Allied Petroleum
never run out

COMMERCIAL FUEL COMPLIANCE GUIDE

Contains Allied Petroleum Customer Information and Safety Data Sheets 2016 - 2019

VERSION 5.0

Commercial Fuel Compliance Guide

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Under the Health and Safety at Work (Hazardous Substances) Regulations 2017 (the Regulations) 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 Work Act 2015 (HSWA).

The purpose of this guide is to assist you in complying with the Regulations and managing the hazards associated with the storage of Petrol and Diesel.

This guide is a reference document only and is intended for the guidance of Persons Conducting a Business or Undertaking (PCBUs) as defined in HSWA. Whilst promoting best practice, this guide is not endorsed as a means of compliance with the Regulations or HSWA. It should be used alongside WorkSafe's other guidance and the Hazardous Substances Calculator available at www.hazardoussubstances.govt.nz

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SECTION 1: RISKS

1. Health Risks

Diesel is known to cause skin dryness or cracking through repeated exposure. It may also 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 form 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 petrol 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 1991 and its amendments. 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 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 Help Desk 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
Hawke's Bay	06 835 9200	0800 108 838
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 100 litres of Petrol and/or 10,000 litres of Diesel are stored 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:

- Address all "reasonably foreseeable" emergencies
- State any special training needed to deal with an emergency involving each substance
- Include the inventory of the hazardous substances present at the workplace
- Include a site showing all the hazardous substances locations in the workplace

It must also include a description of what you will do to:

- Call the emergency services
- Warn people at the workplace and nearby about the emergency
- Advise people how they can protect themselves
- Help or treat anyone injured in the emergency
- Manage the emergency to restrict its effects to the initial area, reduce its severity and if possible, eliminate it

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 there is an emergency management flipchart template available from the Hazardous Substances Toolbox Website www.hazardoussubstances.govt.nz

(Material) Safety Data Sheets (SDS) shall be provided by Allied Petroleum for each of the fuels supplied and these should be kept within 10 minutes of the fuel storage area.

There are copies of SDS for Petrol and Diesel in Appendixes E and F of that are current as of time of publication of this Commercial Fuel Compliance Guide.

The SDS and Emergency Response Plan should be stored together and be readily accessible.

SECTION 3: HAZARDOUS SUBSTANCE REGULATION REQUIREMENTS

1. Hazardous Substance Regulation Controls for Diesel Storage

Amount of Diesel stored (litres)	Fuel Supplier must supply Documentation	Documentation (PCBU)	Fire Extinguishers (number)	Signage	Emergency Response Plans	Secondary Containment	Stationary Container System Compliance Certificate
60	Yes	Yes					*Yes*[1]
100	Yes	Yes					
200	Yes	Yes					
250	Yes	Yes					
500	Yes	Yes	2				*Yes*[2]
1,000	Yes	Yes	2	Yes		Yes	
2,000	Yes	Yes	2	Yes		Yes	
5,000	Yes	Yes	2	Yes		Yes	Yes
10,000+	Yes	Yes	2	Yes	Yes	Yes	Yes

NOTE: All underground tanks over 250L must have a Stationary Container System Compliance Certificate.

[1] Stationary container system certificate required when 60L or more of diesel stored in an above ground tank connected to a burner

[2] Stationary container system certificate required if 500L or more of diesel stored in an above ground tank connected to a stationary engine

2. Hazardous Substance Regulation Controls for Petrol Storage

Amount of Petrol stored (litres)	Fuel Supplier must supply Documentation	Documentation (PCBU)	Secured When Unattended	Fire Extinguishers (number)	Signage	Emergency Response Plans	Secondary Containment	Location Compliance Certificate	Stationary Container System Compliance Certificate
50	Yes	Yes	Yes	1	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	
1,000	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	
2,500	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	Yes
5,000+	Yes	Yes	Yes	2	Yes	Yes	Yes	Yes	Yes

NOTE: All underground tanks must have a Stationary Container System Compliance Certificate.

3. Separation of Flammable Liquids

The storage and handling of fuels have hazards due to their flammable nature. The risks associated with these hazards are managed using separation distances.

