



## Chain & Drive Fluid #238-6429 (NZ)

### RS Components

Chemwatch: 5370-20  
Version No: 2.1.1.1  
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 10/09/2019  
Print Date: 16/09/2019  
L.GHS.NZL.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

Product name	Chain & Drive Fluid #238-6429 (NZ)
Synonyms	Not Available
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains zinc bis(2-ethylhexyl)dithiophosphate)
Other means of identification	Not Available

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

Relevant identified uses	Lubricants, greases, release products.
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### Details of the supplier of the safety data sheet

Registered company name	RS Components
Address	PO Box 12-127 Penrose, Auckland New Zealand
Telephone	+64 27 4747122
Fax	+64 9 579 1700
Website	www.nz.rs-online.com
Email	Not Available

### Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+64 800 700 112
Other emergency telephone numbers	+61 2 9186 1132

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

Classification <sup>[1]</sup>	Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Chronic Aquatic Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	6.3A, 8.3A, 9.1B

### Label elements

Hazard pictogram(s)	
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SIGNAL WORD	DANGER
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### Hazard statement(s)

H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

### Precautionary statement(s) Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.

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## Chain &amp; Drive Fluid #238-6429 (NZ)

## Precautionary statement(s) Response

<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P310</b>	Immediately call a POISON CENTER/doctor/physician/first aider.
<b>P321</b>	Specific treatment (see advice on this label).
<b>P391</b>	Collect spillage.

## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
64742-62-7.	30-50	<u>residual oils, petroleum, solvent dewaxed</u>
64741-88-4.	30-50	<u>paraffinic distillate, heavy, solvent-refined (severe)</u>
57855-77-3	1-10	<u>calcium dinonyl naphthalenesulfonate</u>
4259-15-8	1-10	<u>zinc bis(2-ethylhexyl)dithiophosphate</u>

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>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.</li> <li>Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>Transport to hospital or doctor without delay.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li><b>If swallowed do NOT induce vomiting.</b></li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> </ul>

## Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

**NOTE:** Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

## Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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## Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
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## Chain &amp; Drive Fluid #238-6429 (NZ)

## 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 (CO<sub>2</sub>)phosphorus oxides (PO<sub>x</sub>)sulfur oxides (SO<sub>x</sub>)

other pyrolysis products typical of burning organic material.

**CARE:** Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

See section 8

## Environmental precautions

See section 12

## Methods and material for containment and cleaning up

## Minor Spills

Environmental hazard - contain spillage.

Slippery when spilt.

- ▶ Clean up all spills immediately.
- ▶ Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.
- ▶ Contain and absorb spill with sand, earth, inert material or vermiculite.

## Major Spills

Environmental hazard - contain spillage.

Slippery when spilt.

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.
- ▶ Store in a cool, dry, well-ventilated area.
- ▶ Store away from incompatible materials and foodstuff containers.

## 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

**CARE:** Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.

- ▶ Avoid reaction with oxidising agents

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	residual oils, petroleum, solvent dewaxed	Oil mist, mineral	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	Not Available	(om) - Sampled by a method that does not collect vapour.

## EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Chain & Drive Fluid #238-6429 (NZ)	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
residual oils, petroleum, solvent dewaxed	2,500 mg/m <sup>3</sup>	Not Available


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## Chain &amp; Drive Fluid #238-6429 (NZ)

paraffinic distillate, heavy, solvent-refined (severe)	Not Available	Not Available
calcium dinonyl naphthalenesulfonate	Not Available	Not Available
zinc bis(2-ethylhexyl)dithiophosphate	Not Available	Not Available

## MATERIAL DATA

## Exposure controls

Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>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.</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care.</p>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> <li>Overalls.</li> <li>P.V.C. apron.</li> <li>Barrier cream.</li> </ul>

## Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), 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	Yellow-brown liquid with characteristic odour; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	0.93
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	>150
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	<-20	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	>150	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	>150	Taste	Not Available

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## Chain &amp; Drive Fluid #238-6429 (NZ)

Evaporation rate	Negligible	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 Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
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

