

Fleetguard Compleat 50 Concentrate

Fleetguard

Chemwatch Hazard Alert Code: 2

Chemwatch: 13796

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Safety Data Sheet according to WHS and ADG requirements

S.GHS.AUS.EN

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

Product Identifier

Product name	Fleetguard Compleat 50 Concentrate
Chemical Name	ethylene glycol
Synonyms	Inhibited ethylene glycol base antifreeze misspelling as complete
Other means of identification	Not Available

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

Relevant identified uses	<ul style="list-style-type: none"> Material is mixed and used in accordance with manufacturers directions Inhibited Cooling system antifreeze concentrate
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Details of the supplier of the safety data sheet

Registered company name	Fleetguard
Address	31 Garden Street Kilsyth VIC 3137 Australia
Telephone	+61 3 9721 9100
Fax	+61 3 9721 9148
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	+61 3 9573 3112
Other emergency telephone numbers	Not Available

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

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

Poisons Schedule	S5
Classification ^[1]	Acute Toxicity (Oral) Category 4
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

Fleetguard Compleat 50 Concentrate

GHS label elements	
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SIGNAL WORD	WARNING
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Hazard statement(s)

H302	Harmful if swallowed.
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Precautionary statement(s) Prevention

P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

Precautionary statement(s) Response

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	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
107-21-1	95-97	<u>ethylene glycol</u>
Not Available	1-3	corrosion inhibitor (DCA4)
		contains minor amounts of
		potassium phosphate as
7778-77-0	< 1 ^	<u>potassium phosphate, monobasic</u>
7632-00-0	< 1 ^	<u>sodium nitrite</u>
7631-99-4	< 1 ^	<u>sodium nitrate</u>
7631-95-0	< 1 ^	<u>sodium molybdate</u>
		sodium silicate as
10213-79-3	< 1 ^	<u>sodium metasilicate, pentahydrate</u>
7732-18-5	2-4	<u>water</u>
		NOTE: Manufacturer has supplied full ingredient
		information to allow CHEMWATCH assessment.

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available).

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	<ul style="list-style-type: none"> ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ 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	<p>Rinse mouth out with plenty of water.</p> <p>If poisoning occurs, contact a doctor or Poisons Information Centre.</p> <ul style="list-style-type: none"> ▶ IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. ▶ For advice, contact a Poisons Information Centre or a doctor. <p>Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</p> <ul style="list-style-type: none"> ▶ Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS. ▶ Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration. <p>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> ▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to ethylene glycol:

- ▶ Early treatment of ingestion is important. Ensure emesis is satisfactory.
- ▶ Test and correct for metabolic acidosis and hypocalcaemia.
- ▶ Apply sustained diuresis when possible with hypertonic mannitol.
- ▶ Evaluate renal status and begin haemodialysis if indicated. [I.L.O]
- ▶ Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- ▶ Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- ▶ Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- ▶ Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- ▶ Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.

Laitinen J., et al: Occupational & Environmental Medicine 1996; 53, 595-600

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Water spray or fog.

Bromochlorodifluoromethane (BCF) (where regulations permit).

- ▶ Dry chemical powder.

Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	Avoid contact with strong oxidisers, strong alkalis and strong acids
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ 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. <p>Equipment should be thoroughly decontaminated after use.</p>
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ 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).
HAZCHEM	Not Applicable

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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	<p>Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Contain and absorb spill with sand, earth, inert material or vermiculite. Place spilled material in clean, dry, sealable, labelled container. Wash spill area with large quantities of water.</p>
Major Spills	<p>Remove all ignition sources. Minor hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Control personal contact with the substance, by using protective equipment as required.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<p>Segregate from strong oxidisers strong alkalis</p>

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ethylene glycol	Ethylene glycol (particulate) / Ethylene glycol (vapour)	10 mg/m3 / 52 mg/m3 / 20 ppm	104 mg/m3 / 40 ppm	Not Available	Sk
Australia Exposure Standards	sodium molybdate	Molybdenum, soluble compounds (as Mo)	5 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

