HyperDrive KXR 5W-40 A3/B4

Certas Lubricant Solutions

Part Number: **EEC42**
Version No: **2.2**
Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Issue Date: **15/01/2025**
Print Date: **15/01/2025**
S.REACH.GB.EN

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

1.1. Product Identifier

Product name	HyperDrive KXR 5W-40 A3/B4
Synonyms	Not Available
Other means of identification	Not Available

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

Chemical Product Category	PC24 Lubricants, greases, release products
Relevant identified uses	Use according to manufacturer's directions.
Uses advised against	No specific uses advised against are identified.

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

Registered company name	**Certas Lubricant Solutions**
Address	1st Floor, Allday House, Warrington Road, Birchwood, Warrington Cheshire Great Britain
Telephone	0800 685 685
Fax	Not Available
Website	Not Available
Email	HSE.Sharedservice@certasenergy.co.uk

1.4. Emergency telephone number

Association / Organisation	**Certas Lubricants Solutions**
Emergency telephone number(s)	0800 685 685 Mon – Fri 09:00 – 16:00 UK Time.
Other emergency telephone number(s)	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]	Non hazardous
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567***

2.2. Label elements

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

Hazard statement(s)

Not Applicable

Supplementary statement(s)

EUH208	Contains (C14-16-18)alkylphenol. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Precautionary statement(s) Prevention

Not Applicable

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Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

Material contains lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346), paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346), paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346), paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*.

2.3. Other hazards

Cumulative effects may result following exposure*.

May produce skin discomfort*.

Possible skin sensitizer*.

lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

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	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
1. 72623-87-1 2.276-738-4 3.649-483-00-5 4.Not Available	10-30	lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 64742-56-9. 2.Not Available 3.Not Available 4.Not Available	<10	paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 64742-55-8. 2.Not Available 3.Not Available 4.Not Available	<10	paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 64741-89-5 2.265-091-3 3.649-455-00-2 4.Not Available	<10	paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 93819-94-4 2.Not Available 3.Not Available 4.Not Available	<10	zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 2; H315, H318, H411 [1]	SCL: Not Available	Not Available

Continued...

1. CAS No 2.EC No 3.Index No 4.REACH No	% [weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
				Acute M factor: Not Applicable Chronic M factor: Not Applicable	
1. 64742-70-7. 2.Not Available 3.Not Available 4.Not Available	<10	paraffinic distillate, heavy, solvent-dewaxed (severe), (DMSO <3% w/w by IP 346)	Aspiration Hazard Category 1; H304 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 1190625-94-5 2.Not Available 3.Not Available 4.Not Available	<1	(C14-16-18)alkylphenol	Sensitisation (Skin) Category 1B, Specific Target Organ Toxicity - Repeated Exposure Category 2; H317, H373 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
1. 64742-54-7. 2.Not Available 3.Not Available 4.Not Available	30-50	paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Non hazardous [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not Available
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 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	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

5.3. Advice for firefighters

Continued...

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use water delivered as a fine spray to control fire and cool adjacent area. ▸ Avoid spraying water onto liquid pools. ▸ **DO NOT** approach containers suspected to be hot. ▸ Cool fire exposed containers with water spray from a protected location. ▸ If safe to do so, remove containers from path of fire.
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 irritating/ toxic fumes. ▸ May emit acrid smoke. ▸ Mists containing combustible materials may be explosive. May emit corrosive fumes.

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	▸ 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. ▸ Wipe up. ▸ Place in a suitable, labelled container for waste disposal.
Major Spills	▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by all means available, spillage from entering drains or water courses. ▸ Consider evacuation (or protect in place). ▸ No smoking, naked lights or ignition sources. ▸ Increase ventilation. ▸ Stop leak if safe to do so. ▸ Water spray or fog may be used to disperse / absorb vapour. ▸ Contain or absorb spill with sand, earth or vermiculite. ▸ Collect recoverable product into labelled containers for recycling. ▸ Collect solid residues and seal in labelled drums for disposal. ▸ Wash area and prevent runoff into drains. ▸ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ▸ If contamination of drains or waterways occurs, advise emergency services.

