



ORIGINAL PART

MICHELIN COMPRESSOR OIL

A ARIA C

Chemwatch: 5439-15

Version No: 3.1

Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

Issue Date: **05/12/2024**

Print Date: **06/05/2025**

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

1.1. Product Identifier

Product name	MICHELIN COMPRESSOR OIL
Chemical Name	Not Applicable
Synonyms	0017530065, 1126002671, 1126002674
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Compressor oil
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or importer of the safety data sheet

Registered company name	A ARIA C
Address	Via Cristoforo Colombo 3 Zona Industriale di Robassomero Torino Italy
Telephone	+3234019777
Fax	Not Available
Website	Not Available
Email	Not Available

1.4. Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	+32 2 700 63 06 (ID#: 5439-15)
Other emergency telephone number(s)	+61 3 9573 3188

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments ^[1]	Non hazardous
Legend:	1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

2.2. Label elements

Hazard pictogram(s)	Not Applicable
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Signal word	Not Applicable
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Hazard statement(s)

Not Applicable

Supplementary statement(s)

EUH208	Contains calcium alkaryl sulfonate. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

Material contains interchangeable low viscosity base oil (<20.5 cSt @40C), calcium alkaryl sulfonate, calcium alkaryl sulfonate (polymer exempt).

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients**3.1.Substances**

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1. CAS No 2. EC No 3. Index No 4. REACH No	% [weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M- Factor	Nanoform Particle Characteristics
1. Not Available 2. Not Available 3. Not Available 4. Not Available	0-90	<u>interchangeable low viscosity base oil (<20.5 cSt @40C)</u>	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
Not Available		(DMSO <3% w/w - IP346)	Not Applicable	Not Applicable	Not Available
Not Available		* contains one or more of the following CAS-numbers (REACH registration numbers):	Not Applicable	Not Applicable	Not Available
Not Available		64742-53-6 (01-2119480375- 34), 64742-54-7 (01- 2119484627-25),	Not Applicable	Not Applicable	Not Available
Not Available		64742-55-8 (01-2119487077- 29), 64742-56-9 (01- 2119480132-48),	Not Applicable	Not Applicable	Not Available
Not Available		64742-65-0 (01-2119471299- 27), 68037-01-4 (01- 2119486452-34),	Not Applicable	Not Applicable	Not Available
Not Available		72623-86-0 (01-2119474878- 16), 72623-87-1 (01- 2119474889-13),	Not Applicable	Not Applicable	Not Available
Not Available		8042-47-5 (01-2119487078- 27), 848301-69-9 (01- 0000020163-82)	Not Applicable	Not Applicable	Not Available

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1. CAS No 2. EC No 3. Index No 4. REACH No	% [weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
1. 147880-09-9 2. Not Available 3. Not Available 4. Not Available	1-5	<u>polyolefin polyamine succinimide</u>	Hazardous to the Aquatic Environment Long-Term Hazard Category 4; H413 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 68784-31-6 2. 272-238-5 3. Not Available 4. Not Available	1-2.49	<u>zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate</u>	Serious Eye Damage/Eye Irritation Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 2; H318, H411 [1]	SCL: Not Available Acute M factor: 1 Chronic M factor: Not Applicable	Not Available
1. Not Available 2. Not Applicable 3. Not Applicable 4. Not Available	0.1-0.99	<u>calcium alkaryl sulfonate</u>	Sensitisation (Skin) Category 1B, Hazardous to the Aquatic Environment Long-Term Hazard Category 4; H317, H413 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. Not Available 2. Not Applicable 3. Not Applicable 4. Not Available	0.1-0.99	<u>calcium alkaryl sulfonate (polymer exempt)</u>	Sensitisation (Skin) Category 1B, Hazardous to the Aquatic Environment Long-Term Hazard Category 4; H317, H413 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
Not Available	1-2.49	Ingredients determined not to be hazardous	Not Applicable	Not Applicable	Not Available
Legend:		1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties			

SECTION 4 First aid measures

4.1. 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). ▶ 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. ▶ Prosthesis 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	<ul style="list-style-type: none"> ▶ 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.

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- ▶ Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. 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

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

Do not use water jets.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	<ul style="list-style-type: none"> ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result ▶ Extremely high temperatures.
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5.3. 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. ▶ Avoid spraying water onto liquid pools.
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). ▶ May emit acrid smoke. <p>Combustion products include: carbon dioxide (CO₂) other pyrolysis products typical of burning organic material.</p> <p>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.</p>

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	<p>Slippery when spilt.</p> <ul style="list-style-type: none"> ▶ 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. ▶ Contain and absorb spill with sand, earth, inert material or vermiculite.
Major Spills	<p>Slippery when spilt. Moderate hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ 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.

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6.4. Reference to other sections

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

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ 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. ▶ DO NOT enter confined spaces until atmosphere has been checked.
Fire and explosion protection	See section 5
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. ▶ Store away from incompatible materials and foodstuff containers. <p>Do not store in direct sunlight.</p>

7.2. 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	<ul style="list-style-type: none"> · 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. · Oil leaks in a pressurized circuit may result in a fine flammable spray (the lower flammability limit for oil mist is reached for a concentration of about 45 g/m3 · Autoignition temperatures may be significantly lower under particular conditions (slow oxidation on finely divided materials.. <ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents ▶ Extremely high temperatures.
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Dermal 10.42 mg/kg bw/day (Systemic, Chronic) Inhalation 2.93 mg/m ³ (Systemic, Chronic) Dermal 100 mg/kg bw/day (Systemic, Acute) Inhalation 496.4 mg/m ³ (Systemic, Acute) <i>Dermal 2.1 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.01175 mg/m³ (Systemic, Chronic) *</i> <i>Oral 0.21 mg/kg bw/day (Systemic, Chronic) *</i> <i>Dermal 50 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 198.6 mg/m³ (Systemic, Acute) *</i> <i>Oral 29 mg/kg bw/day (Systemic, Acute) *</i>	0.004 mg/L (Water (Fresh)) 0.044 mg/L (Water - Intermittent release) 0.0046 mg/L (Water (Marine)) 0.07 mg/kg sediment dw (Sediment (Fresh Water)) 0.007 mg/kg sediment dw (Sediment (Marine)) 0.055 mg/kg soil dw (Soil) 3.8 mg/L (STP) 8.33 mg/kg food (Oral)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

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Source	Ingredient	Material name	TWA	STEL	Peak	Notes
European Union Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work	interchangeable low viscosity base oil (<20.5 cSt @40C)	Mineral oils that have been used before in internal combustion engines to lubricate and cool the moving parts within the engine	Not Available	Not Available	Not Available	(10) Substantial contribution to the total body burden via dermal exposure possible.
Belgium Occupational Exposure Limits (French)	interchangeable low viscosity base oil (<20.5 cSt @40C)	Huiles minérales (brouillards)	5 mg/m3	10 mg/m3	Not Available	Not Available
Belgium Occupational Exposure Limits (French)	zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Particules non classifiées autrement (fraction alvéolaire)	3 mg/m3	Not Available	Not Available	Not Available
Belgium Occupational Exposure Limits (French)	zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Particules non classifiées autrement (fraction inhalable)	10 mg/m3	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
interchangeable low viscosity base oil (<20.5 cSt @40C)	2,500 mg/m3	Not Available
polyolefin polyamine succinimide	Not Available	Not Available
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Not Available	Not Available
calcium alkaryl sulfonate	Not Available	Not Available
calcium alkaryl sulfonate (polymer exempt)	Not Available	Not Available

MATERIAL DATA

8.2. Exposure controls

8.2.1. 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. Ventilation can remove or dilute an air contaminant if designed properly.</p>
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul style="list-style-type: none"> ▶ 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. 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	<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. Gloves must only be worn on clean hands.</p> <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C apron. ▶ Barrier cream. ▶ Skin cleansing cream. ▶ Eye wash unit.

Respiratory protection

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- ▶ 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

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Amber liquid, slight hydrocarbon odour		
Physical state	Liquid	Relative density (Water = 1)	0.886 @ 15C
Odour	Not Available	Partition coefficient n-octanol / water	>6
Odour threshold	Not Available	Auto-ignition temperature (°C)	>320
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	-33 (pour pt)	Viscosity (cSt)	105.1 @ 40C
Initial boiling point and boiling range (°C)	>280	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	230 (COC)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	10.0	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.0	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	<0.0005 @ 20C	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	>1	VOC g/L	0 (%)
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
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available
Particle Size	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	Inhalation hazard is increased at higher temperatures. Not normally a hazard due to non-volatile nature of product Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting.
Skin Contact	The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives . Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	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. Exposure to oil mists frequently elicits respiratory conditions, such as asthma; the provoking agent is probably an additive. High oil mist concentrations may produce lipid pneumonia although clinical evidence is equivocal. NOTE L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

MICHELIN COMPRESSOR OIL	TOXICITY	IRRITATION
	Dermal (ATE) LD50: >5000 mg/kg ^[2]	Not Available
	Oral (ATE) LD50: >5000 mg/kg ^[2]	
interchangeable low viscosity base oil (<20.5 cSt @40C)	TOXICITY	IRRITATION
	Not Available	Not Available
polyolefin polyamine succinimide	TOXICITY	IRRITATION
	Not Available	Not Available
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >5000 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50: 2900 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
calcium alkaryl sulfonate	TOXICITY	IRRITATION
	Not Available	Not Available
calcium alkaryl sulfonate (polymer exempt)	TOXICITY	IRRITATION
	Not Available	Not Available

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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

