UNITED HYDRO 600 (SHPD) SAE 15W-40 API CI4/SL

United Oil

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier: UNITED HYDRO 600 (SHPD) SAE 15W-40 API CI4/SL

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses (Consumer use): Lubricant
Relevant uses (Professional users): Lubricant
Relevant uses (Industrial user): Lubricant
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Manufacturer's or supplier´s details:

UNITED OIL COMPANY PTE LTD
14 Tuas Drive 2, Singapore 638647
638647 Singapore - Singapore - Singapore
Phone: +65 6861 1157 - Fax: +65 6861 3101
enquiry@united-oil.com
http://www.united-oil.com/default.aspx?uc=14

1.4 Emergency phone number: +65 68611157

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

SS 586: Part 2: 2022:

The product is not classified as dangerous according to SS 586: Part 2: 2022

2.2 GHS label elements, including precautionary statements:

SS 586: Part 2: 2022:

None

2.3 Other hazards which do not result in classification:

Not relevant

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Not relevant

3.2 Mixtures:

Chemical description: Mixture based on hydrocarbons and additives

Components:

In accordance with SS 586: Part3: 2022 (2023), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 64742-54-7	**Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40ºC**	**75 - <100%**
CAS: 64742-65-0	**Distillates (petroleum), solvent-dewaxed heavy paraffinic, < 3% DMSO**	**<1%**
CAS: 64742-55-8	**Distillates (petroleum), hydrotreated light paraffinic, < 3% DMSO (> 20.5 cSt 40ºC)**	**<1%**

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary first-aid measures:

Consult a doctor in case of discomfort with this Safety data Sheet.

By inhalation:

In case of symptoms, move the person affected into fresh air.

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SECTION 4: FIRST-AID MEASURES (continued)

By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,…), seek medical advice with this Safety Data Sheet

By eye contact:

Rinse with water until the product has been eliminated. In case of problems, consult a doctor with the SDS of this product.

By ingestion/aspiration:

In case of consumption in large quantities, it is recommended to seek medical assistance.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO_2).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Specific hazards arising from the chemical:

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

5.3 Special protective actions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up:

It is recommended:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is not necessary to take special measures to prevent environmental risks. For more information see subsection 6.2

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 5 ºC

Maximum Temp.: 30 ºC

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters/Occupational exposure limits:

Substances whose occupational exposure limits have to be assessed in the workplace:

There are no applicable occupational exposure limits for the substances contained in the product

8.2 Appropriate engineering control measures:

A.- Individual protection measures, such as personal protective equipment (PPE)

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.
All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using chemical protection gloves

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 ºC:	Liquid
Appearance:	Not relevant *
Color:	Not relevant *
Odor:	Not relevant *
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	Not relevant *
Vapour pressure at 20 ºC:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Vapour pressure at 50 ºC:	Not relevant *
Evaporation rate at 20 ºC:	Not relevant *
Product description:	
Density at 20 ºC:	871 kg/m³
Relative density at 20 ºC:	0.87
Dynamic viscosity at 20 ºC:	Not relevant *
Kinematic viscosity at 20 ºC:	Not relevant *
Kinematic viscosity at 40 ºC:	~113 mm²/s
Kinematic viscosity at 100 ºC:	~14.9 mm²/s
Concentration:	Not relevant *
pH:	Not relevant *
Relative vapour density at 20 ºC:	Not relevant *
Partition coefficient n-octanol/water 20 ºC:	Not relevant *
Solubility in water at 20 ºC:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *
Flammability:	
Flash Point:	>200 ºC
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
Particle characteristics:	
Median equivalent diameter:	Not relevant *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *
Other safety characteristics:	
Surface tension at 20 ºC:	Not relevant *
Refraction index:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

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SECTION 10: STABILITY AND REACTIVITY (continued)

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

LD50 oral > 5000 mg/kg (rat)

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met
- Corrosivity/Irritability: Based on available data, the classification criteria are not met

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met
- Contact with the eyes: Based on available data, the classification criteria are not met

