

# SAFETY DATA SHEET



Optigear Synthetic A 320

## Section 1. Identification

<b>GHS product identifier</b>	Optigear Synthetic A 320
<b>Product code</b>	450763-FR01
<b>SDS no.</b>	450763
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
<b>Use of the substance/ mixture</b>	Gear lubricant . For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Manufacturer Supplier</b>	Castrol Australia Pty Ltd Level 17, 717 Bourke Street Docklands, Victoria 3008 ABN 87 008 459 407 www.castrol.com.au  Tel: +61 (03) 9268 4111
<b>EMERGENCY TELEPHONE NUMBER</b>	+61 2801 44558 (or 1800 14 14 74 within Australia)
<b>OTHER PRODUCT INFORMATION</b>	Technical Advice Helpline Number: 1300 557 998

## Section 2. Hazard(s) identification

**Classification of the substance or mixture** SKIN SENSITISATION - Category 1

**GHS label elements**  
**Hazard pictograms**



**Signal word** WARNING  
**Hazard statements** H317 - May cause an allergic skin reaction.

**Precautionary statements**

**Prevention** P280 - Wear protective gloves.  
P261 - Avoid breathing vapour.  
P272 - Contaminated work clothing should not be allowed out of the workplace.

**Response** P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.  
P333 + P313 - If skin irritation or rash occurs: Get medical attention.

**Storage** Not applicable.

**Disposal** P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** Not applicable.

**Other hazards which do not result in classification** Defatting to the skin.

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	<b>(Australia)</b>	<b>(ENGLISH)</b>

## Section 3. Composition and ingredient information

**Substance/mixture** Mixture

Synthetic lubricant and additives.

<b>Ingredient name</b>	<b>% (w/w)</b>	<b>CAS number</b>
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	≥1 - <3	Proprietary

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.
<b>Skin contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.
<b>Ingestion</b>	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if adverse health effects persist or are severe.

### Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	No specific treatment.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Unsuitable extinguishing media</b>	Do not use water jet.

### Specific hazards arising from the chemical

Swarf fires - Neat metal working oils may fume, thermally decompose or ignite if they come into contact with red hot swarf. To minimise the generation of red hot swarf ensure that a sufficient flow of oil is correctly directed to the cutting edge of the tool to flood it throughout cutting operations. As an additional precaution swarf should be regularly cleared from the immediate area to prevent the risk of fire. In a fire or if heated, a pressure increase will occur and the container may burst.

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## Section 5. Firefighting measures

### Hazardous thermal decomposition products

Combustion products may include the following:  
metal oxide/oxides  
carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide)  
nitrogen oxides (NO, NO<sub>2</sub> etc.)

### Special protective actions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

### Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

#### For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

### Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

#### Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Concentrations of mist, fumes and vapours in enclosed spaces may result in the formation of explosive atmospheres. Excessive splashing, agitation or heating must be avoided. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid, as can bacteria, and as a result may induce allergic and other skin reactions, especially if personal hygiene is inadequate.

## Section 7. Handling and storage

### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Zinc dialkyl dithiophosphate	<b>DFG MAC-values list (Germany).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Issued/Revised: 7/2013 Form: Inhalable fraction PEAK: 4 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Issued/Revised: 7/2013 Form: Inhalable fraction PEAK: 0.4 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Issued/Revised: 7/2012 Form: Respirable fraction TWA: 0.1 mg/m <sup>3</sup> 8 hours. Issued/Revised: 7/2012 Form: Respirable fraction
Sulfonic acids, petroleum, calcium salts	<b>DFG MAC-values list (Germany).</b> PEAK: 20 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Issued/Revised: 6/2014 Form: Respirable fraction TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 6/2014 Form: Respirable fraction
Residual oils (petroleum), solvent-dewaxed	<b>Safe Work Australia (Australia).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1995 Form: Mist
Residual oils (petroleum), hydrotreated	<b>Safe Work Australia (Australia).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1995 Form: Mist
maleic anhydride	<b>Safe Work Australia (Australia). Skin sensitiser.</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1995 TWA: 0.25 ppm 8 hours. Issued/Revised: 5/1995

### Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national

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## Section 8. Exposure controls and personal protection