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	Hydrogen sulfide (H2S or Sour Gas) may be present when loading and unloading transport vessels. Stay upwind and away from newly opened hatches and allow to vent thoroughly before handling material. Steam may be used to vent hatches. Keep all sources of ignition away from loading area. ▸ 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. ▸ Avoid smoking, naked lights or ignition sources. ▸ Avoid contact with incompatible materials. ▸ When handling, **DO NOT** eat, drink or smoke. ▸ Keep containers securely sealed when not in use. ▸ Avoid physical damage to containers. ▸ Always wash hands with soap and water after handling. ▸ Work clothes should be laundered separately. ▸ Use good occupational work practice. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS. ▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Fire and explosion protection	See section 5
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ Store in a cool, dry, well-ventilated area. ▸ Store away from incompatible materials and foodstuff containers. ▸ Protect containers against physical damage and check regularly for leaks. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer.

Continued...

	▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	▸ Sulfides are incompatible with acids, diazo and azo compounds, halocarbons, isocyanates, aldehydes, alkali metals, nitrides, hydrides, and other strong reducing agents. ▸ Many reactions of sulfides with these materials generate heat and in many cases hydrogen gas. ▸ Many sulfide compounds may liberate hydrogen sulfide upon reaction with an acid. None known
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
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	Dermal 0.97 mg/kg bw/day (Systemic, Chronic) Inhalation 2.73 mg/m³ (Systemic, Chronic) Inhalation 5.58 mg/m³ (Local, Chronic) ***Oral 0.74 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 1.19 mg/m³ (Local, Chronic) ****	9.33 mg/kg food (Oral)
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	Dermal 0.97 mg/kg bw/day (Systemic, Chronic) Inhalation 2.73 mg/m³ (Systemic, Chronic) Inhalation 5.58 mg/m³ (Local, Chronic) ***Oral 0.74 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 1.19 mg/m³ (Local, Chronic) ****	9.33 mg/kg food (Oral)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Not Applicable

Ingredient	Original IDLH	Revised IDLH
paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)	2,500 mg/m3	Not Available
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	2,500 mg/m3	Not Available
paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)	2,500 mg/m3	Not Available
paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)	2,500 mg/m3	Not Available
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	2,500 mg/m3	Not Available
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	Not Available	Not Available
paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	2,500 mg/m3	Not Available
(C14-16-18)alkylphenol	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	E	≤ 0.1 ppm
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	E	≤ 0.01 mg/m³
(C14-16-18)alkylphenol	C	> 0.1 to ≤ milligrams per cubic meter of air (mg/m³)
Notes:	***Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.***	

8.2. Exposure controls

Continued...

8.2.1. Appropriate engineering controls	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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. ▸ Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area. ▸ Work should be undertaken in an isolated system such as a 'glove-box' . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system. ▸ Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within. ▸ Open-vessel systems are prohibited. ▸ Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. ▸ Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system. ▸ For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▸ Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated areas). ▸ Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air. ▸ Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other than hands and arms, be disallowed.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 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. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
Skin protection	See Hand protection below
Hands/feet protection	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Body protection	See Other protection below
Other protection	▸ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]

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	▸ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent] ▸ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely. ▸ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. ▸ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▸ Overalls. ▸ P.V.C apron. ▸ Barrier cream. ▸ Skin cleansing cream. ▸ Eye wash unit.

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	Pale Clear and Bright Oil

Physical state	Liquid	**Relative density (Water = 1)**	0.854
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	-42	**Viscosity (cSt)**	85.8 @ 40°C
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	230	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available
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	▸ 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 toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

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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.
Skin Contact	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.
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	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. There is sufficient evidence to suggest that this material directly causes cancer in humans.

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TOXICITY	IRRITATION
Not Available	Not Available

paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >5000 mg/kg[2]	Not Available
Oral (Rat) LD50: >15000 mg/kg[2]	

lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)

TOXICITY	IRRITATION
Oral (Rat) LD50: >5000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Skin: no adverse effect observed (not irritating)[1]

paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >2000 mg/kg[1]	Not Available
Inhalation (Rat) LC50: 2.18 mg/l4h[2]	
Oral (Rat) LD50: >5000 mg/kg[2]	

paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)

TOXICITY	IRRITATION
Oral (Rat) LD50: >5000 mg/kg *[2]	Not Available

paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >5000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >15000 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

zinc O,O-bis(C3-14-alkyl esters) dithiophosphate

TOXICITY	IRRITATION
dermal (rat) LD50: >5000 mg/kg[2]	Not Available
Inhalation (Rat) LC50: >0.5 mg/l4h[1]	
Oral (Rat) LD50: >2000 mg/kg[2]	

paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >2000 mg/kg[1]	Not Available
Inhalation (Rat) LC50: 2.18 mg/l4h[1]	
Oral (Rat) LD50: >5000 mg/kg[1]	

