

Lubrication Engineers NZ Ltd

Chemwatch: 42-9989

Version No: 6.1

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 2

Issue Date: **19/09/2020** Print Date: **29/10/2024** S.GHS.NZL.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	LE4032 Quinplex Synthetic Food Grade Oil H1
Chemical Name	1-decene
Synonyms	Not Available
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains 1-decene)
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Lubricant; not for consumer use. Alkenes serve as a feedstock for the petrochemical industry because they can participate in a wide variety of reactions, prominently polymerization and alkylation. Alkenes are relatively stable compounds, but are more reactive than alkanes, either because of the reactivity of the carbon– carbon pi-bond or the presence of allylic CH centers. Most reactions of alkenes involve additions to this pi bond, forming new single bonds. Use according to manufacturer's directions.
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Details of the manufacturer or supplier of the safety data sheet

Registered company name	Lubrication Engineers NZ Ltd
Address	11F Piermark Drive North Harbour Industrial Estate Albany, Auckland New Zealand
Telephone	+64 09 415 9411
Fax	+64 09 4158411
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Lubrication Engineers NZ Ltd	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	+64 21 3385487	+64 800 700 112
Other emergency telephone number(s)	Not Available	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 Hazards identification

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

Chemwatch Hazard Ratings

		Min	Max			
lammability	1					
Toxicity	1					
Body Contact	2			0 = Minimum		
Reactivity	1			2 = Moderate		
Chronic	0			3 = High 4 = Extreme		
Cla	ssific	ation ^[1]	Hazaro	dous to the Aquatic Environment Long-Term Hazard Category 2		
		Legend:	1. Clas 1272/2	ssified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 2008 - Annex VI		
Determined by Chemwatch using GHS/HSNO criteria		9.1B				

Label elements

Hazard pictogram(s)	
Signal word	Not Applicable

Hazard statement(s)

H411	Toxic to aquatic life with long lasting effects.
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Precautionary statement(s) Prevention

P273	Avoid release to the environment.
Procautionary statement/c) Posnonse	

Precautionary statement(s) Response		
P391	Collect spillage.	
Precautionary statement(s) Storage	

Not Applicable

Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
872-05-9	90-100	<u>1-decene</u>
Legend:	1. Classified by Chernwatch; 2. Classification drawn from CCID EPA 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOEL	NZ; 3. Classification drawn from Regulation (EU) No Vs available

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available).

	Seek medical attention in event of irritation.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	 If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice. Avoid giving milk or oils. Avoid giving alcohol.

Indication of any immediate medical attention and special treatment needed

- For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:
- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen.
- Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
 Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled
- cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 Firefighting measures

Extinguishing media

- Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.

Special hazards arising from the substrate or mixture

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

Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) other pyrolysis products typical of burning organic material. May emit poisonous fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Minor Spills	 Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.
Major Spills	 Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	 DO NOT allow clothing wet with material to stay in contact with skin Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.
Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. 	
Storage incompatibility	 Avoid reaction with oxidising agents Avoid strong acids, bases. 	



X — Must not be stored together

0 — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available				
Ingredient	Original IDLH	Revised IDLH		
1-decene	Not Available	Not Available		

Occupational Exposure Banding

	-		
Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
1-decene	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

Exposure controls

Appropriate engineering	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed
controls	engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to
	provide this high level of protection.
	The basic types of engineering controls are:
	Process controls which involve changing the way a job activity or process is done to reduce the risk.

	Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.			
Individual protection measures, such as personal protective equipment				
Eye and face protection	 Safety glasses with side shields. Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 			
Skin protection	See Hand protection below			
Hands/feet protection	 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. 			
Body protection	See Other protection below			
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream. 			

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

+ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.

- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid with a hydrocarbon-like odour; not miscible with water. An alkene is an unsaturated hydrocarbon that contains at least one carbon–carbon double bond. The words alkene and olefin are often used interchangeably. Acyclic alkenes, with only one double bond and no other functional groups, known as mono- enes, form a homologous series of hydrocarbons with the general formula CnH2n. Alkenes have two hydrogen atoms fewer than the corresponding alkane (with the same number of carbon atoms). The physical properties of alkenes and alkanes are similar.				
Physical state	Physical state Liquid Relative density (Water = 1) 0.83				
Odour	Not Available	Partition coefficient n- octanol / water	Not Available		

Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	6-8	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	32.08
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	232	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	<1	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7		
Chemical stability	nstable in the presence of incompatible materials. roduct is considered stable. azardous polymerisation will not occur.		
Possibility of hazardous reactions	See section 7		
Conditions to avoid	See section 7		
Incompatible materials	See section 7		
Hazardous decomposition products	See section 5		

SECTION 11 Toxicological information

Information on toxicological effects

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.IngestionRepeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing	-	
Accidental ingestion of the material may be damaging to the health of the individual. Alkenes are generally of low toxicity but they are considered aspiration hazards. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.Skin ContactRepeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.Let the is some evidence to suggest that this material can cause eye irritation and damage in some persons.ChronictSubstance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oral administration of C20-24 alkenes has not been shown to exhibit significant toxicity in humans.	Inhaled	 Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.
Skin ContactRepeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.EyeThere is some evidence to suggest that this material can cause eye irritation and damage in some persons.ChronicSubstance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oral administration of C20-24 alkenes has not been shown to exhibit significant toxicity in humans.	Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Alkenes are generally of low toxicity but they are considered aspiration hazards. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.
Eye There is some evidence to suggest that this material can cause eye irritation and damage in some persons. Chronic Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oral administration of C20-24 alkenes has not been shown to exhibit significant toxicity in humans.	Skin Contact	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.
Chronic Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oral administration of C20-24 alkenes has not been shown to exhibit significant toxicity in humans.	Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
	Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oral administration of C20-24 alkenes has not been shown to exhibit significant toxicity in humans.

E4032 Quinplex Synthetic	ΤΟΧΙΟΙΤΥ	IRRITATION		
Food Grade Oil H1	Not Available	Not Available		
	ΤΟΧΙΟΙΤΥ	IRRITATION		
	Dermal (rabbit) LD50: >1482 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]		
1-decene	Inhalation (Rat) LC50: ~0.96 mg/L4h ^[1]	Skin: no adverse effect observed (not irritating) ^[1]		
	Oral (Rat) LD50: >2000 mg/kg ^[1]			
Legend:	 Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances 			
E4032 Quinplex Synthetic	No significant acute toxicological data identified in literature search For olefins:			
E4032 Quinplex Synthetic Food Grade Oil H1 & 1- DECENE	No significant acute toxicological data identified in literature search For olefins: Studies have shown that normal alpha olefins have little or no toxic They may produce minimal skin and eye irritation, but do not sens alpha olefin vapours caused central nervous system effects, includ heated, fumes may produce nausea and irritation of the upper airw	n. c effect on animals except if inhaled in high concentrations. tise the skin. Exposure to very high levels of C6-C16 norma ling anaesthesia (loss of sensation). If C20+ products are ray.		
E4032 Quinplex Synthetic Food Grade Oil H1 & 1- DECENE Acute Toxicity	No significant acute toxicological data identified in literature search For olefins: Studies have shown that normal alpha olefins have little or no toxic They may produce minimal skin and eye irritation, but do not sens alpha olefin vapours caused central nervous system effects, includ heated, fumes may produce nausea and irritation of the upper airw	a. c effect on animals except if inhaled in high concentrations. tise the skin. Exposure to very high levels of C6-C16 norma ling anaesthesia (loss of sensation). If C20+ products are /ay. cinogenicity ★		
E4032 Quinplex Synthetic Food Grade Oil H1 & 1- DECENE Acute Toxicity Skin Irritation/Corrosion	No significant acute toxicological data identified in literature search For olefins: Studies have shown that normal alpha olefins have little or no toxic They may produce minimal skin and eye irritation, but do not sens alpha olefin vapours caused central nervous system effects, include heated, fumes may produce nausea and irritation of the upper airw X Carr X Re	n. c effect on animals except if inhaled in high concentrations. tise the skin. Exposure to very high levels of C6-C16 norma ling anaesthesia (loss of sensation). If C20+ products are ray.		
E4032 Quinplex Synthetic Food Grade Oil H1 & 1- DECENE Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation	No significant acute toxicological data identified in literature search For olefins: Studies have shown that normal alpha olefins have little or no toxic They may produce minimal skin and eye irritation, but do not sens alpha olefin vapours caused central nervous system effects, include heated, fumes may produce nausea and irritation of the upper airwork X Carr X Re X STOT - Sing	 a. b. effect on animals except if inhaled in high concentrations. tise the skin. Exposure to very high levels of C6-C16 normaling anaesthesia (loss of sensation). If C20+ products are ray. cinogenicity x productivity x le Exposure 		
E4032 Quinplex Synthetic Food Grade Oil H1 & 1- DECENE Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation Respiratory or Skin sensitisation	No significant acute toxicological data identified in literature search For olefins: Studies have shown that normal alpha olefins have little or no toxic They may produce minimal skin and eye irritation, but do not sens alpha olefin vapours caused central nervous system effects, includ heated, fumes may produce nausea and irritation of the upper airwite X Carr X Re X STOT - Sing X STOT - Repeated	 effect on animals except if inhaled in high concentrations. tise the skin. Exposure to very high levels of C6-C16 normaling anaesthesia (loss of sensation). If C20+ products are ray. cinogenicity × productivity × le Exposure × ed Exposure × 		