A PCBU with management of control of an above ground stationary tank that contains a class 3.1 substance must ensure that the tank is separated from:

1. A ***protected place*** by not less than the distance specified in the table below
2. A ***public place*** by not less than the distance specified in the table below

The definition of a ***protected place*** is:

- A dwelling, residential building, place of worship, public building, school or college, hospital, child care facility, or theatre, or any building or open area in which persons are accustomed to assemble in large numbers, whether within or outside the property boundary of a place where a hazardous substance location is situated;
- Any factory, workshop, office, store, warehouse, shop, or building where persons are regularly employed, whether within or outside the property boundary of a place where a hazardous substance location is situated;
- A ship lying at permanent berthing facilities;
- A public railway; but
- Does not include a small office or other small building associated with a place where storage of a class 3 substance is a major function.

The definition of a ***public place*** is:

- A place (other than private property or a protected place) that is open to, and frequented by, the public; and
- Includes a public road.

Tank Capacity (litres)	Protected Place (metres)		Public place (metres)
	Class 3.1A, 3.1B, 3.1C	Class 3.1 D	Class 3.1A, 3.1B, 3.1C
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

Table 5, Schedule 12, Health and Safety at Work (Hazardous Substances) Regulations 2017

4. Inventory

Businesses are required to have an inventory of all their hazardous substances. It's important to know what hazardous substances you have in order to safely manage their risks to your workers and others who may be exposed to hazardous substances in your workplace.

There are three main things you need to do:

- Have an inventory of all hazardous substances used, handled, manufactured or stored at your workplace
- Keep it up to date
- Make sure it is available to emergency services

For each hazardous substance your inventory must include:

- The substance's name and UN Number (if available)
- The maximum amount likely to be at the workplace
- Its location
- Any specific storage and segregation requirements
- A current safety data sheet or a condensed version of key information from the safety data sheet
- Any hazardous waste.

The hazardous substances calculator is a tool available on the Hazardous Substances Toolbox Website www.hazardoussubstances.govt.nz

The calculator allows you to:

- Enter your workplace hazardous substances
- Locate key requirements you must comply across all your substances in your workplace
- Locate key requirements for individual substances or group standards
- Edit and access your inventory online

Safety Data Sheets (SDS) shall be provided by Allied Petroleum for each of the fuels supplied and these should be kept within 10 minutes of the fuel storage area.

There are copies of SDS for Petrol, Diesel in Appendixes E and F of this Handbook that are current as of time of publication of this Handbook.

The SDS and Emergency Response Plan should be stored together and be readily accessible.

5. Safety Data Sheets

A Safety Data Sheet (SDS) provides comprehensive information about the properties of a hazardous substance, how it affects health and safety in the workplace and how to manage those risks.

An SDS also explains how the substance should be safely used, stored, transported and disposed. It provides first aid information, information about the personal protective equipment that the person handling the substance should wear and what to do in the event of an emergency, such as a spill or fire.

Allied Petroleum shall provide an SDS for each of the fuels supplied.

There is also a duty on the PCBU to obtain a current copy of an SDS.

There are copies of SDS for Petrol, Diesel in Appendixes E and F of this Handbook that are current as of time of publication of this Handbook.

If you need a new copy of an SDS, visit the Allied Petroleum website: https://alliedpetroleum.co.nz/fuel-safety-and-compliance/

The SDS and Emergency Response Plan should be stored together and be readily accessible.

6. Risk Management

Risk management is important for all work-related health and safety.

For hazardous substances it is important to know the substances and likely quantities that you will hold, then:

- Consider if you need them, or are there any you can eliminate or substitute with a safer product;
- For the remaining substances, put in place the technical controls from the Hazardous Substances Regulations;
- Assess your workplace and identify if any risks remain that you need to manage;
- Use the hierarchy of controls to determine the most effective control measures to minimise those risks.
- Monitor the performance of the control measures.
- Maintain and review the control measures.

The **hierarchy of controls** is set out in the Health and Safety at Work (General Risk and Workplace Management) Regulations and means working through the following measures until risk to workers from hazardous substances can be removed or minimised.

Elimination

Can the hazardous substance be removed from the workplace?

Minimisation

If elimination is not possible consider (in this order):

- Substitution: Whether the substance could be replaced by one posing less risk

- Isolation: Isolating the hazard can prevent people coming into contact with it
- Administrative controls: If engineering controls are not sufficient to remove the risk, you are required to apply processes to make your workplace safer
- Personal protective equipment (PPE): If the risk remains after all other measures have been applied, you must supply and ensure the use of personal protective equipment.

