

SECTION 1: IDENTIFICATION

1.1	GHS	Product	identifier:
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UNITED UNIDRAW FES 40

Other means of identification:

Non-applicable

1.2 Recommended use of the chemical and restrictions on use: Relevant uses: 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 2:2014:

Classification of this product has been carried out in accordance with SS 586 : Part 2 : 2014

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Asp. Tox. 1: Aspiration hazard, Category 1, H304 Flam. Liq. 3: Flammable liquids, Category 3, H226 Skin Irrit. 2: Skin irritation, Category 2, H315

2.2 GHS label elements, including precautionary statements:

SS 586:Part 2:2014:

Danger



Hazard statements:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects. Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways. Flam. Liq. 3: H226 - Flammable liquid and vapour. Skin Irrit. 2: H315 - Causes skin irritation.

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand.

- P102: Keep out of reach of children.
- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P264: Wash thoroughly after use.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P370+P378: In case of fire: Use ABC powder extinguisher to put it out.

P501: Dispose of contents and / or their container according to the separated collection system used in your municipality.

Substances that contribute to the classification

Naphtha (petroleum), hydrotreated heavy, < 0.1 % EC 200-753-7

2.3 Other hazards which do not result in classification:

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

3.2 Mixtures:

Chemical description: Mixture based on hydrocarbons and additives

Components:

In accordance with SS 586:Part 3:2008 (2014) , the product contains:

	Identification	Chemical name/Classification	Concentration
CAS:	64742-48-9	Naphtha (petroleum), hydrotreated heavy, < 0.1 % EC 200-753-7 Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Danger	75 - <100 %
CAS:	111-84-2	Nonane Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; () () () () () () () () () () () () ()	2.5 - <10 %

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary first-aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

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:

Non-applicable

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 (CO2).

Unsuitable extinguishing media:

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

5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

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 individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)



SECTION 5: FIRE-FIGHTING MEASURES (continued)

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:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and materials for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

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

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems and with the minimum requirements for protecting the security and health of workers. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

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

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.:	5 °C
Maximum Temp.:	30 °C
Maximum time:	6 Months

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):



SECTION 7: HANDLING AND STORAGE (continued)

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 monitored in the workplace:

Workplace Safety and Health (General Provisions) Regulations:

Identification	Occupational exposure limits		
Nonane	PEL (Long Term)	200 ppm	1050 mg/m ³
CAS: 111-84-2	PEL (Short Term)		
Fatty acids, C16-18, 2-ethylhexyl esters	PEL (Long Term)		10 mg/m ³
CAS: 91031-48-0	PEL (Short Term)		

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

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

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.- Ocular and facial 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
Mandatory complete body protection	Antistatic and fireproof protective clothing	Limited protection against flames.
Mandatory foot protection	Safety footwear with antistatic and heat resistant properties	Replace boots at any sign of deterioration.
- Additional emerge	ency measures	

Emergency measure	Standards	Emergency measure	Standards
	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	0 +	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
Emergency shower		Eyewash stations	



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemica	I properties:
For complete information see the product datas	
Appearance:	
Physical state at 20 °C:	Liquid
Appearance:	Not available
Color:	Not available
Odor:	Not available
Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *
Product description:	
Density at 20 °C:	757.4 kg/m³
Relative density at 20 °C:	0.757
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	~1.13 cSt
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Flammability:	
Flash Point:	~46 °C
Heat of combustion:	Non-applicable *
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Not available
Upper flammability limit:	Not available
Explosive:	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *
*Not relevant due to the nature of the product, not provide	ng information property of its hazards.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

9.2 Other information:

Surface tension at 20 °C:

Non-applicable * Non-applicable *

Refraction index:

*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.