SECTION 12 Ecological information

Toxicity

LE4032 Quinplex Synthetic Food Grade Oil H1	Endpoint Test Duration (hr)		Species	Value	Source	
	Not Available	Not Available	Not Available	Not Available	Not Available	
	Endpoint	Test Duration (hr)	Species	Value	Source	
1-decene	EC50	72h	Algae or other aquatic plants	>0.001mg/l	2	
	EC50	48h	Crustacea	>0.003mg/l	2	
	EC50	96h	Algae or other aquatic plants	0.093mg/l	2	
	NOEC(ECx)	72h	Algae or other aquatic plants	>=0.001mg/l	2	
	LC50	96h	Fish	>0.003mg/l	2	
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity					
	4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) -					
	Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data					

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

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water. The oil film on water surface may physically affect the aquatic organisms, due to the interruption of the

oxygen transfer between the air and the water

Oils of any kind can cause:

+ drowning of water-fowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility

Iethal effects on fish by coating gill surfaces, preventing respiration

+ asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and

adverse aesthetic effects of fouled shoreline and beaches

In case of accidental releases on the soil, a fine film is formed on the soil, which prevents the plant respiration process and the soil particle saturation. It may cause deep water infestation.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Source of unsaturated substances Unsaturated substances (Reactive Emissions) For alkenes (olefins)

Major Stable Products produced following reaction with ozone.

Environmental fate:

The potential for exposure of aquatic organisms to members of the higher olefins will be influenced by their physico-chemical properties. The predicted or measured water solubilities of these olefins range from 50 mg/L at 20 C for hexene to 0.00015 mg/L at 25 C for 1-octadecene, and to 6.33 [E-23] mg/L at 25 C for C54 alpha olefin, which suggests there is a lower potential for the larger olefins to be bioavailable to aquatic organisms due to their low solubilities. Their vapor pressures range from 230.6 hPa at 25 C for hexene to 0.00009 hPa at 25 C for 1-octadecene, and to 1.13 [E-16] hPa at 25 C for C54 alpha olefin, which suggests the shorter chain olefins will tend to partition to the air at a significant rate and not remain in the other environmental compartments for long periods of time; while the longer chain olefins will tend to partition primarily to water, soil or sediment, depending on water solubility and sorption behavior. The predicted soil adsorption coefficients (Koc) range from 149 for C6 to 230,800 for C18 and to 1.0 [E10] for C54, indicating increasing partitioning to soil/sediment with increasing carbon number.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
1-decene	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
1-decene	HIGH (LogKOW = 5.7)