More information is available from the WorkSafe website in the section on Hazardous Substances: https://worksafe.govt.nz/topic-and-industry/hazardous-substances/

7. Fire Extinguishers

It is the responsibility of the PCBU to ensure that fire extinguishers are present and that they are checked annually.

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 Regulations require you to have at least a 2kg dry powder or 9kg foam fire extinguisher **with a rating of 30B.** Allied Petroleum recommends the dry powder models as they are multipurpose.

The fire extinguishers should be clearly visible and readily accessible in an emergency.

Be mindful that this is the minimum number and size of fire extinguishers required by the Regulations and it may be insufficient for the quantity of fuel you have stored.

Remember that as part of your duty to train your workers, you need to make sure that workers know how to operate emergency response equipment.

8. Secondary Containment

If you store Petrol above the threshold amount of 100 litres and/or Diesel above the threshold amount of 1,000 litres, you will need secondary containment to minimise the extent of any potential spill and to enable you to recover the spilled substance.

The secondary containment (bunding) system prevents hazardous liquids that may liquify in a fire from escalating to a point where staff, the public, or the environment can be harmed.

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.

The capacity of your secondary containment system depends on the type of container and the amount of hazardous substance stored.

Below ground tanks must have 100% secondary containment capacity and above ground tanks 110% capacity of the largest tank in the secondary containment system.

Bunds must be constructed so that they can be periodically drained to minimise, so far as is reasonably practicable, the accumulation of water e.g. using an oil stop valve, pumping, or a pipe through the wall of the bund at the lowest point.

If a pipe is used to minimise the accumulation of water the pipe must be fitted with a screw-in bung or a lockable valve that is always kept in the closed position, except when draining off

accumulated water.

If the bund contains oil or an oil/water mixture, your local waste oil specialist to have it removed. Do not release this mixture from the containment area into the environment.

9. Stock Reconciliation

It is your responsibility to record **stock reconciliations** daily or at the very least, weekly. These records should be kept for at least two years and be able to be presented to an Inspector, Compliance Certifier, or 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.

10. Spill Kits

You need to be prepared to deal with a spill or leak of the hazardous substances you store, and spill kits may assist containment and clean-up of spills from a fuel tank and should be essential for any fuel storage area.

Your spill kit should contain:

- PPE (disposable coveralls, safety gloves, goggles)
- Spill handling equipment (plastic brush and pan set)
- Spill containment equipment (sorbent pads, socks, pillows)
- Absorbent material (mineral sponge)
- Waste disposal container (disposal bag/ties)

You need to make sure that your workers know where the spill kit is kept and how to use it.

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

11. Certified Handlers and Training Requirements

Previously, under the Hazardous Substances and New Organisms Act 1996 (HSNO) many substances (including Petrol) had to be handled by approved handlers.

Under the Regulations approved handlers are now known as **certified handlers** and are required for fewer substances – *Petrol is no longer one of these substances.*

However, under the Regulations anyone who handles a hazardous substance must be properly trained.

Workers need to understand the risks posed by hazardous substances and how to keep safe around them.

General instruction, supervision and training requirements are provided in the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. The Health and Safety at Work (Hazardous Substances) Regulations 2017 go further to state what a business needs to do to ensure that every worker who uses, handles, manufactures or stores a hazardous substance

has the knowledge and practical experience to do so safely.

This includes making sure workers know of the hazardous substances in their work area and the dangers they pose and that they get the training and supervision necessary to operate safely around and with them.

Items to consider for training include:

- Does the worker know the harm each hazardous substance they each use at work can cause?
- Does the worker know which substances are incompatible and need to be stored separately?
- Does the worker know how to do the jobs they are given that involve hazardous substances?
- Does the worker understand the control measures at the workplace to reduce exposure to the substances and keep safe and healthy?
- Has the worker been provided with the right safety equipment and PPE?
- Has the worker been trained to use safety equipment and PPE?
- Is PPE in good repair?
- Does PPE fit properly?
- Does the worker know here the (M)SDSs for hazardous substances are kept and how to access them?
- Have you trained your workers to use the (M)SDS?
- Does the worker know what to do in emergencies involving the hazardous substances e.g. a spill?
- Has the worker been trained to use the first aid equipment to deal with incidents involving hazardous substances, such as splashes?
- Has the worker had practical experience under direct supervision reflecting the risks associated with the hazardous substances?
- Do you keep records of worker training and instruction?

You must keep a record of this training and instruction provided under the Regulations for each worker and ensure that the record is available for inspection by an Inspector or Compliance Certifier.

12. Signage

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

Signage is required when:

- More than 50 litres of petrol are stored
- More than 1,000 litres of diesel are stored

Even if you aren't required to have signs, it is best practice always to have them as they warn other people at the workplace and emergency services, that hazardous substances are present.

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.

The signs must display:

- A warning that **hazardous substances** are present – this must use the words HAZCHEM for Class 3 substances
- A description of the **hazardous property** and **general type of hazard** of the substances that are present
- **Precautionary measures** to prevent the hazards of flammables
- The **immediate emergency response action**

Signs need to be placed close to where the hazardous substances are stored and must be maintained and up to date. They must be clearly visible and legible at a distance no less than 10 metres in varying conditions

You must ensure that your signs are clean, in good repair and not covered or obscured.

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

13. Location Compliance Certificates

If you have more than 50 litres of petrol stored at your workplace you require a location compliance certificate.

A location compliance certificate certifies that the hazardous substance location where the substances are used and stored is safely managed according to the rules.

Location compliance certificates are issued by compliance certifiers (independent service providers approved by WorkSafe).

Before issuing a location compliance certificate, the compliance certifier will check that you have:

- An inventory of hazardous substances on site
- A site plan of your workplace showing:
  - All hazardous substance locations
  - Hazardous areas
  - Controlled zones
- Fire extinguishers, if needed and that:
  - You have the correct number of fire extinguishers
  - You have the correct type of fire extinguishers (with a rating of at least 30B)
  - The fire extinguishers are clearly seen and readily accessible in an emergency
- Hazardous substances are safely stored in areas that can be secured
- Ensured that specific storage requirements for substances have been met
- Established and managed hazardous areas
- Ensured that any workers requiring information, instruction and training have received them
- Procedures to prevent fires
- Signs in place
- An emergency response plan
- Secondary containment in place
- The right PPE for the substances the workers handle
- Clean up materials for any substances that require them
- Told your local WorkSafe office where the hazard is, what hazardous substances re stored and in what quantities

A location compliance certificate is valid for one year.

14. Stationary Container System Compliance Certificates

A stationary container system is a fixed tank (above or below ground) and its associated pipework and fittings.

If you have a stationary container system containing a liquid hazardous substance you may need a stationary container system compliance certificate to certify that your tank and associated equipment is safe and complies with the Regulations.

Above ground tanks storing more than 2,500 litres of Petrol require a Stationary Container System Compliance Certificate.

Above ground tanks storing more than 5,000 litres of Diesel require a Stationary Container System Compliance Certificate.

Above ground tanks storing more than 60 litres of a Class 3.1 substance supplying a burner or substances approved by the Environmental Protection Agency (EPA) for use as a fuel for burner require a Stationary Container System Compliance Certificate.

All underground tanks require a Stationary Container System Compliance Certificate.

Stationary Container System Compliance Certificates are issued by compliance certifiers (independent service providers approved by WorkSafe).

Before issuing a stationary container system compliance certificate, the compliance certifier will check that the stationary container system is:

- suitable for service with the hazardous substance specified
- doesn't leakage for all reasonably foreseeable operating pressures, temperatures, stresses, and loadings
- constructed of materials that are compatible with any hazardous substance that the system is likely to contain

They will also check that the stationary tank complies with the following requirements of the Regulations for:

- tank design
- tank construction
- tank installation
- pressure management
- emergency pressure management
- level indicators
- lightning and stray current protection
- separation
- firefighting equipment and facilities
- marking
- plans
- integral secondary containment

The validity period of a Stationary Container System Compliance Certificate will vary.

SECTION 4: TANK STRUCTURE AND SAFETY

1. Tank Design Standards

The Regulations require above ground stationary tanks used to store hazardous liquids are:

- Designed to AS 1692 - Australian Standard Steel Tanks for Flammable and Combustible Liquids;
- Installed on foundations that will prevent subsidence of the ground that endangers safety;
- Designed, constructed and installed to meet the seismic and wind loading standards of NZS/API 650:1998

2. Plastic Tanks

There are now plastic diesel tanks available on the market and they can be used to store diesel in remote locations.

A plastic diesel tank must be separated from a protected place by a minimum of 45 metres.

