



SAFETY DATA SHEET

HOUGHTON™

Revision Date: 04-11-2016

Version 1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1.

Product identifier

Product Code(s): 06506800-M
Product Name HYDRO DRIVE HP 68
Product Registration number
Denmark -
Norway -
Sweden -
EC #
Pure substance/preparation

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

Recommended use Lubricant
Uses advised against Any other purpose.

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier

Houghton Singapore
22 Boon Lay Way,
#01-61 Trade Hub 21,
Singapore 609968
Tel: +65-6235-1544

Thai Houghton 1993 Co., Ltd.
77/105-106, 25th Floor
Sinn Sathorn Tower
Krungdhonburi Road
Klongsarn, Bangkok 10600, Thailand
Tel: + 66-2-440-1262

Houghton Australia Pty. Ltd.
287 Wickham Road
Moorabbin, Victoria
Australia, 3189
+61-3-9555-0344

D A Stuart India Private Ltd. (a Houghton
Company)
502&503, Montreal Business Centre
5th Floor, Baner, Pune 411 045
Maharashtra, India
Tel: +91-20-6724-5300

1.4. Emergency telephone number

3E Company: (+)1 760 476 3961 (Code 333938)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label Elements

EUH210 - Safety data sheet available on request

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances / 3.2. Mixtures**

This product is a mixture. Health hazard information is based on its ingredients

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Highly refined base oil (Viscosity >20.5 cSt @40°C)	-	-	50% - 100%	**	-
2,6-Di-tert-butylphenol	204-884-0	128-39-2	0% - 1%	Skin Irrit. 2 (H315) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119490822-33-xxx x

Additional information

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 See Section 15 for additional information on base oils.

** Substances for which there are Community workplace exposure limits

Full text of H- and EUH-phrases: see section 16

SECTION 4: FIRST AID MEASURES**4.1. Description of first-aid measures**

General advice	If symptoms persist, call a physician.
Inhalation	Move to fresh air.
Skin contact	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Ingestion	Clean mouth with water. Drink plenty of water. Do not induce vomiting without medical advice.
Protection of First-aiders	Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Main Symptoms None

4.3. Indication of immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment; Use CO2, dry chemical, or foam, Water spray or fog, Cool containers / tanks with water spray

Extinguishing media which shall not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire

5.2. Special hazards arising from the substance or mixture

Special Hazard

In the event of fire and/or explosion do not breathe fumes. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Thermal decomposition can lead to release of irritating gases and vapors. This material creates a fire hazard because it floats on water.

Hazardous Decomposition Products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ensure adequate ventilation.

Advice for non-emergency personnel Material can create slippery conditions.

Advice for emergency responders For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dike to collect large liquid spills.

6.4. Reference to other sections

See Section 8/12/13 for additional information

(Viscosity >20.5 cSt @40°C)	STEL: 10 mg/m ³			
Chemical Name	Russia	Estonia	Latvia	Lithuania
Highly refined base oil (Viscosity >20.5 cSt @40°C)			TWA: 5 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³
Chemical Name	Belarus	Ukraine	Slovakia	Slovenia
Highly refined base oil (Viscosity >20.5 cSt @40°C)			TWA: 5mg/m ³	

Legend:

(s) - Skin

TWA - Time-Weighted Average

STEL - Short Term Exposure Limit

Ceiling - Ceiling Value

Workers Systemic toxicity

Chemical Name	Long term - Oral exposure	Long term - Dermal exposure	Long term - Inhalation exposure	Short term - Oral Exposure	Short term - Dermal exposure	Short term - Inhalation exposure
2,6-Di-tert-butylphenol		2.77 mg/kg	19.6 mg/m ³			

Workers Local effects**Consumers Systemic toxicity**

Chemical Name	Long term - Oral exposure	Long term - Dermal exposure	Long term - Inhalation exposure	Short term - Oral Exposure	Short term - Dermal exposure	Short term - Inhalation exposure
2,6-Di-tert-butylphenol	1.67 mg/kg		5.8 mg/m ³			

Consumers Local effects**Predicted No Effect Concentration (PNEC)**

Chemical Name	Fresh water	Sea water	Fresh water sediment	Sea sediment	Soil
2,6-Di-tert-butylphenol	0.00045 mg/L	0.000045 mg/L	0.196 mg/kg	0.0196 mg/kg	0.0389 mg/kg

8.2. Exposure controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye Protection**

Safety glasses with side-shields.

