


## Alphasyn PG 220

## Section 1. Identification

<b>Product name</b>	Alphasyn PG 220
<b>Product code</b>	451170-DE03
<b>SDS no.</b>	451170
<b>Use of the substance/mixture</b>	<input checked="" type="checkbox"/> Gear lubricant For specific application advice see appropriate Technical Data Sheet or consult our company representative.
<b>Product type</b>	Liquid.
<b>Supplier</b>	Castrol New Zealand Limited 73 Remuera Road Newmarket Auckland, New Zealand  www.castrol.com/nz Technical Helpline 0800 10 40 60
<b>Emergency telephone number</b>	0800 243643 (0800 CHEMHELP) (NZ use only)
<b>New Zealand National Poisons Centre</b>	0800 764 766 National Poison Centre

## Section 2. Hazards identification

<b>HSNO Classification</b>	<input checked="" type="checkbox"/> REPRODUCTIVE TOXICITY - Category 2
<input checked="" type="checkbox"/> This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.	
This material is not classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.	
<b>Routes of entry</b>	Dermal contact. Eye contact. Inhalation.
<b>GHS label elements</b>	
<b>Signal word</b>	<input checked="" type="checkbox"/> Warning
<b>Hazard statements</b>	<input checked="" type="checkbox"/> Suspected of damaging fertility or the unborn child.
<b>Precautionary statements</b>	
<b>Prevention</b>	<input checked="" type="checkbox"/> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
<b>Response</b>	<input checked="" type="checkbox"/> If exposed or concerned: Get medical attention.
<b>Storage</b>	<input checked="" type="checkbox"/> Store locked up.
<b>Disposal</b>	<input checked="" type="checkbox"/> Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Symbol</b>	<input checked="" type="checkbox"/> 
<b>Other hazards which do not result in classification</b>	<input checked="" type="checkbox"/> Defatting to the skin.

## Section 3. Composition/information on ingredients

**Substance/mixture** Mixture

Synthetic base stock. Proprietary performance additives.

Ingredient name	% (w/w)	CAS number
(tetrapropenyl)succinic acid	≤0.3	27859-58-1

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>Inhalation</b>	<input checked="" type="checkbox"/> Inhaled, remove to fresh air. Get medical attention.
<b>Ingestion</b>	<input checked="" type="checkbox"/> 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.
<b>Skin contact</b>	<input checked="" type="checkbox"/> 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. Get medical attention.
<b>Eye contact</b>	<input checked="" type="checkbox"/> 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.

### 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.
<b>Protection of first-aiders</b>	<input checked="" type="checkbox"/> 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.

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable</b>	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Not suitable</b>	Do not use water jet.
<b>Specific hazards arising from the chemical</b>	<input checked="" type="checkbox"/> In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	<input checked="" type="checkbox"/> Combustion products may include the following: phosphorus oxides carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide) sulphur oxides (SO, SO <sub>2</sub> , etc.)
<b>Hazchem code</b>	Not available.
<b>Special precautions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	<input checked="" type="checkbox"/> 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

<b>For non-emergency personnel</b>	<input checked="" type="checkbox"/> 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".
<b>For emergency responders</b>	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## Section 6. Accidental release measures

<b>Environmental precautions</b>	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).
<b><u>Methods and material for containment and cleaning up</u></b>	
<b>Small spill</b>	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.
<b>Large spill</b>	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

<b>Precautions for safe handling</b>	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.
<b>Conditions for safe storage, including any incompatibilities</b>	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. Store locked up. 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.
<b>Not suitable</b>	Prolonged exposure to elevated temperature.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

#### Recommended monitoring procedures

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### 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 organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

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.

## Section 8. Exposure controls/personal protection

### Environmental exposure controls

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.

### Individual protection measures

#### Hygiene measures

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye protection

Safety glasses with side shields.

#### Hand protection

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.

#### Skin protection

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.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. 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>). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary. 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.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

#### Physical state

Liquid.

#### Colour

Yellow. [Light]

#### Odour

Not available.

#### pH

Not applicable.

#### Melting point/freezing point

Not available.

#### Boiling point, initial boiling point, and boiling range

Not available.

#### Drop Point

Not available.

#### Flash point

Open cup: >200°C (>392°F) [Cleveland DIN EN ISO 2592]

#### Auto-ignition temperature

Not available.

#### Vapour pressure

## Section 9. Physical and chemical properties

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<input checked="" type="checkbox"/> O,O-triphenyl phosphorothioate	0	0				
<input type="checkbox"/> 2,2',6,6'-tetra-tert-butyl-4,4'-methylenediphenol	0.000000022	0.000000029				

**Relative vapour density**

Not available.

**Density**

>1000 kg/m<sup>3</sup> (>1 g/cm<sup>3</sup>) at 15 °C

**Solubility(ies)**

Media	Result
<input checked="" type="checkbox"/> Water	Very slightly soluble

**Viscosity**

Kinematic: 202 to 238 mm<sup>2</sup>/s (202 to 238 cSt) at 40 °C  
Kinematic: 40 mm<sup>2</sup>/s (40 cSt) at 100 °C (DIN EN ISO 3104)

**Particle characteristics**

**Median particle size**

Not applicable.

## Section 10. Stability and reactivity

**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 all possible sources of ignition (spark or flame).

**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 likely routes of exposure**

**Inhalation**

Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

**Ingestion**

No known significant effects or critical hazards.

**Skin contact**

Defatting to the skin. May cause skin dryness and irritation.

**Eye contact**

No known significant effects or critical hazards.

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

**Inhalation**

No specific data.

**Ingestion**

Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Skin contact**

Adverse symptoms may include the following:  
irritation  
dryness  
cracking  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Eye contact**

No specific data.

**Potential chronic health effects**

**General**

No known significant effects or critical hazards.

**Inhalation**

Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

**Ingestion**

Ingestion of large quantities may cause nausea and diarrhoea.

## Section 11. Toxicological information

<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/ or dermatitis.
<b>Eye contact</b>	<input checked="" type="checkbox"/> 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>	<input checked="" type="checkbox"/> Suspected of damaging the unborn child.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	<input checked="" type="checkbox"/> Suspected of damaging fertility.

## Section 12. Ecological information

**Ecotoxicity** No known significant effects or critical hazards.

### Persistence and degradability

Not expected to be rapidly degradable.

### Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

### Mobility in soil

**Mobility** Spillages may penetrate the soil causing ground water contamination.

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Other ecological information** Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## Section 13. Disposal considerations

**Disposal methods**  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 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.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>New Zealand Class</b>	Not regulated.	-	-	-		-
<b>ADG Class</b>	Not regulated.	-	-	-		-
<b>IATA Class</b>	Not regulated.	-	-	-		-
<b>IMDG Class</b>	Not regulated.	-	-	-		-

PG\* : Packing group

## Section 15. Regulatory information

### New Zealand Regulatory Information

<b>HSNO Approval Number</b>	SR002606
<b>HSNO Group Standard</b>	Lubricants, Lubricant Additives, Coolants and Anti-freeze Agents (Subsidiary Hazard) Group Standard 2020
<b>HSNO Classification</b>	REPRODUCTIVE TOXICITY - Category 2

### Regulation according to other foreign laws

<b>REACH Status</b>	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.
<b>United States inventory (TSCA 8b)</b>	All components are active or exempted.
<b>Australia inventory (AIC)</b>	All components are listed or exempted.
<b>Canada inventory status</b>	All components are listed or exempted.
<b>China inventory (IECSC)</b>	All components are listed or exempted.
<b>Japan inventory (CSCL)</b>	All components are listed or exempted.
<b>Korea inventory (KECI)</b>	All components are listed or exempted.
<b>Philippines inventory (PICCS)</b>	All components are listed or exempted.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	All components are listed or exempted.

## Section 16. Other information

### History

<b>Date of issue/Date of revision</b>	30 January 2024
<b>Date of previous issue</b>	8 March 2021.
<b>Version</b>	3
<b>Prepared by</b>	Not available.

### Key to abbreviations

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

### Notice to reader

Indicates information that has changed from previously issued version.

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