Impact protection must be installed if there is a risk that the tank may be impacted by a vehicle.

Refer to Health and Safety at Work (Hazardous Substances – Polyethylene Above Ground Stationary Tanks for Diesel Fuel) Safe Work Instrument 2017 for further information.

3. Tripod Tanks

The manufacture of tanks with tripod stands was stopped in 1996 and they do not meet current design specifications. There have been a number of injury incidents involving old tripod tanks.

The PCBU is responsible for keeping themselves, their workers, and other people safe and healthy. This includes making sure tanks on the site are safe and won't cause an incident involving harm to themselves, their workers, or others.

Allied Petroleum has a primary duty of care to make sure we are doing everything we can, so far as reasonably practicable, to keep ourselves and other people safe and healthy. Allied Petroleum could refuse to fill any tank that we believe is unsafe.

It is not safe or appropriate to install new stands on tripod tanks. Installing a new stand will invalidate the original design approval – these approvals make sure any new tanks manufactured are safe.

If your tripod tank requires work beyond painting, replacing hoses or valves or other general maintenance, you will need to get a new tank. Allied Petroleum may be able to help you source a safe and compliant replacement tank.

4. Ladders

Ladders are often needed to access above ground tanks. The safest are fixed ladders or stairs attached to the tank at the appropriate angle (1 metre out from base for 4 metres of height).

Newly commissioned overhead fuel tanks shall have fixed ladders or stairs attached to the structure.

Ladders should be trade or industrial standard with a rating of either 120kg or 150kg and comply

with the AS/NZS 1892 standard. They should also be structurally sound and not covered in chemicals or other materials.

Access to the tank fill and/or dip point must be able to be accessed from the third rung from the top of the ladder without overreaching.

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 tank's structural integrity. If you are concerned about rust on your tank, contact your Allied Petroleum.

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 Allied Petroleum 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 using 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 a 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. This minimises 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 into the tank.

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, shall only be used for the purpose of receiving, storing, handling or dispensing Mobil petroleum products purchased from Allied in connection with the agreement to supply Allied Petroleum products
2. The Customer shall keep all signage on the Equipment visible and legible. The Customer shall not affix any other signage to the Equipment unless by written agreement with Allied Petroleum Limited.
3. The equipment is supplied fully compliant and in good condition. The Customer shall take reasonable steps to secure and protect the Equipment from damage. It is the Customer's responsibility to carry out repairs and maintenance, which should be done in an appropriate timeframe. In the case of trailer tanks the customer should maintain road-worthiness to warrant of fitness (WOF) standard. Repairs which may be required due to equipment failure should be arranged in consultation with Allied.
4. The Customer shall comply with all statutes, regulations, by-laws and other lawful requirements relating to the use of the Equipment. Furthermore the customer has read and understood the fuel storage compliance booklet provided, acknowledges their responsibility and agrees to store fuel in accordance to the Health and Safety at Work (Hazardous Substances) Regulations 2017.
5. The Customer shall be responsible for any product loss and damage howsoever caused by, or resulting from, the use of the Equipment.
6. The ownership of the Equipment shall remain with Allied at all times.
7. The customer agrees that the Company shall have the right to complete and register a security interest over the Equipment under the PPSA.
8. In the case of trailer tanks the customer shall maintain a current warrant of fitness at all times. Allied shall maintain registration for all trailer tanks, including sending new registration tags to the customer, the cost of which will be on-charged to the customer annually. The customer shall advise Allied if a new registration tag is not received in a timely manner or if the trailer tanks falls out of registration.
9. Any infringements incurred due to a failure to adhere to the above conditions shall be on the account of the Customer.
10. Upon termination of this agreement, the Equipment shall be returned to Allied in the same condition the Equipment was delivered to the Customer, fair wear and tear excepted. Any repairs considered necessary by Allied to reinstate the Equipment to this condition shall be carried out and charged to the account of the Customer.