(C14-16-18)alkylphenol

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Not Available
Oral (Rat) LD50: >2000 mg/kg[1]	

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***

paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)	* Q8 MSDS
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	**WARNING:** This substance has been classified by the IARC as Group 1: **CARCINOGENIC TO HUMANS**.
ZINC O,O-BIS(C3-14-ALKYL ESTERS) DITHIOPHOSPHATE	Dithiophosphate alkyl esters is corrosive and toxic to the tissues on skin or oral exposure depending on its concentration. Symptoms included diarrhoea, skin and gastrointestinal irritation, lethargy, reduced food intake, staining about the nose and eye; occasionally, there was drooping of the eyelid, hair standing up, inco-ordination and salivation. Toxicity is reduced following inhalation (due to vapour pressure and high viscosity). It may produce reproductive, developmental and genetic toxicity on experimental animals, but no substantive data is available to establish effect on humans.

Continued...

HyperDrive KXR 5W-40 A3/B4 & (C14-16-18)alkylphenol	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.
paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346) & lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346) & paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)* & paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	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 residual base oils 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. Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential cancer-causing and mutation-causing activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components. In comparison to unrefined and mildly refined base oils, the highly and severely refined distillate base oils have a smaller range of hydrocarbon molecules and have demonstrated very low mammalian toxicity. Testing of residual oils for mutation-causing and cancer-causing potential has shown negative results, supporting the belief that these materials lack biologically active components or the components are largely non-bioavailable due to their molecular size. Toxicity testing has consistently shown that lubricating base oils have low acute toxicities. Numerous tests have shown that a lubricating base oil s mutagenic and carcinogenic potential correlates with its 3-7 ring polycyclic aromatic compound (PAC) content, and the level of DMSO extractables (e.g. IP346 assay), both characteristics that are directly related to the degree/conditions of processing.
paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	For highly and severely refined distillate base oils: In animal studies, the acute, oral, semilethal dose is >5g/kg body weight and the semilethal dose by skin contact is >2g/kg body weight. The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied from “non-irritating” to “moderately irritating” when tested for skin and eye irritation. Testing for sensitisation has been negative. The effects of repeated exposure vary by species; in animals, effects to the testes and lung have been observed, as well as the formation of granulomas. In animals, these substances have not been found to cause reproductive toxicity or significant increases in birth defects. They are also not considered to cause cancer, mutations or chromosome aberrations. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346) & paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	For unrefined and mildly refined distillate base oils: Acute toxicity: Animal testing showed high semilethal doses of >5000 mg/kg body weight and >2 g/kg body weight for exposure by swallowing or skin contact, respectively. The same material was also reported to be moderately irritating to skin, while not being sensitizing. Repeat dose toxicity: Animal testing showed that repeat dose toxicity was mild to moderate to the skin. Reproductive / developmental toxicity: No studies on developmental toxicity or reproduction are available. Animal testing shows that high doses may reduce the body weight of both the mother and the foetus, and increase the rate of soft tissue malformations. Genetic toxicity: These oils have been found to cause mutations. Cancer-causing potential: The general conclusion that can be drawn from animal testing is that these oils may potentially cause skin cancer; however, they have not been found to be associated with an increase in tumours elsewhere in the body.
paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346) & paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346) & ZINC O,O-BIS(C3-14-ALKYL ESTERS) DITHIOPHOSPHATE & paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346) & (C14-16-18)alkylphenol	No significant acute toxicological data identified in literature search.
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)* & paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins. The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell. The gut cell may play a major role in determining the proportion of hydrocarbon that becomes available to be deposited unchanged in peripheral tissues such as in the body fat stores or the liver.

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

Continued...

