAL SAFETY DATA SHEET

Revision Date: 29 Oct 2014

SECTION 1 PRODUCT AND COMPANY INFORMATION

As of the revision date above, this (M)SDS meets the regulations in New Zealand.

PRODUCT

Product Name: DIESEL FUEL
Product Description: Hydrocarbons and Additives
Product Code: 166009-86, 169938-86, 176156-86
Intended Use: Diesel engine fuel

Trade Names	Trade Names
B10 DIESEL	B20 DIESEL
B5 DIESEL	B5 SYNERGY DIESEL
DIESEL	MARINE GAS OIL
SYNERGY DIESEL	

COMPANY IDENTIFICATION

Supplier: Mobil Oil New Zealand Limited
 c/o Russell McVeagh
 Vero Centre
 48 Shortland Street
 Auckland 1140 New Zealand

National Poison Control Centre +64 3 479 7248/ Freephone 0800 764 766
General Contact Number +64 4 568 0400

SECTION 2 HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION: HAZARDOUS SUBSTANCE. DANGEROUS GOOD.

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

3.1D
 6.3B 6.7B 6.1E
 9.1B

Flammable liquid: Category 4.
 Skin irritation: Category 3. Carcinogen: Category 2. Aspiration toxicant: Category 1.
 Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.

LABEL:

Symbol:



Signal Word: Danger

Hazard Statements:

Physical: H227: Combustible liquid.

Health: H304: May be fatal if swallowed and enters airways. H316: Causes mild skin irritation. H351: Suspected of causing cancer.

Environmental: H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements:

General: P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use.

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from flames and hot surfaces. -- No smoking. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P308 + P313: IF exposed or concerned: Get medical advice/ attention. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/ attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish P391: Collect spillage.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: FUELS, DIESEL

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Harmful by inhalation. Danger of adverse health effects by prolonged exposure. Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression.

ENVIRONMENTAL HAZARDS

No additional hazards.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
FATTY ACIDS, RAPE-OIL, ME ESTERS	85586-25-0	0 – 20%	H304
FATTY ACIDS, TALLOW, ME ESTERS	61788-61-2	0 – 20%	H304
FUELS, DIESEL	68334-30-5	80 -> 99%	H227, H304, H332, H351, H315, H373, H401, H411
USED COOKING OIL METHYL ESTERS	25550	0 – 20%	H304

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous.

NOTE: Composition may contain up to 0.5% performance additives and / or dyes.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE

Contains hydrocarbon solvent/petroleum hydrocarbons; skin contact may aggravate an existing dermatitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulphur oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >61°C (142°F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0

Autoignition Temperature: N/D

Hazchem Code: 3Z

SECTION 6 ACCIDENTAL RELEASE MEASURES**NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H₂S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid all personal contact. Do not siphon by mouth. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices etc) in or around any fuelling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Keep away from incompatible materials. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source	Year
FUELS, DIESEL	Stable Aerosol	TWA	5 mg/m ³			ExxonMobil	2014
FUELS, DIESEL	Vapour	TWA	200 mg/m ³			ExxonMobil	2014
FUELS, DIESEL [as total hydrocarbon vapour]	Inhalable fraction and vapour	TWA	100 mg/m ³		Skin	ACGIH	2014

Biological limits

No biological limits allocated.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation. Organic vapour

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Nitrile, Viton

Eye Protection: If contact with material is likely, chemical goggles are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:
Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Colour: Yellow
Odour: Petroleum/Solvent
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.82 - 0.86
Flash Point [Method]: >61°C (142°F) [ASTM D-93]
Flammability (Solid, Gas): N/A
Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0
Explosive Properties: N/D
Autoignition Temperature: N/D
Boiling Point / Range: > 149°C (300°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): > 2 at 101 kPa
Vapour Pressure: 0.067 kPa (0.5 mm Hg) at 20 °C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: <4.5 cSt (4.5 mm²/sec) at 40°C
Molecular Weight: N/D
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: < 12°C (54°F)

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Open flames and high energy ignition sources.

MATERIALS TO AVOID: Halogens, Strong Acids, Strong Bases, Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION**ACUTE TOXICITY**

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 4 100 mg/m3	Moderately toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
Ingestion	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.