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Inhalation hazard is increased at higher temperatures. Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis.
Ingestion	Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	<p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
Chronic	<p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Limited evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a significant number of individuals at a greater frequency than would be expected from the response of a normal population.</p> <p>Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking.</p> <p>Principal route of exposure is by skin contact; lesser exposures include inhalation of fumes from hot oils, oil mists or droplets. Prolonged contact with mineral oils carries with it the risk of skin conditions such as oil folliculitis, eczematous dermatitis, pigmentation of the face (melanosis) and warts on the sole of the foot (plantar warts). With highly refined mineral oils no appreciable systemic effects appear to result through skin absorption.</p> <p>Exposure to oil mists frequently elicits respiratory conditions, such as asthma; the provoking agent is probably an additive.</p> <p>Prolonged or repeated skin contact may cause degreasing with drying, cracking and dermatitis following.</p> <p>Principal route of exposure is by skin contact; lesser exposures include inhalation of fumes from hot oils, oil mists or droplets. Prolonged contact with mineral oils carries with it the risk of skin conditions such as oil folliculitis, eczematous dermatitis, pigmentation of the face (melanosis) and warts on the sole of the foot (plantar warts). With highly refined mineral oils no appreciable systemic effects appear to result through skin absorption.</p> <p>Exposure to oil mists frequently elicits respiratory conditions, such as asthma; the provoking agent is probably an additive.</p>

Chain & Drive Fluid #238-6429 (NZ)	TOXICITY	IRRITATION
	Not Available	Not Available
residual oils, petroleum, solvent dewaxed	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Inhalation (rat) LC50: >5.3 mg/l4 h <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
paraffinic distillate, heavy, solvent-refined (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Inhalation (rat) LC50: >5.3 mg/l4 h <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>

## Chain &amp; Drive Fluid #238-6429 (NZ)

	Oral (rat) LD50: >5000 mg/kg <sup>[2]</sup>	
calcium dinonyl naphthalenesulfonate	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >20000 mg/kg <sup>[2]</sup>	Not Available
	Inhalation (rat) LC50: >4.5 mg/l <sup>[2]</sup>	
	Oral (rat) LD50: >5000 mg/kg <sup>[2]</sup>	
zinc bis(2-ethylhexyl)dithiophosphate	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >5000 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
	Oral (rat) LD50: >2000-5000 mg/kg <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>Legend:</b>	1. 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	

