



Product Name: CAT TRANSMISSION AND DRIVE TRAIN OIL (TDTO) 10W

Revision Date: 19 May 2015

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SAFETY DATA SHEET

SECTION 1	IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING
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As of the revision date above, this (M)SDS meets the regulations in the United Kingdom & Ireland.

1.1. PRODUCT IDENTIFIER

Product Name: CAT TRANSMISSION AND DRIVE TRAIN OIL (TDTO) 10W

Product Description: Base Oil and Additives

Product Code: 20202050B045, 400577, 564658-60

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended Use: Gear oil

Uses advised against: None unless specified elsewhere in this SDS.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: ExxonMobil Petroleum & Chemical BVBA
POLDERDIJKWEG
B-2030 Antwerpen
Belgium

MSDS Internet Address:

www.msds.exxonmobil.com

E-Mail:

sds.uk@exxonmobil.com

Supplier / Registrant:

(BE) 32 35433111

1.4. EMERGENCY TELEPHONE NUMBER

24 Hour Environmental / Health Emergency

(UK) 01372 222 000 / (IRELAND) 44 1372 222 000

Telephone:

SECTION 2	HAZARDS IDENTIFICATION
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2.1. CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008

Not Classified

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Classification according to EU Directive 67/548/EEC / 1999/45 EC

Not Classified

2.2. LABEL ELEMENTS

No Label elements according to Regulation (EC) No 1272/2008

Contains: CALCIUM SULPHONATE May produce an allergic reaction.

2.3. OTHER HAZARDS

Physical / Chemical Hazards:

No significant hazards.

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. Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

SECTION 3	COMPOSITION / INFORMATION ON INGREDIENTS
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3.1. SUBSTANCES Not Applicable. This material is regulated as a mixture.

3.2. MIXTURES

This material is defined as a mixture.

Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Name	CAS#	EC#	Registration#	Concentration*	GHS/CLP classification
CALCIUM SULPHONATE		POLYMER	NE	0.1 - < 1%	Skin Sens. 1 H317
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	265-157-1	01-2119484627-25	30 - < 40%	Asp. Tox. 1 H304
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	265-169-7	01-2119471299-27	30 - < 40%	Asp. Tox. 1 H304
TETRAPROPENYL PHENOL	121158-58-5	310-154-3	01-2119513207-49	0.1 - < 1%	Aquatic Acute 1 H400 (M factor 10), Aquatic Chronic 1 H410 (M factor 10), Repr. 1B H360F, Skin Irrit. 2 H315,

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					Eye Irrit. 2 H319
ZINC ARYLDITHIOPHOSPHATE		308-565-8	NE	1 - < 5%	Eye Irrit. 2 H319, [Aquatic Acute 3 H402], Aquatic Chronic 3 H412

Note - any classification in brackets is a GHS building block that was not adopted by the EU in the CLP regulation (No 1272/2008) and therefore is not applicable in the EU or in non-EU countries which have implemented the CLP regulation and is shown for informational purposes only.

Name	CAS#	EC#	Registration#	Concentration*	DSD Symbols/Risk Phrases
TETRAPROPENYL PHENOL	121158-58-5	310-154-3	01-2119513207-49	0.1 - < 1%	Xi;R36/38, T;Repro. Cat. 2;R60, N;R50/53
ZINC ARYLDITHIOPHOSPHATE		308-565-8	NE	1 - < 5%	R52/53

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

Note: See (M)SDS Section 16 for full text of the R-Phrases. See (M)SDS Section 16 for full text of hazard statements.

SECTION 4 FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

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

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

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Local necrosis as evidenced by delayed onset of pain and tissue damage a few hours after injection.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

The need to have special means for providing specific and immediate medical treatment available in the workplace is not expected.

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SECTION 5 FIRE FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Unsuitable Extinguishing Media: Straight streams of water

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

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

5.3. ADVICE FOR FIRE FIGHTERS

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.

FLAMMABILITY PROPERTIES

Flash Point [Method]: 200°C (392°F) [ASTM D-92]

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.9 [Estimated]

Autoignition Temperature: No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

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

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antistatic material is recommended.

6.2. ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

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.

6.4. REFERENCES TO OTHER SECTIONS

See Sections 8 and 13.

SECTION 7

HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabelled containers. Keep away from incompatible materials.