Skin	
Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Irritating to the skin. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

For the product itself:

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Diesel fuel: Carcinogenic in animal tests. Caused mutations in-vitro. Repeated dermal exposures to high concentrations in test animals resulted in reduced litter size and litter weight, and increased fetal resorptions at maternally toxic doses. Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality. Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation, and reduction in lung function. Diesel exhaust fumes: Carcinogenic in animal tests. Inhalation exposures to exhaust for 2 years in test animals resulted in lung tumours and lymphoma. Extract of particulate produced skin tumours in test animals. Caused mutations in-vitro.

Additional information is available by request.

IARC Classification:

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

High molecular wt. component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be inherently biodegradable

Atmospheric Oxidation:

More volatile component -- Expected to degrade rapidly in air

BIOACCUMULATION POTENTIAL

Material -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

ECOLOGICAL DATA**Ecotoxicity**

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	96 hour(s)	Fish	LL50 1 - 100 mg/l: data for similar materials
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EL50 1 - 1000 mg/l: data for similar materials
Aquatic - Chronic Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 1 - 10 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EL50 1 - 100 mg/l: data for similar materials

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Water	Ready Biodegradability	28 day(s)	Percent Degraded < 60 : similar material

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION**LAND**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Fuels, diesel)

Hazard Class: 9

Hazchem Code: 3Z

UN Number: 3082

Packing Group: III

Label(s) / Mark(s): 9, EHS

SEA (IMDG)

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Fuels, diesel)
Hazard Class & Division: 9
EMS Number: F-A, S-F
UN Number: 3082
Packing Group: III
Marine Pollutant: Yes
Label(s): 9
Transport Document Name: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Fuels, diesel), 9, PG III, MARINE POLLUTANT

AIR (IATA)

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Fuels, diesel)
Hazard Class & Division: 9
UN Number: 3082
Packing Group: III
Label(s) / Mark(s): 9, EHS
Transport Document Name: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Fuels, diesel), 9, PG III

SECTION 15 REGULATORY INFORMATION

This material has been classified according to the Environmental Risk Management Authority (ERMA) under ERMA Approval Code: HSR001441

Product is regulated according to New Zealand Land Transport Rule.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Complies with the following national/regional chemical inventory requirements:
 PICCS, TSCA, AICS, EINECS

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H227: Combustible liquid; Flammable Liquid, Cat 4
 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1
 H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
 H332: Harmful if inhaled; Acute Tox Inh, Cat 4
 H351: Suspected of causing cancer; GHS Carcinogenicity, Cat 2
 H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2
 H401: Toxic to aquatic life; Acute Env Tox, Cat 2
 H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:
 Section 06: Protective Measures information was modified.
 Section 12: Environmental fate table in section 12 information was modified.
 Section 09: Boiling Point °C(°F) information was modified.
 Section 09: Pour Point °C(°F) information was modified.
 Section 16: Not determined, Not applicable information was modified.
 Section 09: Vapour Pressure information was modified.
 Section 01: Company Mailing Address information was modified.

Section 11: Inhalation Irritation Test Data information was modified.
Section 05: Hazardous Combustion Products information was modified.
Section 09: Relative Density - Header information was modified.
Section 09: Flash Point °C(°F) information was modified.
Section 09: Viscosity information was modified.
Section 15: EU Inventory Requirements - Header information was modified.
Section 14: Proper Shipping Name information was modified.
Section 14: Proper Shipping Name information was modified.
Section 14: Transport Document Name information was modified.
Section 14: Proper Shipping Name information was modified.
Section 14: Transport Document Name information was modified.
Section 15: National Chemical Inventory Listing information was modified.
Section 11: Additional Health Information information was modified.
Section 16: MSN, MAT ID information was modified.
Section 08: Exposure Limits Table information was modified.
Section 01: Company Contact Methods information was modified.
Section 12: Environmental tox table in section 12 information was modified.
Composition: Component Table information was modified.
Section 16: HCode Key information was modified.
GHS Health Hazards information was modified.
GHS Precautionary Statements - Disposal information was modified.
GHS Precautionary Statements - Prevention information was modified.
GHS Precautionary Statements - Response information was modified.
GHS Precautionary Statements - Storage information was modified.
Section 01: Alternate Product Names Table information was added.
Section 01: Alternate Product Name Header information was added.
Section 08: Biological Limits - Header information was added.
Section 08: Biological Limits - Allocation information was added.
Section 16: EU Materials Covered- Header information was deleted.
Section 16: Materials Covered information was deleted.
Section 08: Biological Limits - Header information was deleted.
Section 08: Biological Limits - Allocation information was deleted.