<b>RESIDUAL OILS, PETROLEUM, SOLVENT DEWAXED</b>	<p><b>Residual Base Oils</b></p> <p>Residual oils have substantial polycyclic aromatic compound (PAC) levels when assayed by traditional methods. On this basis, they would be expected to have mutagenic and/or carcinogenic activity. However, no adverse effects have been seen in either in vitro mutagenicity or dermal carcinogenicity testing of residual base oils, irrespective of the degree of processing they have undergone. Ultraviolet, HPLC/UV, GC/MS, and infrared analyses of these oils indicate that the aromatics they contain are predominantly 1-3 rings that are highly alkylated (paraffinic and naphthenic).</p>
<b>PARAFFINIC DISTILLATE, HEAVY, SOLVENT-REFINED (SEVERE)</b>	<p>The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>
<b>CALCIUM DINONYL NAPHTHALENESULFONATE</b>	<p>For dinonylnaphthalenes: The chemicals exhibit a very low order of toxicity to rats or rabbits by the oral, inhalation, or dermal routes. Human sensitisation study results are available for two members of the category (dinonylnaphthalene sulfonic acid, calcium salt; dinonylnaphthalene sulfonic acid, barium salt). Neither is a sensitiser. Based on the available toxicity results, dinonylnaphthalene sulfonic acid, barium salt appears to be the most biologically active member of the category. for alkaryl sulfonate petroleum additives: <b>Mammalian Toxicology - Acute.</b> Existing data on acute mammalian toxicity indicates a low concern for acute toxicity. Acute oral toxicity: In all but one studies, there were no deaths that could be attributed to treatment with the test material when administered at the limit dose of 2000 or 5000 mg/kg. In some studies, the primary clinical observations were diarrhea and reduced food consumption (without a change in body weight). 551dhnnsa Linear alkylbenzene sulfonates (LAS) are classified as Irritant (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious damage to eyes) according to CESIO (CESIO 2000). LAS are not included in Annex 1 of list of dangerous substances of Council Directive 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids (pKa&lt;2) are classified as corrosive (R34) <b>Acute toxicity:</b> The available data indicate minimal to moderate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). Acute inhalation data also indicate a lack of significant toxicity. Available dermal exposure data also shows a lack of significant toxicity.</p>
<b>ZINC BIS(2-ETHYLHEXYL)DITHIOPHOSPHATE</b>	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. For dithiophosphate alkyl esters and their (zinc) salts: <b>Acute toxicity:</b> Dithiophosphate alkyl esters consist of a phosphorodithioic acid structure with alkyl ester substituent groups. The alkyl groups are saturated hydrocarbon chains that vary in length and extent of branching. While corrosive to tissue the esters demonstrate a low concern for acute systemic toxicity. Data on acute mammalian toxicity of zinc dialkylidithiophosphates in highly refined lubricant base oil also indicate a low concern for acute toxicity.</p>
<b>RESIDUAL OILS, PETROLEUM, SOLVENT DEWAXED &amp; PARAFFINIC DISTILLATE, HEAVY, SOLVENT-REFINED (SEVERE)</b>	<p>The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives; The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since: - The adverse effects of these materials are associated with undesirable components, and - The levels of the undesirable components are inversely related to the degree of processing; - Distillate base oils receiving the same degree or extent of processing will have similar toxicities; - The potential toxicity of <i>residual base oils</i> is independent of the degree of processing the oil receives. - The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing. The degree of refining influences the carcinogenic potential of the oils. Whereas mild acid / earth refining processes are inadequate to substantially reduce the carcinogenic potential of lubricant base oils, hydrotreatment and / or solvent extraction methods can yield oils with no carcinogenic potential. Highly and Severely Refined Distillate Base Oils <b>Acute toxicity:</b> Multiple studies of the acute toxicity of highly &amp; severely refined base oils have been reported. Irrespective of the crude source or the method or extent of processing, the oral LD50s have been observed to be &gt;5 g/kg (bw) and the dermal LD50s have ranged from &gt;2 to &gt;5g/kg (bw). The LC50 for inhalation toxicity ranged from 2.18 mg/l to &gt; 4 mg/l. When tested for skin and eye irritation, the materials have been reported as "non-irritating" to "moderately irritating" Testing in guinea pigs for sensitization has been negative <b>Repeat dose toxicity:</b> .</p>
<b>RESIDUAL OILS, PETROLEUM, SOLVENT DEWAXED &amp; PARAFFINIC DISTILLATE, HEAVY, SOLVENT-REFINED (SEVERE) &amp; CALCIUM DINONYL NAPHTHALENESULFONATE &amp; ZINC BIS(2-ETHYLHEXYL)DITHIOPHOSPHATE</b>	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✗
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✗
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✗

## Chain &amp; Drive Fluid #238-6429 (NZ)

Mutagenicity ✖

Aspiration Hazard ✖

Legend: ✖ – Data either not available or does not fill the criteria for classification  
 ✔ – Data available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Chain & Drive Fluid #238-6429 (NZ)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
residual oils, petroleum, solvent dewaxed	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>100mg/L	2
	EC50	48	Crustacea	>10-mg/L	2
	NOEC	504	Crustacea	>1mg/L	1
paraffinic distillate, heavy, solvent-refined (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>100mg/L	2
	EC50	48	Crustacea	>10-mg/L	2
	EC50	96	Algae or other aquatic plants	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
calcium dinonyl naphthalenesulfonate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
zinc bis(2-ethylhexyl)dithiophosphate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	4.4mg/L	2
	EC50	48	Crustacea	≈11.5mg/L	1
	EC50	96	Algae or other aquatic plants	≈1-5mg/L	1
	NOEC	504	Crustacea	0.4mg/L	2
<b>Legend:</b> Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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					

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

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

## Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

## Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

Product / Packaging disposal	
	<ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains.</li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Authority for disposal.</li> <li>▶ Bury or incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul>

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



Continued...

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)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains zinc bis(2-ethylhexyl)dithiophosphate)
Transport hazard class(es)	Class : 9 Subrisk : Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions : 274; 331; 335; 375 Limited quantity : 5 L

### Air transport (ICAO-IATA / DGR)

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains zinc bis(2-ethylhexyl)dithiophosphate)
Transport hazard class(es)	ICAO/IATA Class : 9 ICAO / IATA Subrisk : Not Applicable ERG Code : 9L
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions : A97 A158 A197 Cargo Only Packing Instructions : 964 Cargo Only Maximum Qty / Pack : 450 L Passenger and Cargo Packing Instructions : 964 Passenger and Cargo Maximum Qty / Pack : 450 L Passenger and Cargo Limited Quantity Packing Instructions : Y964 Passenger and Cargo Limited Maximum Qty / Pack : 30 kg G

### Sea transport (IMDG-Code / GGVSee)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains zinc bis(2-ethylhexyl)dithiophosphate)
Transport hazard class(es)	IMDG Class : 9 IMDG Subrisk : Not Applicable
Packing group	III
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number : F-A , S-F Special provisions : 274 335 969 Limited Quantities : 5 L

### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Continued...