SECTION 12 Ecological information

12.1. Toxicity

HyperDrive KXR 5W-40 A3/B4

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	96h	Algae or other aquatic plants	>1000mg/l	1
NOEC(ECx)	504h	Crustacea	>1mg/l	1
EC50	48h	Crustacea	>1000mg/l	1
ErC50	72h	Algae or other aquatic plants	>1000mg/l	1

lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	504h	Crustacea	>1mg/l	1
EC50	48h	Crustacea	>1000mg/l	1

paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	504h	Crustacea	>1mg/l	1
EC50	48h	Crustacea	>1000mg/l	1

paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	504h	Crustacea	>1mg/l	1
EC50	48h	Crustacea	>1000mg/l	1

paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*

Endpoint	Test Duration (hr)	Species	Value	Source
ErC50	72h	Algae or other aquatic plants	>1000mg/l	1
EC50	96h	Algae or other aquatic plants	>1000mg/l	1
NOEC(ECx)	504h	Crustacea	>1mg/l	1
EC50	48h	Crustacea	>1000mg/l	1

zinc O,O-bis(C3-14-alkyl esters) dithiophosphate

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	2mg/l	2
EC50	96h	Algae or other aquatic plants	2mg/l	2
LC50	96h	Fish	46mg/l	2
EC50	48h	Crustacea	5.4mg/l	2
NOEC(ECx)	504h	Crustacea	0.4mg/l	2

paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

(C14-16-18)alkylphenol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50(ECx)	24h	Crustacea	>100mg/l	2
EC50	48h	Crustacea	>100mg/l	2

Legend: ***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data***

For dithiophosphate alkyl esters and their (zinc) salts:
The physical and chemical properties of dithiophosphate alkyl esters exhibit a common similarity. All members of this category are within a narrow molecular weight range (256-354 daltons) and are highly acidic. In addition, modelling data indicate they have similar melting and boiling points, low water solubility, low vapour pressure, and are lipophilic in nature. Members of the zinc dialkyldithiophosphate category contain alkyl chain lengths that range from C3-10, or tetrapropenylphenol (range = C10-15, C12 enriched). It is common for zinc dialkyldithiophosphates to contain mixed alkyl esters (e.g., C4, C5), although derivatives with single chain lengths (e.g., C8) are included in the category. As a result of this diversity in alkyl side chain length, the molecular weight distribution for the members of the category is broad, 578 to 1303 gm/mol. due to the predominant influence of carbon chain length on molecular weight. The zinc dialkyldithiophosphates are generally regarded to be poorly soluble in water.
Fate and Transport Characteristics: Members of this category are expected to be poorly biodegradable. The members of the category are resistant to hydrolysis at room temperature, but are degraded when heated and are unstable at temperatures >120 C. This decomposition mechanism is key to how the zinc salts provide anti-wear and anti-oxidation performance enhancements in engine oils. Photodegradation is not expected to cause significant physical degradation of dithiophosphate alkyl esters. These substances have low vapour pressure, which indicates that they have a low potential to partition into the air to a significant extent where they would be subject to indirect photodegradation. These substances are not expected to partition to water or air if released into the environment due to their low water solubility and low vapour pressure. They are also hydrophobic in nature, which suggests that any which reaches the water compartment will be immobilized through binding to the organic component of soils and sediments. Studies indicate a bioaccumulation factor of less than 100 for a C4-5 ester zinc dithiophosphate indicating a low potential for bioconcentration or cumulative effects. The hydrocarbon portion of these compounds that is susceptible to biodegradation is present in both the zinc dialkyldithiophosphates and the dithiophosphate alkyl esters. Therefore, it is expected that the dithiophosphate alkyl esters will behave similarly. The zinc salts are poorly biodegradable.
Ecotoxicity: The low water solubility suggests that the acute aquatic toxicity of these substances should be low due to limited bioavailability to aquatic organisms. However, the length of the alkyl side chains on these substances will influence their relative water solubility, and, hence, their relative toxicity. Diethyl dithiophosphate for example is highly toxic to DaphnidsZinc O,O-bis (isooctyl) dithiophosphate (CAS RN 28629-66-5) also appears to be harmful to aquatic organisms such as fish and Daphnids.

Continued...

Sulfide ion is very toxic to aquatic life, threshold concentration for fresh or saltwater fish is 0.5ppm. The product therefore is very toxic to aquatic life. The major decomposition product, hydrogen sulfide, is damaging to vegetation at 5ppm for 24 hours
Studies on various thiophosphates indicated complete mineralization within three weeks by acclimation. A water stability study demonstrated the nature of hydrolysis involves the attack of water molecule on the phosphorus ester involving P-O bond fission. .