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met
  IARC: Distillates (petroleum), solvent-dewaxed heavy paraffinic, < 3% DMSO (3: Not classifiable as to its carcinogenicity to humans); Distillates (petroleum), hydrotreated light paraffinic, < 3% DMSO (> 20.5 cSt 40ºC) (3: Not classifiable as to its carcinogenicity to humans); Distillates (petroleum), solvent-dewaxed light paraffinic , < 3 % IP 346 (3: Not classifiable as to its carcinogenicity to humans); Anthraquinone (2B: Possibly carcinogenic to humans)
- Mutagenicity: Based on available data, the classification criteria are not met
- Reproductive toxicity: Based on available data, the classification criteria are not met

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met
- Skin: Based on available data, the classification criteria are not met

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met
- Skin: Based on available data, the classification criteria are not met

H- Aspiration hazard:

Based on available data, the classification criteria are not met

Other information:

Not relevant

Specific toxicology information on the substances:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Distillates (petroleum), hydrotreated heavy paraffinic , < 3 % IP 346, > 20,5 cSt @ 40ºC CAS: 64742-54-7	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation vapour	>20 mg/L	
Distillates (petroleum), solvent-dewaxed heavy paraffinic, < 3% DMSO CAS: 64742-65-0	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation vapour	>20 mg/L	
Distillates (petroleum), hydrotreated light paraffinic, < 3% DMSO (> 20.5 cSt 40ºC) CAS: 64742-55-8	LD50 oral	5100 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rabbit
	LC50 inhalation vapour	>20 mg/L	

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	>5000 mg/kg (Calculation method)	0 %
Dermal	>5000 mg/kg (Calculation method)	0 %
LC50 inhalation vapour	>20 mg/L (4 h) (Calculation method)	0 %

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
Distillates (petroleum), hydrotreated light paraffinic, < 3% DMSO (> 20.5 cSt 40ºC) CAS: 64742-55-8	LC50	5000 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	1000 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1000 mg/L (96 h)	Scenedesmus subspicatus	Algae

12.2 Persistence and degradability:

Not relevant

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Distillates (petroleum), hydrotreated light paraffinic, < 3% DMSO (> 20.5 cSt 40ºC) CAS: 64742-55-8	BCF	
	Pow Log	3.9
	Potential	

12.4 Mobility in soil:

Not relevant

12.5 Results of PBT and vPvB assessment:

Not relevant

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See epigraph 6.2.

Regulations related to waste management:

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

Legislation related to waste management:

Environmental Public Health (Toxic Industrial Waste) Regulations.
Hazardous Waste (Control of Export, Import and Transit) Act.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to SS 586-1 (2014):

14.1	**UN number:**	Not relevant
14.2	**UN proper shipping name:**	Not relevant
14.3	**Transport hazard class(es):**	Not relevant
	Labels:	Not relevant
14.4	**Packing group, if applicable:**	Not relevant
14.5	**Environmental hazard:**	No
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**	Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 42-24:

14.1	**UN number:**	Not relevant
14.2	**UN proper shipping name:**	Not relevant
14.3	**Transport hazard class(es):**	Not relevant
	Labels:	Not relevant
14.4	**Packing group, if applicable:**	Not relevant
14.5	**Marine pollutant:**	No
14.6	**Special precautions for user**	
	Special regulations:	Not relevant
	EmS Codes:	
	Physico-Chemical properties:	see section 9
	Limited quantities:	Not relevant
	Segregation group:	Not relevant
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2026:

14.1	**UN number:**	Not relevant
14.2	**UN proper shipping name:**	Not relevant
14.3	**Transport hazard class(es):**	Not relevant
	Labels:	Not relevant
14.4	**Packing group, if applicable:**	Not relevant
14.5	**Environmental hazard:**	No
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

Specific provisions in terms of protecting people or the environment:

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SECTION 15: REGULATORY INFORMATION (continued)

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Environmental Protection and Management (Hazardous Substances) Regulations.
Environmental Protection and Management Act. (EPMA) (CHAPTER 94A)
Environmental Public Health Act. (EPHA) (CHAPTER 95)
Fire Safety Act. (CHAPTER 109A)
Workplace Safety and Health Act. (CHAPTER 354A)
Workplace Safety and Health (General Provisions) Regulations.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with SS 586: Part 3: 2022 (2023) - Specification for hazard communication for hazardous chemicals and dangerous goods - Part 3 : Preparation of safety data sheets (SDS).

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

SS 586: Part 2: 2022:

Not relevant

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://www.nea.gov.sg

Abbreviations and acronyms:

IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET