

## SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
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### PRODUCT

Product Name: UNIREX N 3  
Product Description: Base Oil and Additives  
Product Code: 2015A0207230, 644369-84  
Intended Use: Grease

### COMPANY IDENTIFICATION

Supplier: ExxonMobil Hong Kong Limited  
Suite 2301-02&06-08, 23/F, Central Plaza  
18 Harbour Road  
Wanchai Hong Kong

24 Hour Emergency Telephone 800-968-793 / +1-703-527-3887  
Supplier General Contact (852) 2172 8300

Supplier: BRENNTAG CHEMICALS (HK) PTE LTD  
6/F, Epoch Industrial Building,  
8 Cheung Ho Street,  
Tsing Yi, NT Hong Kong

Supplier General Contact (852) 3590 3909/(852)3590 6306

SECTION 2	HAZARDS IDENTIFICATION
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This material is not hazardous according to UN GHS Revision 4 Criteria. Classification includes all GHS hazard classes and all GHS hazard categories. For hazard categories with two cut-off/concentration limits, classification was based on the higher limit.

**Contains:** N-PHENYL-1-NAPHTHYLAMINE May produce an allergic reaction.

**Other hazard information:**

### PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

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#### HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

#### ENVIRONMENTAL HAZARDS

No significant hazards.

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

<b>SECTION 3</b>	<b>COMPOSITION / INFORMATION ON INGREDIENTS</b>
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This material is defined as a mixture.

#### Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
N-PHENYL-1-NAPHTHYLAMINE	90-30-2	0.1 - < 1.0%	H302, H317, H373, H400(M factor 1), H410(M factor 1)
BENZOIC ACID, 2-HYDROXY-, MONOLITHIUM SALT	552-38-5	1 - < 5%	H302, H314(1)
DILITHIUM SALICYLATE	38970-76-2	1 - < 5%	H302, H314(1B)
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT	25619-56-1	0.1 - < 1%	H302, H315
LITHIUM HYDROXIDE	1310-65-2	0.1 - < 1%	H302, H314(1B)
LITHIUM METABORATE	13453-69-5	0.1 - < 1%	H302, H361(D), H318

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

<b>SECTION 4</b>	<b>FIRST AID MEASURES</b>
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#### INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

#### SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

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First aid is normally not required. Seek medical attention if discomfort occurs.

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
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#### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight streams of water

#### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulphur oxides

#### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** >200 C (392 F) [ EST. FOR OIL, ASTM D-92 (COC)]

**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D

**Autoignition Temperature:** N/D

<b>SECTION 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
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#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

#### PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or

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contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

#### SPILL MANAGEMENT

**Land Spill:** Stop leak if you can do so without risk. Scrape up spilled material with shovels into a suitable container for recycle or disposal.

**Water Spill:** Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
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#### HANDLING

Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is not a static accumulator.

#### STORAGE

Do not store in open or unlabelled containers.

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
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#### EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source	Year
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT [as Ba]		STEL	1.5 mg/m <sup>3</sup>			China OELs	2019
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT [as Ba]		TWA	0.5 mg/m <sup>3</sup>			China OELs	2019
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT [as Ba]		TWA	0.5 mg/m <sup>3</sup>			Hong Kong OELs	2002
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT [as Ba]		TWA	0.5 mg/m <sup>3</sup>			ACGIH	2020
LITHIUM HYDROXIDE		Ceiling	1 mg/m <sup>3</sup>			OARS WEEL	2018

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LITHIUM METABORATE	Inhalable fraction	STEL	6 mg/m <sup>3</sup>			ACGIH	2020
LITHIUM METABORATE	Inhalable fraction	TWA	2 mg/m <sup>3</sup>			ACGIH	2020

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use. Nitrile, Viton

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

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**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:  
No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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**Note:** Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

## GENERAL INFORMATION

**Physical State:** Solid  
**Form:** Semi-fluid  
**Colour:** Green  
**Odour:** Characteristic  
**Odour Threshold:** N/D

## IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 C):** 0.92  
**Flash Point [Method]:** >200 C (392 F) [ EST. FOR OIL, ASTM D-92 (COC)]  
**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D  
**Flammability (Solid, Gas):** N/A  
**Autoignition Temperature:** N/D  
**Boiling Point / Range:** N/D  
**Vapour Density (Air = 1):** N/D  
**Vapour Pressure:** < 0.013 kPa (0.1 mm Hg) at 20 C [Estimated]  
**Evaporation Rate (n-butyl acetate = 1):** N/D  
**pH:** N/A  
**Log Pow (n-Octanol/Water Partition Coefficient):** N/D  
**Solubility in Water:** Negligible  
**Viscosity:** 112.75 cSt (112.75 mm<sup>2</sup>/sec) at 40 C [Base oil]  
**Freezing Point:** N/D  
**Melting Point:** N/D  
**Decomposition Temperature:** N/D

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**Oxidizing Properties:** See Hazards Identification Section.