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DGN: 7097442XNZ (1017113)

End of (M)SDS

APPENDIX F – PETROL MATERIAL SAFETY DATA SHEET

Revision Date: 29 Oct 2014

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

As of the revision date above, this (M)SDS meets the regulations in New Zealand.

PRODUCT

Product Name: UNLEADED GASOLINE
Product Description: Hydrocarbons and Additives
Product Code: 15024-86, 19208-86, 22004-86, 29041-86, 29447-86
Intended Use: Fuel

Trade Names	Trade Names
PREMIUM PETROL	REGULAR PETROL
SYNERGY 1000	SYNERGY 5000
SYNERGY 8000	

COMPANY IDENTIFICATION

Supplier: Mobil Oil New Zealand Limited
 c/o Russell McVeagh
 Vero Centre
 48 Shortland Street
 Auckland 1140 New Zealand

**National Poison Control Centre
 General Contact Number**

+64 3 479 7248/ Freephone 0800 764 766
 +64 4 568 0400

SECTION 2 HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION: HAZARDOUS SUBSTANCE. DANGEROUS GOOD.

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

3.1A
 6.3B 6.7B 6.1E
 9.1B

Flammable liquid: Category 1.

Skin irritation: Category 3. Carcinogen: Category 2. Aspiration toxicant: Category 1.

Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.

LABEL:

Symbol:





Signal Word: Danger

Hazard Statements:

Physical: H224: Extremely flammable liquid and vapor.

Health: H304: May be fatal if swallowed and enters airways. H316: Causes mild skin irritation.

H351: Suspected of causing cancer.

Environmental: H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements:

General: P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use.

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating, and lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P308 + P313: IF exposed or concerned: Get medical advice/attention. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish. P391: Collect spillage.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Possible risk of harm to the unborn child. Vapours may cause drowsiness and dizziness. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression. Exposure to benzene is associated with cancer (acute myeloid leukaemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders (see Section 11). May cause heritable genetic damage.

ENVIRONMENTAL HAZARDS

No additional hazards.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3	COMPOSITION / INFORMATION ON INGREDIENTS
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This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
GASOLINE	86290-81-5	> 99 %	H224, H304, H336, H340(1B), H350(1B), H361(D), H315, H401, H411

Hazardous Constituent(s) Contained in Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
2,3-DIMETHYLBUTANE	79-29-8	1 - 5%	H225, H304, H336, H315, H401, H411
3-METHYLHEXANE	589-34-4	1 - 5%	H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)
BENZENE	71-43-2	1 - 5%	H225, H303, H304, H340(1B), H350(1A), H315, H319(2A), H372, H401
BUTANE	106-97-8	1 - 5%	H220, H280
ETHYL BENZENE	100-41-4	1 - 5%	H225, H332, H351
ISOPENTANE	78-78-4	5 - 10%	H224, H304, H336, H401, H411
n-Hexane	110-54-3	1 - 5%	H225, H304, H336, H361(F), H315, H373, H401, H411
PENTANE	109-66-0	1 - 5%	H224, H304, H336, H401, H411
PENTANE, 2-METHYL-	107-83-5	1 - 5%	H225, H304, H336, H315, H373, H401, H411
PENTANE, 3-METHYL-	96-14-0	1 - 5%	H225, H304, H336, H315, H401, H411
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	5 - 10%	H226, H332, H335, H315, H319(2A), H401, H411
TOLUENE	108-88-3	5 - 10%	H225, H304, H336, H361(D), H315, H373, H401, H412
TRIMETHYL BENZENE	25551-13-7	1 - 5%	H226, H315
XYLENES	1330-20-7	5 - 10%	H226, H304, H312, H332, H335, H315, H320(2B), H373, H401

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous.