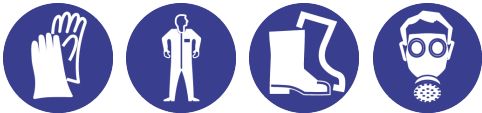
Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ethylene glycol	Ethylene glycol	10 ppm	40 ppm	60 ppm
potassium phosphate, monobasic	Potassium phosphate, monobasic	29 mg/m3	320 mg/m3	1900 mg/m3

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sodium nitrite	Sodium nitrite	2.3 mg/m3	26 mg/m3	280 mg/m3
sodium nitrate	Sodium nitrate	12 mg/m3	130 mg/m3	250 mg/m3
sodium molybdate	Sodium molybdate dihydrate; (Disodium molybdate dihydrate)	2.9 mg/m3	2.9 mg/m3	210 mg/m3
sodium molybdate	Molybdic acid, disodium salt; (Disodium molybdate)	1.1 mg/m3	1.1 mg/m3	230 mg/m3
sodium metasilicate, pentahydrate	Sodium metasilicate pentahydrate	45 mg/m3	45 mg/m3	170 mg/m3
sodium metasilicate, pentahydrate	Sodium silicate; (Sodium metasilicate)	18 mg/m3	230 mg/m3	230 mg/m3

Ingredient	Original IDLH	Revised IDLH
ethylene glycol	Not Available	Not Available
corrosion inhibitor (DCA4)	Not Available	Not Available
potassium phosphate, monobasic	Not Available	Not Available
sodium nitrite	Not Available	Not Available
sodium nitrate	Not Available	Not Available
sodium molybdate	N.E. mg/m3 / N.E. ppm	1,000 mg/m3
sodium metasilicate, pentahydrate	Not Available	Not Available
water	Not Available	Not Available

Exposure controls

Appropriate engineering controls	<p>Use in a well-ventilated area</p> <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"> ▶ Safety glasses with side shields ▶ Chemical goggles ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> ▶ Barrier cream with polyethylene gloves <p>or</p> <ul style="list-style-type: none"> ▶ PVC gloves ▶ Neoprene rubber gloves ▶ Nitrile rubber gloves ▶ Protective footwear
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ Eyewash unit.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the: **"Forsberg Clothing Performance Index"**. The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:
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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

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Material	CPI
BUTYL	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE/EVAL/PE	C
PVA	C
PVC	C
TEFLON	C
VITON	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	A-AUS / Class 1 P2	-	A-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	A-2 P2	A-PAPR-2 P2
up to 50 x ES	-	A-3 P2	-
50+ x ES	-	Air-line**	-

^ - 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(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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Blue liquid with a mild odour; mixes with water.[Odour threshold 25 ppm.		
Physical state	Liquid	Relative density (Water = 1)	1.12-1.13
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	400 approx.
pH (as supplied)	Not Available	Decomposition temperature	Not available.
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	111 (glycol)	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 (g/L)	Miscible	pH as a solution (1%)	Not available.
Vapour density (Air = 1)	> 2	VOC g/L	1076.7

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
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Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. <p> Can react violently with oleum, sulphuric acid and perchloric acid.</p>
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	<p>Not normally a hazard due to non-volatile nature of product</p> <p>The vapour is mildly discomforting if inhaled</p> <p>Inhalation of vapour is more likely at higher than normal temperatures.</p> <p>The vapour from heated material is discomforting to the upper respiratory tract and may be harmful and if exposure is prolonged Inhalation of vapour may result in nausea, headache</p>
Ingestion	<p>Considered an unlikely route of entry in commercial/industrial environments</p> <p>The material is harmful and may be fatal if swallowed Ingestion may result in nausea, abdominal irritation, pain and vomiting Ingestion symptoms include respiratory failure, central nervous depression, cardiovascular collapse, pulmonary oedema, acute kidney failure. Ingestion of 100 ml ethylene glycol concentrate may cause death.</p>
Skin Contact	<p>Excessive use or prolonged contact may lead to defatting, drying and irritation of sensitive skin</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p>
Eye	<p>The vapour and liquid both produce eye discomfort. Tearing and reddening of the eyes are symptomatic of overexposure. Higher levels of vapour are generated with increased temperature and engineering controls should be introduced when any discomfort is experienced following exposure to mists or vapour.</p> <p>The liquid is discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/ or other transient eye damage/ ulceration</p> <p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>
Chronic	<p>Principal routes of exposure are usually by skin contact with the material or inhalation of vapour from heated material accidental ingestion</p> <p>As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.</p>