2. Contact Details

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

Allied Petroleum Limited
14 McAlpine Street
Wigram
Christchurch 8042

PO Box 31201
Christchurch 8444

Phone 0800 383 566
Fax 0800 438 355

References

Health and Safety at Work Act 2015. Retrieved from http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html

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Worksafe (2019). *Safe working with ladders and stepladders – fact sheet.* Wellington, New Zealand: New Zealand Government

APPENDICES


HAZCHEM
UN No.
3Z
3082
ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S (DIESEL)
ECO TOXIC
PROTECT WATERWAYS
ENSURE DRAINS
ARE CLOSED
KEEP AWAY FROM
IGNITION SOURCES
NO SMOKING
NO NAKED FLAMES
FLAMMABLE LIQUID
3
IN EMERGENCY
DIAL 111
FIRE, POLICE OR
AMBULANCE


HAZCHEM
UN No.
3YE
1203
PETROL
ECO TOXIC
PROTECT WATERWAYS
ENSURE DRAINS
ARE CLOSED
KEEP AWAY FROM
IGNITION SOURCES
NO SMOKING
NO NAKED FLAMES
FLAMMABLE LIQUID
3
IN EMERGENCY
DIAL 111
FIRE, POLICE OR
AMBULANCE

Issue	Yes	No	N/A	Actions
Location of Flammable Liquids				
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 10,000 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 Safety Data Sheet for petrol and/or diesel available on site? (SDS should be available within 10 minutes of where the fuel is stored)				
Do all of the employees involved in handling fuel know where the Safety Data Sheets are kept?				
Fire Extinguishers				
Are fire extinguishers in place for the following amounts of fuel?				
Petrol: Less than 200 litres = at least one extinguisher 200 litres and over = two extinguishers				
Diesel: Less than 500 litres = no extinguisher required 500 litres and over = 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 100 litres of petrol and/or 1,000 litres of 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?				
Training				
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)				
Signage and Labelling				
If over 50 litres of petrol and over 1,000 litres of diesel is stored, is signage for the site available?				
Is the fuel storage tank labelled clearly with its contents?				
Location Compliance Certificates				
If more than 50 litres of petrol is stored, is a current Location Compliance Certificate available? (Location Compliance Certificates must be renewed annually)				
Stationary Container System Compliance Certificates				
If the tank storing petrol above ground tank is larger than 2,500 litres, or is underground, is a Stationary Container System Compliance Certificate available?				
If the tank storing diesel above ground is larger than 5,000 litres, or is underground, is a Stationary Container System Compliance 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 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 designed to AS 1692?				
Is the tank support on a solid, level foundation?				

Is the tank designed, constructed and installed to meet the seismic and wind loading standards of NZS/API 650:1998				
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?				

DAILY STOCK RECONCILIATION

Site Name: **Grade:** **Month:**

	Yesterday Dip	Delivery	Stock After Delivery	Today's Dip	Throughput Dip	Pump Meter Readings	Adjustment	Throughput by Meter	Loss/Gain	Cumulative Loss/Gain	Cumulative Meter Throughput	Cumulative Loss/Gain % to Date
	A	B	(A+B)=C	D	(C-D)=E	F	G	F-PREV F-G=H	H-E=I	SUM I to Date=J	(F-PREV. MONTH F)-SUM G=K	(J/K)x100=L
prev month												
1												
2												
3												
4												
5												
6												
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Revision Date: 23 Jul 2019

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
DIESEL	EXTRA DIESEL
MARINE GAS OIL	MOBIL DIESEL EFFICIENT

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

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/m3	Skin	ExxonMobil	2019
FUELS, DIESEL	Vapour.	TWA	200 mg/m3	Skin	ExxonMobil	2019
FUELS, DIESEL [total hydrocarb, vapour&aerosol]	Inhalable fraction and vapour	TWA	100 mg/m3	Skin	ACGIH	2018

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 40ºC
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: TOXILOGICAL 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	48 hour(s)	Daphnia magna	EL50 1 - 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	96 hour(s)	Fish	LL50 1 - 100 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EL50 - 100 mg/l: data for similar materials
Aquatic - Chronic Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR1 - 10 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

[Footnote: Not subject to the provisions of UN3082 Environmentally hazardous substances liquid, n.o.s., if shipped in quantities of 5 liters or less per single or inner combination packaging as per IMDG code 2.10.2.7.]

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

[Footnote: Not subject to the provisions of UN3082 Environmentally hazardous substances liquid, n.o.s., if shipped in quantities of 5 liters or less per single or inner combination packaging as per Special Provision A197.]

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

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): 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):
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 01: Alternative Product Names Table information was modified.
Section 08: Exposure Limits Table information was modified.
Section 09: Vapour Pressure information was modified.
Section 12: information was modified.