7.3. SPECIFIC END USES: Section 1 informs about identified end-uses. No industrial or sector specific guidance available.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

EXPOSURE LIMIT VALUES

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

Substance Name	Form	Limit/Standard			Note	Source
Distillates (petroleum), hydrotreated heavy paraffinic	Inhalable fraction.	TWA	5 mg/m ³			ACGIH
Distillates (petroleum), hydrotreated heavy paraffinic	Mist.	TWA	5 mg/m ³			ACGIH
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Mist.	TWA	5 mg/m ³			ACGIH

Exposure limits/standards for materials that can be formed when handling this product: When mists/aerosols can occur the following is recommended: 5 mg/m³ - ACGIH TLV (inhalable fraction).

Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s):

UK Health and Safety Executive (HSE)

DERIVED NO EFFECT LEVEL (DNEL)/DERIVED MINIMAL EFFECT LEVEL (DMEL)

Worker

Substance Name	Dermal	Inhalation
Distillates (petroleum), solvent-dewaxed heavy paraffinic	NA	5.4 mg/m ³ DNEL, Chronic Exposure, Local Effects
Distillates (petroleum), hydrotreated heavy paraffinic	NA	5.4 mg/m ³ DNEL, Chronic Exposure, Local Effects

Consumer

Substance Name	Dermal	Inhalation	Oral
Distillates (petroleum), solvent-dewaxed heavy paraffinic	NA	1.2 mg/m ³ DNEL, Chronic Exposure, Local Effects	NA
Distillates (petroleum), hydrotreated heavy paraffinic	NA	1.2 mg/m ³ DNEL, Chronic Exposure, Local Effects	NA

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

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PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance Name	Aqua (fresh water)	Aqua (marine water)	Aqua (intermittent release)	Sewage treatment plant	Sediment	Soil	Oral (secondary poisoning)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	NA	NA	NA	NA	NA	NA	9.33 mg / kg (food)
Distillates (petroleum), hydrotreated heavy paraffinic	NA	NA	NA	NA	NA	NA	9.33 mg / kg (food)

8.2. EXPOSURE CONTROLS

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 special requirements under ordinary 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.

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

Skin and Body Protection: Any specific clothing information provided is based on published literature or

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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

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.

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Colour: Brown

Odour: Characteristic

Odour Threshold: No data available

pH: Not technically feasible

Melting Point: Not technically feasible

Freezing Point: No data available

Initial Boiling Point / and Boiling Range: > 316°C (600°F) [Estimated]

Flash Point [Method]: 200°C (392°F) [ASTM D-92]

Evaporation Rate (n-butyl acetate = 1): No data available

Flammability (Solid, Gas): Not technically feasible

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.9 [Estimated]

Vapour Pressure: < 0.013 kPa (0.1 mm Hg) at 20 °C [Estimated]

Vapour Density (Air = 1): > 2 at 101 kPa [Estimated]

Relative Density (at 15 °C): 0.89 [ASTM D4052]

Solubility(ies): water Negligible

Partition coefficient (n-Octanol/Water Partition Coefficient): > 3.5 [Estimated]

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: [N/D at 40°C] | 6.3 cSt (6.3 mm²/sec) at 100°C [test method unavailable]

Explosive Properties: None

Oxidizing Properties: None

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9.2. OTHER INFORMATION

Pour Point: -30°C (-22°F) [ASTM D97]

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

SECTION 10 STABILITY AND REACTIVITY

10.1. REACTIVITY: See sub-sections below.

10.2. CHEMICAL STABILITY: Material is stable under normal conditions.

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

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

10.5. INCOMPATIBLE MATERIALS: Strong oxidisers

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

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

<u>Hazard Class</u>	<u>Conclusion / Remarks</u>
Inhalation	
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.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data	Not expected to be a germ cell mutagen. Based on assessment of

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for material.	the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
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.

OTHER INFORMATION

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. Tetrapropenyl phenol (TPP). TPP was tested in a rat oral gavage one-generation reproductive toxicity study and a rat dietary two-generation reproductive toxicity study. Results from the one-generation study included reduced ovary weights and changes in male reproductive accessory organs. Results from the two-generation study included prolonged estrous cyclicity, reduced ovary weights, accelerated sexual maturation, decreased mean live litter size, decreased fertility rates, hypospermia, and reduced weights of male reproductive accessory organs. A Specific Concentration Limit (SCL) for reproductive effects of 1.5 wt% TPP was derived by the supplier based on the NOAEL (15 mg/kg/day) from the rat dietary two-generation study and was confirmed in supporting studies with other substances containing TPP as an impurity.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

12.1. TOXICITY

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

12.2. PERSISTENCE AND DEGRADABILITY

Biodegradation:

Base oil component -- Expected to be inherently biodegradable

12.3. BIOACCUMULATIVE POTENTIAL

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

12.4. MOBILITY IN SOIL

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.