Hand Protection

Protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.

Skin and body protection

Long sleeved clothing.

Respiratory protection

No special protective equipment required. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hygiene measures

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls No special environmental precautions required.
Thermal hazards None under normal use conditions

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state @20°C	liquid	Appearance	yellow
Odor	Characteristic	Odor Threshold	Not Applicable
<u>Property</u>	<u>Values</u>		<u>Note</u>
pH	Not applicable		
Melting Point / Freezing Point	No information available		
Boiling point/boiling range	No information available		
Flash point	230 °C / 446 °F		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limits in Air			
upper flammability limit	No information available		
Lower flammability limit	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Relative density	~ 0.880		g/cm3 @20°C
Solubility(ies)	Insoluble in water		
Partition coefficient: n-octanol/water	Not Applicable		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity, kinematic	~ 68 cSt @ 40 °C		
Explosive properties	Not Applicable		
Oxidizing Properties	Not Applicable		

9.2 Other information

Viscosity, kinematic (100°C)	No information available
Pour point	No information available
VOC Content (ASTM E-1868-10)	No information available
VOC Content	No information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None under normal use conditions

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition

10.5. Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information - Principle Routes of Exposure

Inhalation	Based on available data, the classification criteria are not met
Eye contact	Based on available data, the classification criteria are not met
Skin contact	Based on available data, the classification criteria are not met
Ingestion	Based on available data, the classification criteria are not met

Acute toxicity - Product Information

Product does not present an acute toxicity hazard based on known information.

Acute toxicity - Component Information

Chemical Name	LD50 Oral (Rat)	LD50 Dermal (Rat/Rabbit)	LC50 Inhalation
Highly refined base oil (Viscosity >20.5 cSt @40°C)	>2000 mg/kg	>2000 mg/kg	
2,6-Di-tert-butylphenol	>5000 mg/kg (Rat)	= 10000 mg/kg (Rabbit)	

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Sensitization

Respiratory Sensitization

Based on available data, the classification criteria are not met.

Skin sensitization

Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Specific target organ systemic toxicity (single exposure)

Based on available data, the classification criteria are not met

Specific target organ systemic toxicity (repeated exposure)

Based on available data, the classification criteria are not met

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
2,6-Di-tert-butylphenol		1.4: 96 h Pimephales promelas mg/L LC50		0.45: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

The product is not readily biodegradable, but it can be degraded by micro-organisms, it is regarded as being inherently biodegradable.

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

The product is insoluble and floats on water

12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products	Dispose of in accordance with local regulations
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Observe all label precautions until container is cleaned, reconditioned or destroyed.
Other Data	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORT INFORMATION

14.1. UN-Number

Not regulated

14.2. UN proper shipping name

Not regulated

14.3. Transport hazard class

Not regulated

14.4. Packing group

Not regulated

14.5. Environmental Hazards

None

14.6. Special precautions for users

None

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

IMDG/IMO Not regulated**ADR/RID** Not regulated**IATA** Not regulated**ADN** Not regulated**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
 Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

Statutory Instruments: Control of Substances Hazardous to Health Regulations 2002. Chemicals (Hazard Information and Packaging) Regulations 2009.

Acts of Parliament: The Health and Safety at Work etc. Act 1974. Environment Protection Act 1990.

Regulation on classification, labeling, of hazardous chemicals (2002 changing 2005). Appendix VI to Regulation on classification, labeling etc. of hazardous chemicals (2002 changing 2010), list of hazardous substances (as amended). Guidelines for submission and declaration of hazardous waste (2009). Transport of dangerous goods: ADR, RID, IMDG and IATA. Administrative norms for pollution of the atmosphere, 2009.

Workplace exposure limits (EH40)

WGK Classification

Low hazard to water/Class 1

The highly refined base oil (Viscosity >20.5 cSt @40°C) contains one or more substance with the following CAS/EC numbers/REACH registration numbers:

Chemical Name	CAS-No	EC-No	REACH Registration Number
Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated	101316-72-7	309-877-7	01-2119489969-06-xxxx
Lubricating oils (petroleum), used, noncatalytically refined	101316-73-8	309-878-2	02-2119822310-56-xxxx
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	265-090-8	
Residual oils (petroleum), solvent-refined	64742-01-4	265-101-6	01-2119488707-21-xxxx
Extracts (petroleum), residual oil solvent	64742-10-5	265-110-5	01-2119488175-30-xxxx
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	265-155-0	01-2119467170-45-xxxx
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	265-156-6	
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	265-157-1	01-2119484627-25-xxxx
Residual oils (petroleum), hydrotreated	64742-57-0	265-160-8	01-2119489287-22-xxxx
Lubricating oils (petroleum), hydrotreated spent	64742-58-1	265-161-3	
Residual oils (petroleum), solvent-dewaxed	64742-62-7	265-166-0	01-2119480472-38-xxxx
Distillates (petroleum), solvent-dewaxed heavy, paraffinic	64742-65-0	265-169-7	01-2119471299-27-xxxx
Paraffin oils (petroleum), catalytic dewaxed heavy	64742-70-7	265-174-4	01-2119487080-42-xxxx
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	276-737-9	01-2119474878-16-xxxx
Lubricating oils (petroleum), C20-C50, hydrotreated neutral oil-based	72623-87-1	276-738-4	01-2119474889-13-xxxx
Lubricating oils	74869-22-0	278-012-2	
Paraffin oils	8012-95-1	232-384-2	
White mineral oil (petroleum)	8042-47-5	232-455-8	01-2119487078-27-xxxx
C18-C50 branched, cyclic and linear hydrocarbons – Distillates	848301-69-9	482-220-0	01-0000020163-82-xxxx

15.2. Chemical Safety Assessment

No information available

SECTION 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Repr.-Reproduction toxicity
 Asp. Tox. - Aspiration Toxicity
 Acute Tox. - Acute Toxicity
 Aquatic Acute - Acute Aquatic Toxicity
 Aquatic Chronic - Chronic Aquatic Toxicity
 Eye Dam. - Eye Damage
 Eye Irrit. - Eye Irritation
 Skin Corr. - Skin Corrosion
 Skin Irrit. - Skin Irritation
 Skin Sens. - Skin Sensitizer
 Resp. Sens. - Respiratory Sensitizer
 STOT SE - Specific target organ systemic toxicity (Single exposure)
 STOT RE - Specific target organ systemic toxicity (repeated exposure)
 VOC - Volatile organic compounds

Full text of H-Statements referred to under sections 2 and 3

<ul style="list-style-type: none"> • H224 - Extremely flammable liquid and vapor • H225 - Highly flammable liquid and vapor • H226 - Flammable liquid and vapor • H270 - May cause or intensify fire; oxidizer • H271 - May cause fire or explosion; strong oxidizer • H272 - May intensify fire; oxidizer • H290 - May be corrosive to metals • H300 - Fatal if swallowed • H301 - Toxic if swallowed • H302 - Harmful if swallowed • H304 - May be fatal if swallowed and enters airways • H310 - Fatal in contact with skin • H311 - Toxic in contact with skin • H312 - Harmful in contact with skin • H314 - Causes severe skin burns and eye damage • H315 - Causes skin irritation • H317 - May cause an allergic skin reaction • H318 - Causes serious eye damage • H319 - Causes serious eye irritation • H330 - Fatal if inhaled • H331 - Toxic if inhaled • H332 - Harmful if inhaled • H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled • H335 - May cause respiratory irritation • H336 - May cause drowsiness or dizziness • H340 - May cause genetic defects 	<ul style="list-style-type: none"> • H341 - Suspected of causing genetic defects • H350 - May cause cancer • H351 - Suspected of causing cancer • H360 - May damage fertility or the unborn child • H361 - Suspected of damaging fertility or the unborn child • H362 - May cause harm to breast-fed children • H370 - Causes damage to organs • H371 - May cause damage to organs • H372 - Causes damage to organs through prolonged or repeated exposure • H373 - May cause damage to organs through prolonged or repeated exposure • H400 - Very toxic to aquatic life • H410 - Very toxic to aquatic life with long lasting effects • H411 - Toxic to aquatic life with long lasting effects • H412 - Harmful to aquatic life with long lasting effects • H413 - May cause long lasting harmful effects to aquatic life • H360Df - May damage the unborn child. Suspected of damaging fertility • H360D - May damage the unborn child • H360FD - May damage fertility. May damage the unborn child • H360F - May damage fertility • H361d - Suspected of damaging the unborn child • H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child • H361f - Suspected of damaging fertility • EUH066 - Repeated exposure may cause skin dryness or cracking • EUH210 - Safety data sheet available on request • EUH208 - May produce an allergic reaction
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Exposure scenario

No information available

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Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.