NOTE: Composition may contain up to 0.5% performance additives and / or dyes. The concentration of the components shown above may vary substantially. In certain countries, benzene content may be limited to lower levels. Oxygenates such as tertiary-amyl-methyl ether, ethanol, di-isopropyl ether, and ethyl-tertiary-butyl ether may be present. Because of volatility considerations, gasoline vapor may have concentrations of components very different from those of liquid gasoline. The major components of gasoline vapor are: butane, isobutane, pentane, and isopentane. The reportable component percentages, shown in the composition/information on ingredients section, are based on API's evaluation of a typical gasoline mixture. Oxygenates may be present up to the maximum permitted by European Standard EN228.

SECTION 4	FIRST AID MEASURES
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INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This light hydrocarbon material, or a component, may be associated with cardiac sensitisation following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.

SECTION 5**FIRE FIGHTING MEASURES****EXTINGUISHING MEDIA**

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Extremely Flammable. Hazardous material. Firefighters should consider protective equipment indicated in Section 8. Vapour is flammable and heavier than air. Vapour may travel across the ground and reach remote ignition sources, causing a flashback fire danger.

Hazardous Combustion Products: Oxides of carbon, Incomplete combustion products, Smoke, Fume, Sulphur oxides, Aldehydes

FLAMMABILITY PROPERTIES

Flash Point [Method]: <-40°C (-40°F) [ASTM D-56]

Flammable Limits (Approximate volume % in air): LEL: 1.2 UEL: 8.2

Autoignition Temperature: N/D

Hazchem Code: 3YE

SECTION 6**ACCIDENTAL RELEASE MEASURES****NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H₂S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces.

Water Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Do not confine in area of spill. Advise occupants and shipping in downwind areas of fire and explosion hazard and warn them to stay clear. Allow liquid to evaporate from the surface. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7

HANDLING AND STORAGE

HANDLING

Avoid all personal contact. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapour may be evolved from heated or agitated material. Do not siphon by mouth. Use only with adequate ventilation. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. It is dangerous and/or unlawful to put petrol into unapproved containers. Do not fill container while it is in or on a vehicle. Static electricity may ignite vapour and cause fire. Place container on ground when filling and keep nozzle in contact with container. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices etc) in or around any fuelling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may

cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Keep away from incompatible materials. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source	Year
2,3-DIMETHYLBUTANE		STEL	3500 mg/m3	1000 ppm		New Zealand OELs	2013
2,3-DIMETHYLBUTANE		TWA	1760 mg/m3	500 ppm		New Zealand OELs	2013
2,3-DIMETHYLBUTANE		STEL	1000 ppm			ACGIH	2014
2,3-DIMETHYLBUTANE		TWA	500 ppm			ACGIH	2014
3-METHYLHEXANE		STEL	2050 mg/m3	500 ppm		New Zealand OELs	2013
3-METHYLHEXANE		TWA	1640 mg/m3	400 ppm		New Zealand OELs	2013
3-METHYLHEXANE		STEL	500 ppm			ACGIH	2014
3-METHYLHEXANE		TWA	400 ppm			ACGIH	2014
BENZENE		STEL	2.5 ppm		Skin	New Zealand OELs	2013
BENZENE		TWA	1 ppm		Skin	New Zealand OELs	2013
BENZENE		STEL	1 ppm			ExxonMobil	2014
BENZENE		TWA	0.5 ppm			ExxonMobil	2014
BUTANE		TWA	1900 mg/m3	800 ppm		New Zealand OELs	2013
BUTANE		STEL	1000 ppm			ACGIH	2014