POLYOLEFIN POLYAMINE SUCCINIMIDE	For succinimide dispersants: Acute toxicity: Data on acute mammalian toxicity were reviewed indicate a low concern for acute toxicity. Genotoxicity: Data from bacterial reverse mutation assays and <i>in vitro</i> and <i>in vivo</i> chromosome aberration studies indicate a low concern for mutagenicity. Reproductive toxicity: Data from repeated-dose toxicity studies were reviewed. No signs of toxicity were observed following repeated oral or dermal exposure. Reproductive and Developmental Toxicity: Data from a reproductive/developmental toxicity screening study were reviewed.
ZINC BIS(SEC-BUTYL AND 1,3-DIMETHYLBUTYL) DITHIOPHOSPHATE	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: Acute toxicity: 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 dialkyldithiophosphates in highly refined lubricant base oil also indicate a low concern for acute toxicity. Commercial oil-based samples of the zinc dialkyldithiophosphate category have been tested for acute oral toxicity.
MICHELIN COMPRESSOR OIL & INTERCHANGEABLE LOW VISCOSITY BASE OIL (<20.5 CST @40C)	NOTE L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP
POLYOLEFIN POLYAMINE SUCCINIMIDE & ZINC BIS(SEC-BUTYL AND 1,3-DIMETHYLBUTYL) DITHIOPHOSPHATE	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	✘
Mutagenicity	✘	Aspiration Hazard	✘

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

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

	Endpoint	Test Duration (hr)	Species	Value	Source
MICHELIN COMPRESSOR OIL	LL/EL/IL50	Not Available	Fish	100mg/L	8
	LL/EL/IL50	Not Available	Algae or other aquatic plants	100mg/L	8
	LL/EL/IL50	Not Available	Crustacea	100mg/L	8
interchangeable low viscosity base oil (<20.5 cSt @40C)	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
polyolefin polyamine succinimide	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	46mg/l	2

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	NOEC(ECx)	504h	Crustacea	0.4mg/l	2
calcium alkaryl sulfonate	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
calcium alkaryl sulfonate (polymer exempt)	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

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

Aquatic organisms LL/EL/IL50: 100 mg/L

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	LOW (LogKOW = 10.51)

12.4. Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

12.5. Results of PBT and vPvB assessment

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
MICHELIN COMPRESSOR OIL				No			No
interchangeable low viscosity base oil (<20.5 cSt @40C)	No data available	No data available	No data available	No	No data available	No data available	No
polyolefin polyamine succinimide	No data available	No data available	No data available	No	No data available	No data available	No
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	✓	✗	✗	No	✗	✗	No
calcium alkaryl sulfonate				No			No
calcium alkaryl sulfonate (polymer exempt)				No			No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	<p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails)
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MICHELIN COMPRESSOR OIL

	<p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means.</p> <ul style="list-style-type: none"> ▶ 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.
Waste treatment options	EU Waste Disposal Code: 13 02 05
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
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Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number or ID number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Class	Not Applicable
	Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	Not Applicable
	Hazard Label	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Transport Category	Not Applicable
	Tunnel Restriction Code	Not Applicable

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

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

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

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	IMDG Class	Not Applicable
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Not Applicable	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

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
interchangeable low viscosity base oil (<20.5 cSt @40C)	Not Available
polyolefin polyamine succinimide	Not Available
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Not Available
calcium alkaryl sulfonate	Not Available
calcium alkaryl sulfonate (polymer exempt)	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
interchangeable low viscosity base oil (<20.5 cSt @40C)	Not Available
polyolefin polyamine succinimide	Not Available
zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate	Not Available
calcium alkaryl sulfonate	Not Available
calcium alkaryl sulfonate (polymer exempt)	Not Available

SECTION 15 Regulatory information

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

interchangeable low viscosity base oil (<20.5 cSt @40C) is found on the following regulatory lists

Belgium Occupational Exposure Limits (French)

Chemical Footprint Project - Chemicals of High Concern List

European Union Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

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

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

polyolefin polyamine succinimide is found on the following regulatory lists

Not Applicable

zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate is found on the following regulatory lists

Belgium Occupational Exposure Limits (French)

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

calcium alkaryl sulfonate is found on the following regulatory lists

Not Applicable

calcium alkaryl sulfonate (polymer exempt) is found on the following regulatory lists

Not Applicable

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

National Inventory Status

National Inventory	Status
Australia - AICC / Australia Non-Industrial Use	No (polyolefin polyamine succinimide)
Canada - DSL	No (polyolefin polyamine succinimide)
Canada - NDSL	No (polyolefin polyamine succinimide; zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (polyolefin polyamine succinimide)
Japan - ENCS	No (polyolefin polyamine succinimide)
Korea - KECI	No (zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate)
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (polyolefin polyamine succinimide; zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate)
Vietnam - NCI	Yes
Russia - FBEPH	No (polyolefin polyamine succinimide; zinc bis(sec-butyl and 1,3-dimethylbutyl) dithiophosphate)
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	05/12/2024

MICHELIN COMPRESSOR OIL

Initial Date	25/03/2021
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Full text Risk and Hazard codes

H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

SDS Version Summary

Version	Date of Update	Sections Updated
2.1	25/03/2021	Hazards identification - Classification, Identification of the substance / mixture and of the company / undertaking - Supplier Information, Identification of the substance / mixture and of the company / undertaking - Synonyms
3.1	05/12/2024	Identification of the substance / mixture and of the company / undertaking - Supplier 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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

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
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code

- 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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
, EUH208	Expert judgement
, EUH210	Expert judgement

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