Section 14: IATA Footnote information was modified.
Section 14: IMDG Footnote information was modified.
Section 15: National Chemical Inventory Listing information was modified.
Section 15: New Zealand ERMA Approval Code information was modified.

DGN: 7097442XNZ (1017113)

End of (M)SDS

Revision Date: 14 Feb 2016

SECTION 1: PRODUCT AND COMPANY INFORMATION

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: +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:

3.1A
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

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, H373, H401, H412
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 New Zealand Engine Fuel Specifications Regulations latest issue.

SECTION 4: FIRST AID MEASURES

INHALATION

Remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

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

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	2015
2,3-DIMETHYLBUTANE		TWA	500 ppm			ACGIH	2015
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	2015
3-METHYLHEXANE		TWA	400 ppm			ACGIH	2015
BENZENE		STEL	2.5 ppm		Skin	New Zealand OELs	2013
BENZENE		TWA	1 ppm		Skin	New Zealand OELs	2013
BENZENE		STEL	1 ppm			ExxonMobil	2015
BENZENE		TWA	0.5 ppm			ExxonMobil	2015
BUTANE		TWA	1900 mg/m3	800 ppm		New Zealand OELs	2013
BUTANE		STEL	1000 ppm			ACGIH	2015
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	2015
GASOLINE		STEL	200 ppm			ExxonMobil	2015
GASOLINE		TWA	100 ppm			ExxonMobil	2015
GASOLINE	Vapour	TWA	300 mg/m3	100 ppm		ExxonMobil	2015
ISOPENTANE		TWA	1000 ppm			ACGIH	2015
n-Hexane		TWA	72 mg/m3	20 ppm		New Zealand OELs	2013
n-Hexane		TWA	50 ppm		Skin	ACGIH	2015

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	2015
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	2015
PENTANE, 2-METHYL-		TWA	500 ppm			ACGIH	2015
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	2015
PENTANE, 3-METHYL-		TWA	500 ppm			ACGIH	2015
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	123 mg/m3	25 ppm		New Zealand OELs	2013
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	25 ppm			ACGIH	2015
TOLUENE		TWA	188 mg/m3	50 ppm	Skin	New Zealand OELs	2013
TOLUENE		TWA	20 ppm			ACGIH	2015
TRIMETHYL BENZENE		TWA	123 mg/m3	25 ppm		New Zealand OELs	2013
TRIMETHYL BENZENE		TWA	25 ppm			ACGIH	2015
XYLENES		TWA	217 mg/m3	50 ppm		New Zealand OELs	2013
XYLENES		STEL	150 ppm			ACGIH	2015
XYLENES		TWA	100 ppm			ACGIH	2015

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

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 20ºC] | 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 40ºC
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

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

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m3	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
GASOLINE	86290-81-5	3
ETHYL BENZINE	100-41-4	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 (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
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 04: First Aid Inhalation information was modified.
Section 05: Hazardous Combustion Products information was modified.
Composition: Footnotes 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 Precautionary Statements - Prevention information was modified.
Section 01: Alternate Product Names Table information was added.

product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly of indirectly hold any interest.

DGN: 7097426XNZ (1017112)

End of (M)SDS

This Commercial Fuel Compliance Guide contains the following revision changes:

Title Page: Modified
Introduction: Modified
Section 02: Emergency Response Plans modified
Section 03: Hazardous Substance Regulation Controls for Diesel Storage modified
Section 03: Hazardous Substance Regulation Controls for Petrol Storage modified
Section 03: Inventory modified
Section 03: Safety Data Sheets modified
Section 03: Secondary Containment modified
Section 03: Stationary Container System Compliance Certificates modified
Section 04: Maintenance removed
Section 04: Tank Structure and Safety added
Section 04: Tank Design Standards modified
Section 04: Plastic Tanks Added
Section 04: Tripod Tanks added
Section 04: Ladders modified
Section 04: The Storage Tank removed
Section 04: Corrosion of Fuel Tanks modified
Section 04: Fittings, Pumps and Hoses modified
Section 05: Access modified
Section 05: Access to the Fuel Tank Site using the Site Road modified
Section 05: Access to the Fuel Tank Fill Point modified
Section 06: Your Responsibilities modified
Section 08: Secondary Containment information was modified
References: Modified
Appendix A: Tank Label for Petrol modified
Appendix C: Checklist for Safe Fuel Storage modified
Appendix G: Document Revisions information modified