**OTHER INFORMATION**

**DMSO Extract (mineral oil only), IP-346:** < 3 %wt

NOTE: Most physical properties above are for the oil component in the material.

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
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**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidisers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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**INFORMATION ON TOXICOLOGICAL EFFECTS**

<u>Hazard Class</u>	<u>Conclusion / Remarks</u>
<b>Inhalation</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
<b>Ingestion</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
<b>Skin</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 431 439
<b>Eye</b>	
Serious Eye Damage/Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 437 492
<b>Sensitisation</b>	
Respiratory Sensitization: No end point	Not expected to be a respiratory sensitizer.

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data for material.	
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
<b>Aspiration:</b> Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
<b>Germ Cell Mutagenicity:</b> No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
<b>Carcinogenicity:</b> No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
<b>Reproductive Toxicity:</b> No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
<b>Lactation:</b> No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

#### TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
N-PHENYL-1-NAPHTHYLAMINE	Oral Lethality: LD 50 1625 mg/kg (Rat)
DILITHIUM SALICYLATE	Oral Lethality: LD 50 550 mg/kg (Rat)
DINONYL NAPHTHALENESULPHONIC ACID, BARIUM SALT	Oral Lethality: LD 50 1750 mg/kg (Rat)

#### OTHER INFORMATION

##### For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components, this formulation, or similar formulations.

##### Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitising in test animals. N-phenyl-1-naphthylamine (PAN): A single oral overexposure may result in clinical signs/symptoms of cyanosis, headache, shallow respiration, dizziness, confusion, low blood pressure, convulsions, coma, or jaundice. Hematuria may occur due to bladder and kidney irritation, and anemia may develop later. Repeated exposure in laboratory animals caused liver and kidney damage and depressed bone marrow activity. Undiluted PAN is a skin sensitiser. Human testing of lubricants containing 1.0% PAN resulted in no reactions indicative of sensitisation.

##### IARC Classification:

The following ingredients are cited on the lists below: None.



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--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

**SECTION 12 ECOLOGICAL INFORMATION**

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

**ECOTOXICITY**

Material -- Not expected to be harmful to aquatic organisms.

**MOBILITY**

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

**PERSISTENCE AND DEGRADABILITY****Biodegradation:**

Base oil component -- Expected to be inherently biodegradable

**BIOACCUMULATION POTENTIAL**

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

**ECOLOGICAL DATA****Ecotoxicity**

Test	Duration	Organism Type	Test Results
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOELR 1 mg/l: data for similar materials

**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

**DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

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**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
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**LAND (ADR) :** Not Regulated for Land Transport

**SEA (IMDG):** Not Regulated for Sea Transport according to IMDG-Code

**Marine Pollutant:** No

**AIR (IATA):** Not Regulated for Air Transport

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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Material is not hazardous according to UN GHS Revision 4 Criteria.

**REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS**

Listed or exempt from listing/notification on the following chemical inventories : DSL, IECSC, TCSI, TSCA

**Special Cases:**

Inventory	Status
AIIC	Restrictions Apply
KECI	Restrictions Apply
PICCS	Restrictions Apply

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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N/D = Not determined, N/A = Not applicable

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H314(1): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1

H314(1B): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1B

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H315: Causes skin irritation; Skin Corr/Irritation, Cat 2  
H317: May cause allergic skin reaction; Skin Sensitisation, Cat 1  
H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1  
H361(D): Suspected of damaging the unborn child; Repro Tox, Cat 2 (Develop)  
H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2  
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1  
H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

BRENTAG CHEMICALS (HK) PTE LTD: Section 01: Supplier Mailing Address information was modified.  
Section 01: Company Mailing Address information was modified.  
Section 07: Handling and Storage - Handling information was modified.

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