SAFETY DATA SHEET

BP E85

Section 1. Identification

Product name	BP E85
Synonym	85% ethanol, 15% 98 RON petrol
Product code	0000004759
SDS no.	0000004759
Use of the substance/mixture	Use only as a motor fuel for spark ignition engines. NOT for aviation use. Should NOT be used as a solvent nor cleaning agent. Fuels for vehicles and machinery. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Product type	Liquid. Clear and Bright
Supplier	BP Oil New Zealand Limited Ground floor and 1st floor Watercare House 73 Remuera Road Newmarket Auckland New Zealand Phone 09 969 9300
Emergency telephone number	Tel: 0800 805 111
New Zealand National Poisons Centre	0800 764 766
OTHER PRODUCT INFORMATION	Technical Helpline 09 623 9451

Section 2. Hazards identification

HSNO Classification

3.1 - FLAMMABLE LIQUIDS - Category A
6.3 - SKIN IRRITATION - Category B
6.4 - EYE IRRITATION - Category A (Irritant)
6.6 - MUTAGENICITY - Category A
6.7 - CARCINOGENICITY - Category B
6.1 - ACUTE TOXICITY (aspiration) (oral) - Category E
9.1 - AQUATIC ECOTOXICITY - Category B

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

Routes of entry Dermal contact. Eye contact. Inhalation.

GHS label elements

Signal word Danger

Hazard statements

Extremely flammable liquid and vapour.
Causes mild skin irritation.
Causes serious eye irritation.
May cause genetic defects.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection: Recommended: splash goggles. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Keep out of reach of children. Wash thoroughly after handling. If medical advice is needed: Have product container or label at hand.

Response

Collect spillage. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention.

Storage

Store locked up. Store in a well-ventilated place. Keep cool.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol

Other hazards which do not result in classification

Not available.

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ethanol
Gasoline: A complex mixture of volatile hydrocarbons containing paraffins, naphthenes, olefins and aromatics with carbon numbers predominantly between C4 and C12. May contain oxygenates. May also contain small quantities of proprietary performance additives.

Ingredient name	%	CAS number
Ethanol	85	64-17-5
Gasoline	15	86290-81-5
Toluene	<3	108-88-3
Benzene	<0.2	71-43-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation

If inhaled, remove to fresh air. Get medical attention.

Ingestion

Do not induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention.

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Firefighting measures

Extinguishing media

Suitable

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

Not suitable

Do not use water jet.

Specific hazards arising from the chemical

Extremely flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Liquid will float and may reignite on surface of water.

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

Hazchem code

Not available.

Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Eliminate all ignition sources. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8).

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other contaminated materials in suitable tanks or containers for recycle, recovery or safe disposal.

Section 6. Accidental release measures

Methods and material for containment and cleaning up

Small spill

Eliminate all ignition sources. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

Large spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not swallow. Never siphon by mouth. Avoid exposure - obtain special instructions before use. Avoid breathing vapour or mist. Use only with adequate ventilation. Avoid release to the environment. Do not enter storage areas and confined spaces unless adequately ventilated. Wear appropriate respirator when ventilation is inadequate. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Wash thoroughly after handling. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container. Aspiration hazard if swallowed. Can enter lungs and cause damage. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Do not enter storage tanks. If entry to vessels is necessary, follow permit to work procedures. Entry to any tanks or other confined space requires a full risk assessment and appropriate control measures to be put in place in conformance with appropriate regulations and industry practice on confined space entry. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is

Section 7. Handling and storage

intrinsically safe (i.e. will not produce sparks). Explosive air/vapour mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ethanol	**NZ HSWA 2015 (New Zealand).** WES-TWA: 1880 mg/m³ 8 hours. Issued/ Revised: 1/1994 WES-TWA: 1000 ppm 8 hours. Issued/ Revised: 1/1994
Gasoline	**ACGIH TLV (United States).** TWA: 300 ppm 8 hours. Issued/Revised: 5/1996 TWA: 890 mg/m³ 8 hours. Issued/Revised: 5/1996 STEL: 500 ppm 15 minutes. Issued/ Revised: 5/1996 STEL: 1480 mg/m³ 15 minutes. Issued/ Revised: 5/1996
Toluene	**NZ HSWA 2015 (New Zealand). Absorbed through skin.** WES-TWA: 188 mg/m³ 8 hours. Issued/ Revised: 1/1994 WES-TWA: 50 ppm 8 hours. Issued/ Revised: 1/1994
Benzene	**NZ HSWA 2015 (New Zealand). Absorbed through skin.** WES-STEL: 2.5 ppm 15 minutes. Issued/ Revised: 9/2010 WES-TWA: 1 ppm 8 hours. Issued/Revised: 9/2010