ETHYL BENZENE		STEL	543 mg/m3	125 ppm		New Zealand OELs	2013
ETHYL BENZENE		TWA	434 mg/m3	100 ppm		New Zealand OELs	2013
ETHYL BENZENE		TWA	20 ppm			ACGIH	2014
GASOLINE		STEL	200 ppm			ExxonMobil	2014
GASOLINE		TWA	100 ppm			ExxonMobil	2014
GASOLINE	Vapour.	TWA	300 mg/m3	100 ppm		ExxonMobil	2014
ISOPENTANE		TWA	1000 ppm			ACGIH	2014
n-Hexane		TWA	72 mg/m3	20 ppm		New Zealand OELs	2013
n-Hexane		TWA	50 ppm		Skin	ACGIH	2014
PENTANE		STEL	2120 mg/m3	750 ppm		New Zealand OELs	2013
PENTANE		TWA	1770 mg/m3	600 ppm		New Zealand OELs	2013
PENTANE		TWA	1000 ppm			ACGIH	2014
PENTANE, 2-METHYL-		STEL	3500 mg/m3	1000 ppm		New Zealand OELs	2013
PENTANE, 2-METHYL-		TWA	1760 mg/m3	500 ppm		New Zealand OELs	2013
PENTANE, 2-METHYL-		STEL	1000 ppm			ACGIH	2014
PENTANE, 2-METHYL-		TWA	500 ppm			ACGIH	2014
PENTANE, 3-METHYL-		STEL	3500 mg/m3	1000 ppm		New Zealand OELs	2013
PENTANE, 3-METHYL-		TWA	1760 mg/m3	500 ppm		New Zealand OELs	2013
PENTANE, 3-METHYL-		STEL	1000 ppm			ACGIH	2014
PENTANE, 3-METHYL-		TWA	500 ppm			ACGIH	2014
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	123 mg/m3	25 ppm		New Zealand OELs	2013
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	25 ppm			ACGIH	2014
TOLUENE		TWA	188 mg/m3	50 ppm	Skin	New Zealand OELs	2013
TOLUENE		TWA	20 ppm			ACGIH	2014
TRIMETHYL BENZENE		TWA	123 mg/m3	25 ppm		New Zealand OELs	2013
TRIMETHYL BENZENE		TWA	25 ppm			ACGIH	2014
XYLENES		TWA	217 mg/m3	50 ppm		New Zealand OELs	2013
XYLENES		STEL	150 ppm			ACGIH	2014
XYLENES		TWA	100 ppm			ACGIH	2014

Biological limits

Substance	Specimen	Sampling Time	Limit	Determinant	Source
n-Hexane	Urine	End of shift	5 mg/l	2,5-Hexanedione	New Zealand BEIs
XYLENES	Urine	End of shift	1.5 g/l	Methylhippuric acid	New Zealand BEIs

Tolerable exposure limits

Substance Name	Medium	Limit
BENZENE	Air	10 ug/m ³
BENZENE	Water	10 ug/l
TOLUENE	Air	400 ug/m ³
TOLUENE	Water	800 ug/l
XYLENES	Air	870 ug/m ³
XYLENES	Water	600 ug/l

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation. Organic vapour

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Nitrile, Viton

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Colour: Clear (May Be Dyed)
Odour: Petroleum/Solvent
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.72 - 0.78
Flash Point [Method]: <-40°C (-40°F) [ASTM D-56]
Flammability (Solid, Gas): N/A
Flammable Limits (Approximate volume % in air): LEL: 1.2 UEL: 8.2
Explosive Properties: N/D
Autoignition Temperature: N/D
Boiling Point / Range: > 20°C (68°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): N/D
Vapour Pressure: [N/D at 20°C] | 69 kPa (517.5 mm Hg) at 34°C
Evaporation Rate (n-butyl acetate = 1): > 10
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3
Solubility in Water: Negligible
Viscosity: <1 cSt (1 mm²/sec) at 40°C
Molecular Weight: N/D
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A

SECTION 10	STABILITY AND REACTIVITY
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STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Halogens, Strong Acids, Alkalies, Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
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ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m ³	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.
Ingestion	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Irritating to the skin. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

OTHER HEALTH EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

For the product itself:

Laboratory animal studies have shown that prolonged and repeated inhalation exposure to light hydrocarbon vapours in the same boiling range as this product can produce adverse kidney effects in male rats. However, these effects were not observed in similar studies with female rats, male and female mice, or in limited studies with other animal species. Additionally, in a number of human studies, there was no clinical evidence of such effects at normal occupational levels. In 1991, The U.S. EPA determined that the male rat kidney is not useful for assessing human risk. Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. Very high exposure (confined spaces / abuse) to light hydrocarbons may result in abnormal heart rhythm (arrhythmias). Concurrent high stress levels and/or co-exposure to high levels of hydrocarbons (above occupational exposure limits), and to heart-stimulating substances like epinephrine, nasal decongestants, asthma drugs, or cardiovascular drugs may initiate arrhythmias.