## Chain &amp; Drive Fluid #238-6429 (NZ)

## 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
HSR002624	N.O.S. (Subsidiary Hazard) Group Standard 2017
HSR002535	Gas Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2017
HSR002596	Laboratory Chemicals and Reagent Kits Group Standard 2017
HSR002530	Cleaning Products (Subsidiary Hazard) Group Standard 2017
HSR002585	Fuel Additives (Subsidiary Hazard) Group Standard 2017
HSR002519	Aerosols (Subsidiary Hazard) Group Standard 2017
HSR002521	Animal Nutritional and Animal Care Products Group Standard 2017
HSR002606	Lubricants, Lubricant Additives, Coolants and Anti-freeze Agents (Subsidiary Hazard) Group Standard 2017
HSR002644	Polymers (Subsidiary Hazard) Group Standard 2017
HSR002647	Reagent Kits Group Standard 2017
HSR002670	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2017
HSR002638	Photographic Chemicals (Subsidiary Hazard) Group Standard 2017
HSR002565	Embalming Products (Subsidiary Hazard) Group Standard 2017
HSR002578	Food Additives and Fragrance Materials (Subsidiary Hazard) Group Standard 2017
HSR002558	Dental Products (Subsidiary Hazard) Group Standard 2017
HSR002684	Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2017
HSR002573	Fire Fighting Chemicals Group Standard 2017
HSR100425	Pharmaceutical Active Ingredients Group Standard 2017
HSR002600	Leather and Textile Products (Subsidiary Hazard) Group Standard 2017
HSR002571	Fertilisers (Subsidiary Hazard) Group Standard 2017
HSR002648	Refining Catalysts Group Standard 2017
HSR002653	Solvents (Subsidiary Hazard) Group Standard 2017
HSR002544	Construction Products (Subsidiary Hazard) Group Standard 2017
HSR002549	Corrosion Inhibitors (Subsidiary Hazard) Group Standard 2017
HSR100757	Veterinary Medicine (Limited Pack Size, Finished Dose) Standard 2017
HSR100758	Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2017
HSR100759	Veterinary Medicines (Non-dispersive Open System Application) Group Standard 2017
HSR100580	Tattoo and Permanent Makeup Substances Group Standard 2017
HSR002612	Metal Industry Products (Subsidiary Hazard) Group Standard 2017
HSR002503	Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2017
HSR002552	Cosmetic Products Group Standard 2017

## RESIDUAL OILS, PETROLEUM, SOLVENT DEWAXED IS FOUND ON THE FOLLOWING REGULATORY LISTS

IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International FOSFA List of Banned Immediate Previous Cargoes

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

## PARAFFINIC DISTILLATE, HEAVY, SOLVENT-REFINED (SEVERE) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)

## CALCIUM DINONYL NAPHTHALENESULFONATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards

New Zealand Inventory of Chemicals (NZIoC)

## ZINC BIS(2-ETHYLHEXYL)DITHIOPHOSPHATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

## Hazardous Substance Location

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

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
Not Applicable	Not Applicable	Not Applicable

## Certified Handler

Continued...

## Chain &amp; Drive Fluid #238-6429 (NZ)

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

### Tracking Requirements

Not Applicable

### National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (residual oils, petroleum, solvent dewaxed; zinc bis(2-ethylhexyl)dithiophosphate; calcium dinonyl naphthalenesulfonate; paraffinic distillate, heavy, solvent-refined (severe))
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (zinc bis(2-ethylhexyl)dithiophosphate; calcium dinonyl naphthalenesulfonate)
Vietnam - NCI	Yes
Russia - ARIPS	Yes
<b>Legend:</b>	<p>Yes = All CAS declared ingredients are on the inventory</p> <p>No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</p>

### SECTION 16 OTHER INFORMATION

<b>Revision Date</b>	10/09/2019
<b>Initial Date</b>	10/09/2019

### 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  
 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

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