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Section 8. Exposure controls/personal protection

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye protection

Recommended: splash goggles

Hand protection

Recommended: Gloves made from fluoroelastomer resistant to hydrocarbons and a wide range of chemicals.
Wear a chemically resistant multi-layer laminate inner glove inside an outer nitrile glove. The purpose of the outer glove is to protect the inner glove from cuts and mechanical damage. The presence of aromatic hydrocarbons in the product will significantly shorten the length of time that nitrile gloves will provide protection. Do not re-use nitrile gloves if exposed to aromatic hydrocarbons.

Skin protection

Use of protective clothing is good industrial practice. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. Wear suitable protective clothing. Footwear highly resistant to chemicals. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static. When there is a risk of ignition wear inherently fire resistant protective clothes and gloves. Work clothing / overalls should be laundered on a regular basis. Laundering of contaminated work clothing should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes. When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: overall

Respiratory protection

Recommended: Avoid breathing of vapours, mists or spray. Select and use respirators in accordance with AS/NZS 1715/1716. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist (Type P1) filters. Filter capacity and respirator type depends on exposure level.

Section 9. Physical and chemical properties

Appearance

Physical state Liquid. Clear and Bright

Colour Water White. to Yellow.

Odour Hydrocarbon. (Petrol and Ethanol)

pH Not available.

Melting point Not available.

Boiling point >30 to < 210°C (>86 to < 410°F)

Drop Point Not available.

Flash point Closed cup: -40°C (-40°F) [Pensky-Martens.]

Lower and upper explosive (flammable) limits Lower: 1.4%
Upper: 19%

Section 9. Physical and chemical properties

Vapour pressure 50 kPa (375.03 mm Hg) [25°C (77°F)]

Vapour density Not available.

Density 780 kg/m³ (0.78 g/cm³) at 15°C

Solubility Miscible in water. (85%)

Viscosity Kinematic: <0.1 mm^2/s (<0.1 cSt) at 40°C

Section 10. Stability and reactivity

Chemical stability The product is stable.

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.

Conditions to avoid Avoid all possible sources of ignition (spark or flame). Avoid excessive heat.

Incompatible materials Reactive or incompatible with the following materials: oxidising materials.

Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

Inhalation No known significant effects or critical hazards.

Ingestion Irritating to mouth, throat and stomach. Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Skin contact Causes mild skin irritation.

Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation No specific data.

Ingestion Adverse symptoms may include the following:
nausea or vomiting

Skin contact Adverse symptoms may include the following:
irritation
redness

Eye contact Adverse symptoms may include the following:
pain or irritation
watering
redness

Acute toxicity

Product/ingredient name	Test	Species	Result	Exposure	Remarks
Ethanol	LC50 Inhalation Vapour	Rat	124.7 mg/l	4 hours	Based on Ethanol
	LC50 Inhalation Vapour	Rat	116.9 mg/l	4 hours	Based on Ethanol
	LC50 Inhalation Vapour	Rat	133.8 mg/l	4 hours	Based on Ethanol
	LD50 Oral	Rat	10470 mg/kg	-	Based on Ethanol
Gasoline	LC50 Inhalation Vapour	Rat	>7630 mg/m³ Nominal	4 hours	Based on Gasoline
	LC50 Inhalation Vapour	Rat	>5610 mg/m³ analytical	4 hours	Based on Gasoline
	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on Gasoline

Section 11. Toxicological information

	LD50 Oral	Rat	>5000 mg/kg	-	Based on Gasoline

Conclusion/Summary Not available.

Irritation/Corrosion

Product/ingredient name	Species	Result	Score	Exposure	Observation	Conc.	Remarks
Ethanol	Rabbit	Skin - Non-irritant to skin.	-	-	-	-	Based on Ethanol
	Rabbit	Eyes - Cornea opacity	-	-	-	-	Based on Ethanol
	Rabbit	Eyes - Iris lesion	-	-	-	-	Based on Ethanol
	Rabbit	Eyes - Irritant	-	-	-	-	Based on Ethanol
Gasoline	Rabbit	Skin - Irritant	-	-	-	-	Based on Gasoline
	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	Based on Gasoline

Conclusion/Summary

Skin Causes skin irritation.