<b>Environmental exposure controls</b>	<p>organisation for standards.</p> <p>Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.</p> <p>The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.</p> <p>Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.</p>
<b>Individual protection measures</b>	
<b>Hygiene measures</b>	<p>Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.</p> <p>Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.</p>
<b>Eye/face protection</b>	<p>Safety glasses with side shields.</p>
<b>Skin protection</b>	
<b>Hand protection</b>	<p>Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.</p>
<b>Skin protection</b>	<p>Use of protective clothing is good industrial practice.</p> <p>Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</p> <p>Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.</p>
<b>Other skin protection</b>	<p>Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</p>
<b>Respiratory protection</b>	<p>In case of insufficient ventilation, wear suitable respiratory equipment.</p> <p>For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m<sup>3</sup>), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m<sup>3</sup>).</p> <p>Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.</p> <p>The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.</p>
<b>Refer to standards:</b>	<p>Respiratory protection:AS/NZS 1715 and AS/NZS 1716</p> <p>Gloves:AS/NZS 2161.1</p> <p>Eye protection:AS/NZS 1336 and AS/NZS 1337</p>

## Section 9. Physical and chemical properties

### Appearance

Physical state	Liquid.
Colour	Brown. [Light]
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Open cup: >220°C (>428°F) [Cleveland.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	<1000 kg/m <sup>3</sup> (<1 g/cm <sup>3</sup> ) at 15°C
Solubility	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 320 mm <sup>2</sup> /s (320 cSt) at 40°C Kinematic: >31.5 mm <sup>2</sup> /s (>31.5 cSt) at 100°C

## Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	Avoid excessive heat.
Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
maleic anhydride	Category 1	Inhalation	respiratory system

Information on likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

#### Potential acute health effects

Eye contact No known significant effects or critical hazards.

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## Section 11. Toxicological information

<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
<b>Ingestion</b>	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Ingestion</b>	No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

## Section 12. Ecological information

### Persistence and degradability

Not expected to be rapidly degradable.

### Bioaccumulative potential

Not available.

### Mobility in soil

<b>Soil/water partition coefficient (<math>K_{oc}</math>)</b>	Not available.
<b>Mobility</b>	Liquid. insoluble in water.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

<b>Disposal methods</b>	The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This
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## Section 13. Disposal considerations

material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

### Special Precautions for Landfill or Incineration

No additional special precautions identified.

## Section 14. Transport information

	ADG	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user Not available.

## Section 15. Regulatory information

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### Montreal Protocol (Annexes A, B, C, E)

Ingredient name	List name	Status
Not listed.		

### Stockholm Convention on Persistent Organic Pollutants

Ingredient name	List name	Status
Not listed.		

### Rotterdam Convention on Prior Informed Consent (PIC)

Ingredient name	List name	Status
Not listed.		

### International lists

#### National inventory

#### REACH Status

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

#### Australia inventory (AICS)

All components are listed or exempted.

#### Canada inventory

At least one component is not listed in DSL but all such components are listed in NDSL.

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## Section 15. Regulatory information

<a href="#">China inventory (IECSC)</a>	All components are listed or exempted.
<a href="#">Japan inventory (ENCS)</a>	At least one component is not listed.
<a href="#">Korea inventory (KECI)</a>	At least one component is not listed.
<a href="#">Philippines inventory (PICCS)</a>	At least one component is not listed.
<a href="#">Taiwan Chemical Substances Inventory (TCSI)</a>	All components are listed or exempted.
<a href="#">United States inventory (TSCA 8b)</a>	All components are active or exempted.

## Section 16. Any other relevant information

### History

<a href="#">Date of printing</a>	6/23/2020
<a href="#">Date of issue/Date of revision</a>	6/23/2020
<a href="#">Date of previous issue</a>	4/20/2020
<a href="#">Version</a>	3.02
<a href="#">Prepared by</a>	Product Stewardship
<a href="#">Key to abbreviations</a>	ADG = Australian Dangerous Goods ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) NOHSC = National Occupational Health and Safety Commission REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] STEL = Short term exposure limit SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations TWA = Time weighted average VOC = Volatile Organic Compound SADT = Self-Accelerating Decomposition Temperature Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

### Procedure used to derive the classification

<a href="#">Classification</a>	<a href="#">Justification</a>
Skin Sens. 1, H317	Calculation method

 Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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## Section 16. Any other relevant information

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

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