12.5. PERSISTENCE, BIOACCUMULATION AND TOXICITY FOR SUBSTANCE(S)

This product is not, or does not contain, a substance that is a PBT or a vPvB.

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12.6. OTHER ADVERSE EFFECTS

No adverse effects are expected.

NOTE: One or more components of this material contain an impurity (branched alkylphenol) that is highly toxic to aquatic organisms. The components containing the impurity were tested by the supplier and found to be no more than minimally toxic to aquatic organisms.

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.

13.1. WASTE TREATMENT METHODS

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. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants.

REGULATORY DISPOSAL INFORMATION

European Waste Code: 13 02 05*

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

This material is considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies.

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.

SECTION 14

TRANSPORT INFORMATION

LAND (ADR/RID): 14.1-14.6 Not Regulated for Land Transport

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INLAND WATERWAYS (ADNR/ADN): 14.1-14.6 Not Regulated for Inland Waterways Transport

SEA (IMDG): 14.1-14.6 Not Regulated for Sea Transport according to IMDG-Code

SEA (MARPOL 73/78 Convention - Annex II):

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

Not classified according to Annex II

AIR (IATA): 14.1-14.6 Not Regulated for Air Transport

SECTION 15	REGULATORY INFORMATION
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REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Applicable EU Directives and Regulations:

1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto]

689/2008/EC [...concerning the export and import of dangerous substances and amendments thereto]

1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto]

15.2. CHEMICAL SAFETY ASSESSMENT

REACH Information: A Chemical Safety Assessment has been carried out for one or more substances present in the material.

SECTION 16	OTHER INFORMATION
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REFERENCES: Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, CONCAWE Product Dossiers, publications from other trade associations, such as the EU Hydrocarbon Solvents REACH Consortium, U.S. HPV Program Robust Summaries, the EU IUCLID Data Base, U.S. NTP publications, and other sources, as appropriate.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

Acronym	Full text
N/A	Not applicable
N/D	Not determined
NE	Not established
VOC	Volatile Organic Compound
AICS	Australian Inventory of Chemical Substances
AIHA WEEL	American Industrial Hygiene Association Workplace Environmental Exposure Limits
ASTM	ASTM International, originally known as the American Society for Testing and Materials (ASTM)
DSL	Domestic Substance List (Canada)
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of Notified Chemical Substances
ENCS	Existing and new Chemical Substances (Japanese inventory)
IECSC	Inventory of Existing Chemical Substances in China
KECI	Korean Existing Chemicals Inventory
NDSL	Non-Domestic Substances List (Canada)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
TLV	Threshold Limit Value (American Conference of Governmental Industrial Hygienists)
TSCA	Toxic Substances Control Act (U.S. inventory)
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
LC	Lethal Concentration
LD	Lethal Dose
LL	Lethal Loading
EC	Effective Concentration
EL	Effective Loading
NOEC	No Observable Effect Concentration
NOELR	No Observable Effect Loading Rate

KEY TO THE RISK CODES CONTAINED IN SECTION 2 AND 3 OF THIS DOCUMENT (for information only):

R36; Irritating to eyes.

R38; Irritating to skin.

R50/53; Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53; Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R60; May impair fertility.

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

Asp. Tox. 1 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1

Skin Irrit. 2 H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

Skin Sens. 1 H317: May cause allergic skin reaction; Skin Sensitization, Cat 1

Eye Irrit. 2 H319: Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2

Eye Irrit. 2 H320: Causes eye irritation; Serious Eye Damage/Irr, Cat 2

Repr. 1B H360F: May damage fertility; Repro Tox, Cat 1B (Fertility)

Aquatic Acute 1 H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

[Aquatic Acute 3 H402]: Harmful to aquatic life; Acute Env Tox, Cat 3

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Aquatic Chronic 1 H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

Aquatic Chronic 3 H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 05: Hazardous Combustion Products information was modified.

Composition: Component Table information was modified.

Composition: Component Table for REACH information was modified.

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MHC: 0B, 0B, 0, 0, 0, 0

PPEC: A

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ANNEX

Annex not required for this material.