Gasoline unleaded: Carcinogenic in animal tests. Chronic inhalation studies resulted in liver tumours in female mice and kidney tumours in male rats. Neither result considered significant for human health risk assessment by the United States EPA and others. Did not cause mutations in-vitro or in-vivo. Negative in inhalation developmental studies and reproductive tox studies. Inhalation of high concentrations in animals resulted in reversible central nervous system depression, but no persistent toxic effect on the nervous system. Non-sensitizing in test animals. Caused nerve damage in humans from abusive use (sniffing).

Contains:

2-Methylpentane: Repeated exposure to high concentrations of 2-methylpentane produced adverse effects to the kidney of male rats only. These effects are believed to be species specific and are not relevant to humans. BENZENE: Caused cancer (acute myeloid leukemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders in human studies. Caused genetic effects and effects on the immune system in laboratory animal and some human studies. Caused toxicity to the fetus and cancer in laboratory animal studies. N-HEXANE: Prolonged and/or repeated exposures to n-Hexane can cause progressive and potentially irreversible damage to the peripheral nervous system (e.g. fingers, feet, arms, legs, etc.). Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. n-Hexane has been shown to cause testicular damage at high doses in male rats. The relevance of this effect for humans is unknown. TOLUENE : Concentrated, prolonged or deliberate inhalation may cause brain and nervous system damage. Prolonged and repeated exposure of pregnant animals (> 1500 ppm) have been reported to cause adverse fetal developmental effects. TRIMETHYLBENZENE: Long-term inhalation exposure of trimethylbenzene caused effects to the blood in laboratory animals. ETHYLBENZENE: Caused cancer in laboratory animal studies. The relevance of these findings to humans is uncertain.

IARC Classification:

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
BENZENE	71-43-2	1
ETHYL BENZENE	100-41-4	3
GASOLINE	86290-81-5	3

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12**ECOLOGICAL INFORMATION**

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Less volatile component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY**Biodegradation:**

Majority of components -- Expected to be inherently biodegradable

Atmospheric Oxidation:

More volatile component -- Expected to degrade rapidly in air

BIOACCUMULATION POTENTIAL

Majority of components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

ECOLOGICAL DATA**Ecotoxicity**

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	96 hour(s)	Fish	LL50 1 - 100 mg/l: data for similar materials
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EL50 1 - 100 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EL50 1 - >1000 mg/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOELR 1 - 10 mg/l: data for similar materials
Aquatic - Chronic Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 1 - 100 mg/l: data for similar materials

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Water	Ready Biodegradability	28 day(s)	Percent Degraded < 60 : similar material

ENVIRONMENTAL EXPOSURE LIMITS

Substance Name	Medium	Limit
BENZENE	Water	2000 ug/l
TOLUENE	Water	330 ug/l
XYLENES	Water	340 ug/l

SECTION 13**DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14**TRANSPORT INFORMATION****LAND**

Proper Shipping Name: MOTOR SPIRIT or GASOLINE or PETROL
Hazard Class: 3
Hazchem Code: 3YE
UN Number: 1203
Packing Group: II
Label(s) / Mark(s): 3, EHS

SEA (IMDG)

Proper Shipping Name: MOTOR SPIRIT or GASOLINE or PETROL
Hazard Class & Division: 3
EMS Number: F-E, S-E
UN Number: 1203
Packing Group: II
Marine Pollutant: Yes
Label(s): 3
Transport Document Name: UN1203, MOTOR SPIRIT or GASOLINE or PETROL, 3, PG II, (-40°C c.c.), MARINE POLLUTANT

AIR (IATA)