Fleetguard Compleat 50 Concentrate	TOXICITY	IRRITATION
	Not Available	Not Available
ethylene glycol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 9530 mg/kg ^[2]	Eye (rabbit): 100 mg/1h - mild
	Inhalation (rat) LC50: 50.1 mg/L/8 hr ^[2]	Eye (rabbit): 12 mg/m3/3D
	Oral (rat) LD50: 4700 mg/kg ^[2]	Eye (rabbit): 1440mg/6h-moderate
		Eye (rabbit): 500 mg/24h - mild

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		Skin (rabbit): 555 mg(open)-mild
potassium phosphate, monobasic	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Not Available
	Oral (rat) LD50: 7.4 gm ^[1]	
sodium nitrite	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 0.0055 mg/L/4hr ^[2]	Eye (rabbit): 500 mg/24hr - mild
	Oral (rat) LD50: 157.9 mg/kg ^[2]	
sodium nitrate	TOXICITY	IRRITATION
	dermal (rat) LD50: >5000 mg/kg ^[1]	Nil reported
	Oral (rat) LD50: 1267 mg/kg ^[2]	
sodium molybdate	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >2.08 mg/L/4hr ^[2]	
sodium metasilicate, pentahydrate	TOXICITY	IRRITATION
	Oral (rat) LD50: 847 mg/kg ^[2]	Skin (human): 250 mg/24h SEVERE
		Skin (rabbit): 250 mg/24h SEVERE
water	TOXICITY	IRRITATION
	Oral (rat) LD50: >90000 mg/kg ^[2]	Not Available
Legend:	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	

ETHYLENE GLYCOL	For ethylene glycol: Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow. Following absorption, ethylene glycol is distributed throughout the body according to total body water. In most mammalian species, including humans, ethylene glycol is initially metabolised by alcohol. [Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells.
POTASSIUM PHOSPHATE, MONOBASIC	No data of toxicological significance identified in literature search.
SODIUM NITRITE	Tumorigenic - Carcinogenic by RTECS criteria.
SODIUM METASILICATE, PENTAHYDRATE	The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. sodium metasilicate anhydrous:
WATER	No significant acute toxicological data identified in literature search.
SODIUM NITRITE & SODIUM METASILICATE, PENTAHYDRATE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
SODIUM NITRATE & SODIUM MOLYBDATE & SODIUM METASILICATE, PENTAHYDRATE	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