Eyes Causes serious eye irritation.

Respiratory Not available.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result	Remarks
Gasoline	skin	Guinea pig	Not sensitising	Based on Gasoline

Potential chronic health effects

General No known significant effects or critical hazards.

Inhalation May be harmful by inhalation after often repeated exposure. Vapour, mist or fume may irritate the nose, mouth and respiratory tract. Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.

Ingestion Not applicable.

Skin contact Not applicable.

Eye contact Not applicable.

Carcinogenicity Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. May cause cancer Exposure to benzene may result in effects to the hematopoietic system causing blood disorders including anaemia and leukaemia. Benzene is classified by EEC as a category 1 carcinogen - substances known to be carcinogenic to man.
IARC assessment: benzene - carcinogenic to humans (Group 1)

Mutagenicity May cause genetic defects.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Carcinogenicity

Section 11. Toxicological information

Product/ingredient name	Test		Species	Result		Exposure
Ethanol	Mouse	Oral	105 weeks	Positive - Oral - Unspecified	-	Based on Ethanol
	Rat	Oral	104 weeks	Negative - Oral - Unspecified	-	Based on Ethanol
Gasoline	Rat	Inhalation	113 weeks	Negative - Inhalation - Unspecified	-	Based on Gasoline
	Mouse	Dermal	102 weeks	Negative - Dermal - Unspecified	-	Based on Gasoline

Conclusion/Summary May cause cancer

Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Ethanol	Equivalent to OECD 476	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on Ethanol
	Equivalent to OECD 473	Experiment: In vitro Subject: Non-mammalian species	Negative	Based on Ethanol
	Equivalent to OECD 478	Experiment: In vivo Subject: Unspecified Cell: Germ	Negative	Based on Ethanol
Gasoline	Equivalent to OECD 476	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on Gasoline
	Equivalent to OECD 471	Experiment: In vitro Subject: Non-mammalian species	Negative	Based on Gasoline
	EPA OPPTS 870.5395	Experiment: In vivo Subject: Unspecified Cell: Germ	Negative	Based on Gasoline vapour condensate
	Equivalent to OECD 475	Experiment: In vivo Subject: Unspecified Cell: Germ	Negative	Based on Gasoline

Conclusion/Summary May cause genetic defects.

Reproductive toxicity

Section 11. Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Result	Exposure
Ethanol	-	Positive	-	Rat	Oral	2 generation
	-	-	Negative	Rat	Inhalation	18 days
Gasoline	-	Negative	-	Rat	Inhalation	2 generation
	-	-	Negative	Rat	Inhalation	14 days

Conclusion/Summary Development : Suspected of damaging the unborn child.
Fertility: Based on available data, the classification criteria are not met.
Effects on or via lactation: Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard

Name
Gasoline Toluene n-hexane

Section 12. Ecological information

Ecotoxicity This material is toxic to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Species	Result/Test	Exposure	Effects	Remarks
Ethanol	Algae	EC50 675 mg/l	4 days	-	Based on Ethanol
	Aquatic plants	EC50 4432 mg/l	7 days	-	Based on Ethanol
	Daphnia	Acute LC50 5012 mg/l	48 hours	-	Based on Ethanol
	Fish	Acute LC50 153 g/l	96 hours	-	Based on Ethanol
	Fish	Acute LC50 14.2 g/l	96 hours	-	Based on Ethanol
	Daphnia	Chronic LC50 2 mg/l	10 days	-	Based on Ethanol
	Daphnia	Chronic LC50 9.6 mg/l	9 days	-	Based on Ethanol
Gasoline	Micro-organism	Acute EC50 15.41 mg/l Nominal Fresh water	40 hours	growth inhibition	-
	Algae	Acute EL50 3.1 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Gasoline
	Algae	Acute EL50 3.7 mg/l Nominal Fresh water	96 hours	(growth rate)	Based on Gasoline
	Daphnia	Acute EL50 4.5 mg/l Nominal	48 hours	Mobility	Based on straight-run light

Section 12. Ecological information

	Fresh water			gasoline
Fish	Acute LL50 10 mg/l Nominal Fresh water	96 hours	Mortality	Based on Naphtha (petroleum), isomerisation
Fish	Acute LL50 8.2 mg/l Nominal Fresh water	96 hours	Mortality	Based on Naphtha (petroleum), light alkylate
Algae	Acute NOELR 0.5 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Gasoline
Daphnia	Acute NOELR 0.5 mg/l Nominal Fresh water	48 hours	Mobility	Based on Straight run gas oil
Daphnia	Chronic EL50 10 mg/l Nominal Fresh water	21 days	Reproduction	Based on Naphtha (petroleum), light alkylate
Daphnia	Chronic EL50 >40 mg/l Nominal Fresh water	21 days	Mobility	Based on Naphtha (petroleum), light alkylate
Fish	Chronic EL50 10 mg/l Nominal Fresh water	21 days	Reproduction	Based on: Naphtha (petroleum), light alkylate; read across between species
Fish	Chronic LL50 5.2 mg/l Nominal Fresh water	14 days	Mortality	Based on Naphtha (petroleum), light catalytic reformed
Daphnia	Chronic NOELR 2.6 mg/l Nominal Fresh water	21 days	Reproduction	Based on Naphtha (petroleum), light alkylate
Daphnia	Chronic NOELR 16 mg/l Nominal Fresh water	21 days	Mobility	Based on Naphtha (petroleum), light alkylate
Fish	Chronic NOELR 2.6 mg/l Nominal Fresh water	14 days	Mortality	Based on Naphtha (petroleum), light catalytic reformed
Fish	Chronic NOELR 2.6 mg/l Nominal Fresh water	21 days	Reproduction	Based on: Naphtha (petroleum), light alkylate; read across between species

Section 12. Ecological information

soil, plants	Chronic PNEC >0.4 mg/kg	-	-	-

Conclusion/Summary Toxic to aquatic life with long lasting effects.

Persistence and degradability

Expected to be biodegradable. Non-persistent per IMO criteria

Product/ingredient name	Test	Result	Remarks
Ethanol	EPA	95 % - Readily - 15 days	Based on Ethanol
	EPA	84 % - Readily - 20 days	Based on Ethanol
	EPA	74 % - Readily - 5 days	Based on Ethanol
	EPA	74 % - Readily - 10 days	Based on Ethanol

Conclusion/Summary Non-persistent per IMO criteria

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethanol	-	-	Readily
Gasoline	-	-	Inherent

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ethanol	-0.35	-	low
Gasoline	2 to 7	-	high
Toluene	2.73	90	low
n-hexane	4	-	high
Benzene	2.13	11	low

Mobility in soil

Mobility Spillages may penetrate the soil causing ground water contamination.

Soil/water partition coefficient (K_{OC}) Not available.

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
New Zealand Class	UN3475	ETHANOL AND GASOLINE MIXTURE	3	II		**Hazchem code** •3YE **Special provisions** 333, 363
ADG Class	UN3475	MOTOR SPIRIT or GASOLINE or PETROL	3	II		**Hazchem code** •3YE **Special provisions** 333
IATA Class	UN3475	Ethanol and gasoline mixture	3	II		The environmentally hazardous substance mark may appear if required by other transportation regulations. **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341. **Special provisions** A156
IMDG Class	UN3475	ETHANOL AND GASOLINE MIXTURE	3	II		**Emergency schedules** F-E, S-E **Special provisions** 333, 363

PG* : Packing group

Section 15. Regulatory information

New Zealand Regulatory Information

HSNO Approval Number	HSR002584
HSNO Group Standard	FUEL ADDITIVES (Flammable, Toxic [6.7])
HSNO Classification	3.1 - FLAMMABLE LIQUIDS - Category A 6.3 - SKIN IRRITATION - Category B 6.4 - EYE IRRITATION - Category A (Irritant) 6.6 - MUTAGENICITY - Category A 6.7 - CARCINOGENICITY - Category B 6.1 - ACUTE TOXICITY (aspiration) (oral) - Category E 9.1 - AQUATIC ECOTOXICITY - Category B

Regulation according to other foreign laws

REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.
United States inventory (TSCA 8b)	Not determined.
Australia inventory (AICS)	Contact local supplier or distributor.
Canada inventory status	At least one component is not listed.
China inventory (IECSC)	At least one component is not listed.
Japan inventory (ENCS)	At least one component is not listed.

Section 15. Regulatory information

Korea inventory (KECI)	At least one component is not listed.
Philippines inventory (PICCS)	At least one component is not listed.
Taiwan Chemical Substances Inventory (TCSI)	Not determined.

Section 16. Other information

History

Date of issue/Date of revision	22 November 2019
Date of previous issue	No previous validation.
Version	1
Prepared by	Not available.
Key to abbreviations	Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

Notice to reader

Indicates information that has changed from previously issued version.

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The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.