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	LOW (LogKOW = 7.87)
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	LOW (LogKOW = 12.32)

12.4. Mobility in soil

Ingredient	Mobility
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	LOW (Log KOC = 3509)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✗	✗	✗
vPvB	✗	✗	✗

PBT Criteria fulfilled?	No
vPvB	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	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. 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. A Hierarchy of Controls seems to be common - the user should investigate: ▸ Reduction ▸ Reuse ▸ Recycling ▸ Disposal (if all else fails) 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. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. ▸ **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 Management Authority for disposal. ▸ Bury residue in an authorised landfill. ▸ Recycle containers if possible, or dispose of in an authorised landfill.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Continued...

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 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

Continued...

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
paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Not Available
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	Not Available
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	Not Available
paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	Not Available
(C14-16-18)alkylphenol	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Not Available
lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346)	Not Available
paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*	Not Available
zinc O,O-bis(C3-14-alkyl esters) dithiophosphate	Not Available
paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)	Not Available
(C14-16-18)alkylphenol	Not Available

SECTION 15 Regulatory information

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

paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w=" by=" ip=" 346)=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)

lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w=" by=" ip=" 346)=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)
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

paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w=" by=" ip=" 346)=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)

paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w=" by=" ip=" 346)=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)

paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w=" by=" ip=" 346)*=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

Continued...

Great Britain GB mandatory classification and labelling list (GB MCL)
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

zinc O,O-bis(C3-14-alkyl esters) dithiophosphate is found on the following regulatory lists

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

paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w=" by=" ip=" 346)=">is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
Great Britain GB mandatory classification and labelling list (GB MCL)

(C14-16-18)alkylphenol is found on the following regulatory lists

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

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 - AIIC / Australia Non-Industrial Use	No ((C14-16-18)alkylphenol)
Canada - DSL	No ((C14-16-18)alkylphenol)
Canada - NDSL	No (paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346); lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346); paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*; zinc O,O-bis(C3-14-alkyl esters) dithiophosphate; paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346); (C14-16-18)alkylphenol)
China - IECSC	No ((C14-16-18)alkylphenol)
Europe - EINEC / ELINCS / NLP	No ((C14-16-18)alkylphenol)
Japan - ENCS	No ((C14-16-18)alkylphenol)
Korea - KECI	No ((C14-16-18)alkylphenol)
New Zealand - NZIoC	No ((C14-16-18)alkylphenol)
Philippines - PICCS	No ((C14-16-18)alkylphenol)
USA - TSCA	TSCA Inventory 'Active' substance(s) (paraffinic distillate, heavy, hydrotreated (severe) (DMSO <3% w/w by IP 346); lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346); paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-refined (mild) (DMSO <3% w/w by IP 346)*; zinc O,O-bis(C3-14-alkyl esters) dithiophosphate; paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346)); No ((C14-16-18)alkylphenol)
Taiwan - TCSI	No ((C14-16-18)alkylphenol)
Mexico - INSQ	No (lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346); paraffinic distillate, light, hydrotreated (severe) (DMSO <3% w/w by IP 346); zinc O,O-bis(C3-14-alkyl esters) dithiophosphate; paraffinic distillate, heavy, solvent-dewaxed (severe). (DMSO <3% w/w by IP 346); (C14-16-18)alkylphenol)
Vietnam - NCI	Yes
Russia - FBEPH	No (lubricating oils, petroleum C20-50, hydrotreated neutral (DMSO <3% w/w by IP 346); paraffinic distillate, light, solvent-dewaxed (severe) (DMSO <3% w/w by IP 346); zinc O,O-bis(C3-14-alkyl esters) dithiophosphate; (C14-16-18)alkylphenol)
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	15/01/2025
Initial Date	23/04/2024

Full text Risk and Hazard codes

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

SDS Version Summary

Continued...

Version	Date of Update	Sections Updated
1.2	15/01/2025	Toxicological information - Chronic Health, Hazards identification - Classification, Disposal considerations - Disposal, Exposure controls / personal protection - Engineering Control, Ecological Information - Environmental, Handling and storage - Handling Procedure, Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (other), Exposure controls / personal protection - Personal Protection (hands/feet), Accidental release measures - Spills (major), Handling and storage - Storage (storage incompatibility)

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	Calculation method
, EUH210	Calculation method

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