Acute Toxicity	✔	Carcinogenicity	⊘
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Skin Irritation/Corrosion	⊖	Reproductivity	⊖
Serious Eye Damage/Irritation	⊖	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend: ✘ – Data available but does not fill the criteria for classification
✔ – Data required to make classification available
⊖ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
ethylene glycol	LC50	96	Fish	2284.940mg/L	3
ethylene glycol	EC50	48	Crustacea	>100mg/L	2
ethylene glycol	EC50	96	Algae or other aquatic plants	3536mg/L	2
ethylene glycol	EC50	Not Applicable	Crustacea	=10mg/L	1
ethylene glycol	NOEC	72	Algae or other aquatic plants	>100mg/L	2
potassium phosphate, monobasic	LC50	96	Fish	>100mg/L	2
potassium phosphate, monobasic	EC50	48	Crustacea	>100mg/L	2
potassium phosphate, monobasic	EC50	72	Algae or other aquatic plants	>100mg/L	2
potassium phosphate, monobasic	EC50	48	Algae or other aquatic plants	300mg/L	2
potassium phosphate, monobasic	NOEC	72	Algae or other aquatic plants	>100mg/L	2
sodium nitrite	LC50	96	Fish	0.048mg/L	4
sodium nitrite	EC50	48	Crustacea	ca.12.5100mg/L	1
sodium nitrite	EC50	96	Algae or other aquatic plants	12.537mg/L	3
sodium nitrite	EC50	216	Crustacea	1.8mg/L	4
sodium nitrite	NOEC	2	Fish	0.02mg/L	4
sodium nitrate	LC50	96	Fish	>98.9mg/L	2
sodium nitrate	EC50	48	Crustacea	3581mg/L	2
sodium nitrate	EC50	96	Algae or other aquatic plants	1181.887mg/L	3
sodium nitrate	EC50	384	Crustacea	49.116mg/L	3
sodium nitrate	NOEC	2880	Fish	1.6mg/L	4
sodium molybdate	LC50	96	Fish	18.452mg/L	3
sodium molybdate	EC50	48	Crustacea	130.9mg/L	2
sodium molybdate	EC50	72	Algae or other aquatic plants	26mg/L	2
sodium molybdate	BCF	168	Algae or other aquatic plants	0.025mg/L	4
sodium molybdate	EC50	288	Algae or other aquatic plants	2.5mg/L	2
sodium molybdate	NOEC	672	Crustacea	0.67mg/L	2
sodium metasilicate, pentahydrate	LC50	96	Fish	180mg/L	1
sodium metasilicate, pentahydrate	EC50	48	Crustacea	1700mg/L	2
sodium metasilicate, pentahydrate	EC50	72	Algae or other aquatic plants	207mg/L	2
sodium metasilicate, pentahydrate	EC50	96	Crustacea	160mg/L	1
water	LC50	96	Fish	897.520mg/L	3
water	EC50	96	Algae or other aquatic plants	8768.874mg/L	3

Continued...

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water	EC50	384	Crustacea	199.179mg/L	3
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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				

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol	LOW (Half-life = 24 days)	LOW (Half-life = 3.46 days)
sodium nitrite	LOW	LOW
sodium nitrate	LOW	LOW
sodium molybdate	HIGH	HIGH
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
ethylene glycol	LOW (BCF = 200)
sodium nitrite	LOW (LogKOW = 0.0564)
sodium nitrate	LOW (LogKOW = 0.209)
sodium molybdate	LOW (LogKOW = 2.229)
water	LOW (LogKOW = -1.38)

Mobility in soil

Ingredient	Mobility
ethylene glycol	HIGH (KOC = 1)
sodium nitrite	LOW (KOC = 23.74)
sodium nitrate	LOW (KOC = 14.3)
sodium molybdate	LOW (KOC = 48.64)
water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Consult manufacturer for recycling options and recycle where possible . ▶ Consult State Land Waste Management Authority for disposal. ▶ Incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

Fleetguard Compleat 50 Concentrate

Safety, health and environmental regulations / legislation specific for the substance or mixture**ETHYLENE GLYCOL(107-21-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

POTASSIUM PHOSPHATE, MONOBASIC(7778-77-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SODIUM NITRITE(7632-00-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

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

Australia Inventory of Chemical Substances (AICS)

SODIUM NITRATE(7631-99-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SODIUM MOLYBDATE(7631-95-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

SODIUM METASILICATE, PENTAHYDRATE(10213-79-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (sodium metasilicate, pentahydrate; sodium molybdate; potassium phosphate, monobasic; water; sodium nitrite; ethylene glycol; sodium nitrate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

Name	CAS No
sodium molybdate	7631-95-0, 10102-40-6

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

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

Continued...

Fleetguard Compleat 50 Concentrate

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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