Proper Shipping Name: MOTOR SPIRIT or GASOLINE or PETROL
Hazard Class & Division: 3
UN Number: 1203
Packing Group: II
Label(s) / Mark(s): 3
Transport Document Name: UN1203, GASOLINE, 3, PG II

SECTION 15**REGULATORY INFORMATION**

This material has been classified according to the Environmental Risk Management Authority (ERMA) under ERMA Approval Code: HSR001445

Product is regulated according to New Zealand Land Transport Rule.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories:
 AICS, DSL, ENCS, KECI, PICCS, TSCA

SECTION 16**OTHER INFORMATION**

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H220: Extremely flammable gas; Flammable Gas, Cat 1
 H224: Extremely flammable liquid and vapor; Flammable Liquid, Cat 1
 H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2
 H226: Flammable liquid and vapour; Flammable Liquid, Cat 3
 H280: Contains gas under pressure; may explode if heated; Pressurized Gas
 H303: May be harmful if swallowed; Acute Tox Oral, Cat 5
 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1
 H312: Harmful in contact with skin; Acute Tox Dermal, Cat 4
 H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
 H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A

H320(2B): Causes eye irritation; Serious Eye Damage/Irr, Cat 2B
H332: Harmful if inhaled; Acute Tox Inh, Cat 4
H335: May cause respiratory irritation; Target Organ Single, Resp Irr
H336: May cause drowsiness or dizziness; Target Organ Single, Narcotic
H340(1B): May cause genetic defects; Germ Cell Mutagenicity, Cat 1B
H350(1A): May cause cancer; Carcinogenicity, Cat 1A
H350(1B): May cause cancer; Carcinogenicity, Cat 1B
H351: Suspected of causing cancer; GHS Carcinogenicity, Cat 2
H361(D): Suspected of damaging the unborn child; Repro Tox, Cat 2 (Develop)
H361(F): Suspected of damaging fertility; Repro Tox, Cat 2 (Fertility)
H372: Causes damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 1
H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1
H401: Toxic to aquatic life; Acute Env Tox, Cat 2
H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1
H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 16: Not determined, Not applicable information was modified.
Section 09: Vapour Pressure information was modified.
Section 01: Company Mailing Address information was modified.
Section 05: Hazardous Combustion Products information was modified.
Section 15: EU Inventory Requirements - Header information was modified.
Section 11: Additional Health Information information was modified.
Section 16: MSN, MAT ID information was modified.
Section 08: Exposure Limits Table information was modified.
Section 11: Tox List Cited Table information was modified.
Section 12: Environmental tox table in section 12 information was modified.
Composition: Component Table information was modified.
Section 16: HCode Key information was modified.
GHS Health Hazards information was modified.
GHS Physical Hazards information was modified.
GHS Precautionary Statements - Disposal information was modified.
GHS Precautionary Statements - Prevention information was modified.
GHS Precautionary Statements - Response information was modified.
GHS Precautionary Statements - Storage information was modified.
Section 01: Alternate Product Names Table information was added.
Section 01: Alternate Product Name Header information was added.
Section 16: EU Materials Covered- Header information was deleted.
Section 16: Materials Covered information was deleted.
Section 02: GHS Contains - Header information was deleted.
Section 02: GHS Contains for LABEL_GHS codes information was deleted.

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DGN: 7097426XNZ (1017112)

End of (M)SDS

APPENDIX G - DOCUMENT REVISIONS

This Commercial Compliance Handbook contains the following revision changes:

Cover:	APL Logo was updated
Cover:	Sub Heading was modified
Cover:	Version Number was updated
Table of Contents:	Table was updated
Table of Contents:	Disclaimer was deleted
Introduction:	Paragraph was modified
Section 1:	1. Health Risks was modified
Section 2:	3. Spill was modified
Section 3:	5. Emergency Response Plans was modified
Section 3:	10. Site Signage was modified
Section 4:	7. Fittings, Pumps and Hoses was modified
Appendix A:	Tank Label for Diesel was modified
Appendix E:	Diesel Material Safety Data Sheet was updated
Appendix F:	Heading modified
Appendix F:	Petrol Material Safety Data Sheet was updated
Appendix G:	Document Revisions was added