Engol™

GUARANTEED PERFORMANCE

Material Safety Data Sheet:

Engol Grease GP / EP

1. Product and Company Identification

Product Name :	Engol Grease GP / EP
Product Use:	Automotive Lubricant
Supplier:	Engol Group (Pty) Ltd 4 Silicon Road, Pinetown, 4147
Health Emergency Telephone:	10111
Contact Information:	info@engolgroup.com
Engol Website :	http://www.engolgroup.com

2. Hazards Identification

Emergency Overview

Physical State:	Grease
Odour:	Petroleum Odour

Potential Health Effects:
Immediate (Acute) Health Effects by Route of Exposure:

Inhalation irritation:	Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract.
Skin contact:	Lubricating oils are generally considered no more than minimally irritating to the skin.
Eye contact:	Lubricant oils are generally considered no more than minimally irritating to the eyes. May cause slight irritation of the eyes.
Ingestion Irritation:	Although this product has a low order of acute oral toxicity, aspiration of minute amounts into the lungs during ingestion or vomiting may cause severe pulmonary injury and possibly death.
Ingestion toxicity:	Lubricating oils are generally no more than slightly toxic if swallowed.

Long-Term (Chronic) -

Reproductive:	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Skin contact:	Prolonged and repeated contact may result in defatting and drying of the skin that may cause various skin disorders such as dermatitis, folliculitis, or oil.

HMIS Ratings:

Health:	1
Flammability:	1
Reactivity:	0
PPE:	B

0 - Least 1 - Slight 2 - Moderate 3 - High 4 - Extreme

3. Composition / Information on Ingredients

Chemical Name	%	CAS #
Distillates, hydro-treated heavy paraffinic, synthetic	70-95%	64742-54-7
Mineral Oil and Additives	0.5-30	6878336-8
Stearate	78-69	1592-23-0

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 (Hazard Communication Standard)

4. First Aid Measures

Inhalation:	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.
Eyes:	Flush with water. If irritation occurs, get medical attention. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling occur, transport to nearest medical facility for additional treatment.
Skin contact:	Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If redness, swelling, pain, and/or blisters occur, transport to the nearest medical facility for additional treatment.
Ingestion:	Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately. Provide medical care provider with this MSDS.
Notes to doctor:	Aspiration during swallowing or vomiting may severely cause damage to the lungs.

5. Firefighting Measures:

Flammability Summary:	**Combustible at elevated temperatures**
Extinguishing media:	Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid.
Fire and/or explosion hazard:	Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.
Fire fighting methods and: protection	Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Use methods and protection for the surrounding fire.
Hazardous combustion products:	Carbon dioxide, Carbon monoxide.
Flash point:	220°C

6. Accidental Release Measures:

Personal precautions and : Equipment	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS.

6. Accidental Release Measures:

Methods for clean-up :	Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

7. Handling and Storage:

Handling :	Mildly irritating material. Avoid unnecessary exposure.
Storage:	Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Do not expose to extreme temperatures or flames.

8. Exposure Controls / Personal Protection:

Engineering measures:	No special requirements.
Respiratory protection:	No special requirements.
Eye protection:	Wear safety glasses when handling this product.
Skin protection:	Gloves should be worn.
Exposure limits:	N/A

9. Physical and Chemical Properties:

Physical state:	Grease
Odour:	Petroleum Odour
pH:	ND
Viscosity:	400 cSt @ 40°C
Solubility in water:	Insoluble
Specific gravity:	0.86 - 0.9
Flash point:	220°C
Colour:	Red

No hazardous decomposition of products if stored and handled as prescribed.

Stability:	Stable
Conditions to avoid:	High temperatures
Incompatibility:	Store away from oxidising agents

10. Toxicological Information:

Oral:	RATS Almost non-toxic (LD50 < 2000mg/kg)
Inhalation:	None
Eyes:	None
Skin:	None

11. Ecological Information:

Degradation potential:	No experimental data on the final product. Does contain mineral or synthetic oil which is degradable over time.
Further information:	This product is considered as dangerous to ground flora.

12. Disposal Considerations:

Disposal of packaging:	Recycle containers whenever possible.
Disposal methods:	Dispose of according to Federal, State, Local, or Provincial regulations. Recycle used oil.

13. Transportation Information:

Special information:	DOT & IMDG: NOT RESTRICTED

14. Regulatory Information:

Labeling:	The product is classified as dangerous.
R-Phrases:	R10 - Flammable.
S-Phrases:	S25 - Avoid contact with eyes. N61 - Avoid release to environment.
Water hazard class:	N.E.