10.2 Chemical stability:

Chemically stable under the 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.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Not applicable Not applicable Risk of combustion Avoid direct impact Not applicable	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	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 (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

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

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, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
 - Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- B- Inhalation (acute effect):
 - Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
 - Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
 - Contact with the skin: Produces skin inflammation.
 - Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):



SECTION 11: TOXICOLOGICAL INFORMATION (continued) - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3. IARC: Naphtha (petroleum), hydrotreated heavy, < 0.1 % EC 200-753-7 (3) Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. E- Sensitizing effects: Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3. Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. F- Specific target organ toxicity (STOT) - single exposure: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3. 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, as it does not contain substances classified as dangerous for this effect. For more information see section 3. Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. H- Aspiration hazard: The consumption of a considerable dose can cause pulmonary damage. Other information: Non-applicable Specific toxicology information on the substances: Identification Acute toxicity Genus Naphtha (petroleum), hydrotreated heavy, < 0.1 % EC 200-753-7 D50 oral 15000 mg/kg Rat CAS: 64742-48-9 D50 dermal 5500 mg/kg Rabbit LC50 inhalation >20 mg/L (4 h) LD50 oral 5100 mg/kg Rat Nonane >5000 mg/kg CAS: 111-84-2 D50 dermal C50 inhalation >20 mg/L (4 h)

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>5000 mg/kg (Calculation method)	Non-applicable
Dermal	>5000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

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

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
Nonane	LC50	Non-applicable		
CAS: 111-84-2	EC50	0.2 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

12.2 Persistence and degradability:

Not available

12.3 Bioaccumulative potential:

Safety data sheet According to SS 586:Part 3:2008 (2014)

UNITED UNIDRAW FES 40



SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioacc	Bioaccumulation potential	
Nonane	BCF	105	
CAS: 111-84-2	Pow Log	5.65	
	Potential	High	

12.4 Mobility in soil:

Identification		tion/desorption	Volatility	
Nonane	<mark>Кос</mark>	796	Henry	Non-applicable
CAS: 111-84-2	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	2.243E-2 N/m (25 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

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-dangerous residue. We do not recommended disposal down the drain. See epigraph 6.2.

Regulations related to waste management:

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:		UN1268
✓ <u>½</u> 14.2	UN proper shipping name:	PETROLEUM DISTILLATES, N.O.S
14.3	Transport hazard class(es):	3
	Labels:	3
14.4	Packing group, if applicable:	III
14.5	Environmental hazard:	Yes
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:	Non-applicable
Transport of dangero	us goods by sea:	
With regard to IMDG 39	-18:	



ECTION 14: TRANSPORT INFORMATION (continued)		
14.1	UN number:	UN1268
	UN proper shipping name:	PETROLEUM DISTILLATES, N.O.S
	Transport hazard class(es):	3
	Labels:	3
14.4	Packing group, if applicable:	III
	Marine pollutant:	Yes
	Special precautions for user	
	Special regulations:	955, 363, 223
	EmS Codes:	F-E, S-E
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 L
	Segregation group:	Non-applicable
14.7	Transport in bulk according	Non-applicable
	to Annex II of MARPOL 73/78 and the IBC Code:	
Transport of danger		
With regard to IATA/IC	AO 2021:	
A 14.1	UN number:	UN1268
	UN proper shipping name:	PETROLEUM DISTILLATES, N.O.S
	Transport hazard class(es):	3
• • -	Labels:	3
14.4	Packing group, if applicable:	III
14.5	Environmental hazard:	Yes
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:	Non-applicable

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:

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. Environmental Public Health Act. Fire Safety Act. Workplace Safety and Health Act. 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 586Part 3:2008 (2014) - 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 2:

- H315: Causes skin irritation.
- H411: Toxic to aquatic life with long lasting effects.
- H304: May be fatal if swallowed and enters airways.
- H226: Flammable liquid and vapour.

Texts of the legislative phrases mentioned in section 3:



SECTION 16: OTHER INFORMATION (continued)

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 2:2014:

Aquatic Acute 1: H400 - Very toxic to aquatic life.

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Irrit. 2: H315 - Causes skin irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

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

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.