Mobility in soil

Ingredient	Mobility
1-decene	LOW (Log KOC = 1724)

SECTION 13 Disposal considerations

Waste treatment methods

	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked				
	operating in their area. In some areas, contain wastes must be tracked.				
	A Hierarchy of Controls seems to be common - the user should investigate:				
	Reduction				
	▶ Reuse				
	▶ Recycling				
	▶ Disposal (if all else fails)				
Product / Packaging	This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.				
disposal	DO NOT allow wash water from cleaning or process equipment to enter drains.				
	It may be necessary to collect all wash water for treatment before disposal.				
	In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.				
	Where in doubt contact the responsible authority.				
	 Recycle wherever possible or consult manufacturer for recycling options. 				
	 Consult State Land Waste Authority for disposal. 				
	 Bury or incinerate residue at an approved site. 				
	Recycle containers if possible, or dispose of in an authorised landfill.				

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

SECTION 14 Transport information

Labels Required



Marine Pollutant	
HAZCHEM	•3Z

Land transport (UN)

14.1. UN number or ID number	3082					
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains 1-decene)					
14.3. Transport hazard class(es)	Class Subsidiary Hazard	Class9Subsidiary HazardNot Applicable				
14.4. Packing group	III					
14.5. Environmental hazard	Environmentally hazardous					
14.6. Special precautions for user	Special provisions274; 331; 335; 375Limited quantity5 L					

Air transport (ICAO-IATA / DGR)

14.1. UN number	3082			
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains 1-decene)			
14.3. Transport hazard class(es)	ICAO/IATA Class9ICAO / IATA Subsidiary HazardNot ApplicableERG Code9L			
14.4. Packing group	III			
14.5. Environmental hazard	Environmentally hazardous			
	Special provisions		A97 A158 A197 A215	-
	Cargo Only Packing Instructions		964	-
14.6 Special processions	Cargo Only Maximum Qty / Pack		450 L	_
for user	Passenger and Cargo Packing Ir	structions	964	_
	Passenger and Cargo Maximum Qty / Pack		450 L	
	Passenger and Cargo Limited Qu	uantity Packing Instructions	Y964	
	Passenger and Cargo Limited Ma	aximum Qty / Pack	30 kg G	

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3082			
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains 1-decene)			
14.3. Transport hazard	IMDG Class		9	
class(es)	IMDG Subsidiary Hazard		Not Applicable	
14.4. Packing group	III			
14.5 Environmental hazard	Marine Pollutant			
	EMS Number	F-A ,	S-F	
14.6. Special precautions for user	Special provisions	274 3	335 969	
	Limited Quantities	5 L		

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
1-decene	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
1-decene	Not Available

SECTION 15 Regulatory information

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

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard	
HSR002606	Lubricants Lubricant Additives Coolants and Anti freeze Agents Subsidiary Hazard Group Standard 2020	

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

1-decene is found on the following regulatory lists

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Land Transport Rule; Dangerous Goods 2005 - Schedule 2 Dangerous Goods in Limited Quantities and Consumer Commodities

Additional Regulatory Information

Not Applicable

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantities
Not Applicable	Not Applicable

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (1-decene)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes

National Inventory	Status	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	/es	
Philippines - PICCS	Yes	
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (1-decene)	
Vietnam - NCI	Yes	
Russia - FBEPH	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

SECTION 16 Other information

Revision Date	19/09/2020
Initial Date	12/09/2014

SDS Version Summary

Version	Date of Update	Sections Updated
5.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
6.1	19/09/2020	Hazards identification - Classification, Ecological Information - Environmental, Transport Information

Other information

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

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

Definitions and abbreviations

- PC TWA: Permissible Concentration-Time Weighted Average
- PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit.
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory

- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- + FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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