Tel: 032 815 0430 | Email: paul@engolgroup.com | Cell: 082 801 4789
Email: lee@engolgroup.com | Cell: 060 997 0314 | www.engolgroup.com

Engol™

GUARANTEED PERFORMANCE

Technical Data Sheet:

Engol Grease GP / EP

Engol Grease GP / EP is manufactured using highly refined mineral base oils which are carefully selected and then fortified with synthetic polymers, producing a highly shear stable foundation for the grease. This base oil foundation allows the product to perform in applications where heavy duty loads are typical.

Engol Grease GP / EP is manufactured using a lithium thickener resulting in a buttery appearance with excellent shear stability characteristics. In addition, this type of thickener is easy to pump and has an excellent resistance to heat and water. The optimal operating conditions for this grease in terms of temperature, is from -40 to 150 degrees celcuis, however short periods of elevated temperatures can be tolerated without severe damage to the product.

Engol Grease GP / EP is manufactured to a NLGI 2 grade resulting in a grease of medium to soft consistency. The product contains a blend of synthetic tackifiers, increasing it's ability to resist water and adherence with all surfaces.

Engol Grease GP / EP is red in colour and whose formulation includes a full treat of extreme pressure (EP) and corrosion preventative additives enabling the grease to meet or exceed internationally recognised performance standards.

Key Advantages:

Thermal stability:	Very good thermal stability allowing the grease to perform for short periods of time under extreme temperatures.
Mechanical stability:	Allows for long periods of storage or non-use in the application without any mechanical breakdown of the grease.
Water resistant:	The thickener has very good natural attributes which displace and resist water ingress.
Heat resistant:	Exhibits excellent resistance to heat.
Excellent reversibility:	After being subject to high temperatures, the grease has excellent reversal characteristics, allowing the regaining its original texture after cooling to ambient temperature.

Typical Applications:

Heavy duty wheel bearings on construction, earthmoving and agricultural equipment. Good corrosion protection, thermally and mechanically stable, specially suitable for wheel bearings and hub units in cars and trucks.
Light automotive and trailer wheel bearings. Good corrosion protection, thermally and mechanically stable, specially suitable for wheel bearings and hub units in cars and light trailers.
Multipurpose industrial applications with heavier loads and slower speeds. Sliding machine elements (cams and ways).
For slow moving bearings and certain gears that are subjected to high and/or shock loads typically used in pins and bushes on earthmoving equipment, sliding surfaces, slow moving heavily loaded bearings, axles, 5th wheels, screws and slew ring gears.
Mixing greases in a system can cause issues with thickener systems reacting with each other, changing the physical and chemical structure of the grease, causing an inability to hold or release base oil. Proper care must be taken to ensure compatibility when changing from one grease system to another.
This grease is not compatible with greases making use of the following thickener types: aluminium complex, barium, bentonite clay, calcium complex and polyuera. There is a borderline compatibility sodium thickeners. Care must be taken to ensure the application is properly cleaned before using this product if a borderline or non-compatible product has been used before.

Engol™

GUARANTEED PERFORMANCE

Environment, Health and Safety:

This product is classified under the OECD 301B Modified Sturm, ASTM D-5864, and CEC L-33-T-82 standards as being inherently biodegradable (i.e. 20- 70% biodegradable in 28 days). Information is available on this product in the Material Safety Data Sheet (MSDS). Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. This product contains no PCB's (Polychlorinated Biphenyls).

Typical Technical Characteristics:

Description	Method	Units	Result
NLGI Grade	ASTM D 217		2
Thickener Type			Lithium Calcium
Colour	Visual		Red
Appearance	Visual		Buttery, Tacky
Penetration	ASTM D 217	0.1mm	280
Dropping Point	ASTM D 2265	°C	190
Viscosity of Oil @ 40°C	ASTM D 445	cSt	400
4-Ball Wear Test Scar	ASTM D 2266	mm	0.5
4-Ball Weld Load	ASTM D 2596	kg	315
Timken OK Load	ASTM D 2509	lb	40
Corrosion Prevention	ASTM D 1743		Pass
Copper Strip Corrosion	ASTM D 4048		1B

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

Specifications:

ASTM D-5864 / CEC L-33-T-82
KP2N-40 (DIN 51825)
ISO-L-X-CCIB2 (ISO 6743-9)

Packaging:

15kg Steel pails
18kg Plastic pails
50kg Steel drums
180kg Steel open top drums

Tel: 032 815 0430 | Email: paul@engolgroup.com | Cell: 082 801 4789
Email: lee@engolgroup.com | Cell: 060 997 0314 | www.engolgroup.com