

Revision Date: 01 May 2015

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SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE

COMPANY / UNDERTAKING

As of the revision date above, this (M)SDS meets the regulations in the United Kingdom & Ireland.

1.1. PRODUCT IDENTIFIER

Product Name: MOBIL MACHINE TOOL LONG LIFE COOLANT

Product Description: Glycol

Product Code: 300384-60, 3510101015T5

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

Intended Use: Antifreeze/coolant

Uses advised against: This product is not recommended for any industrial, professional or consumer use

other than the Identified Uses above.

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.comE-Mail:sds.uk@exxonmobil.comSupplier / 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

2.1. CLASSIFICATION OF SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008

Acute oral toxicant: Category 4. Specific target organ toxicant (repeated exposure): Category 2.

H302: Harmful if swallowed. H373: May cause damage to organs through prolonged or repeated exposure. Kidney



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

| Xn; R22 |

Harmful.

R22; Harmful if swallowed.

2.2. LABEL ELEMENTS

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

Pictograms:





Signal Word: Warning

Hazard Statements:

H302: Harmful if swallowed. H373: May cause damage to organs through prolonged or repeated exposure. Kidney

Precautionary Statements:

P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children.

P103: Read label before use.

P260: Do not breathe mist / vapours. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P315: Get immediate medical advice/attention. P330: Rinse mouth.

P501: Dispose of contents and container in accordance with local regulations.

Contains: 1H-BENZOTRIAZOLE; ethane-1,2-diol

2.3. OTHER HAZARDS

Physical / Chemical Hazards:

No significant hazards.

Health Hazards:

High-pressure injection under skin may cause serious damage. Ingestion may cause serious adverse effects and may be fatal. May cause kidney failure and central nervous system effects. Prolonged exposure to elevated concentrations of mist or liquid may cause irritation of the skin, eyes, and respiratory tract.

Environmental Hazards:

No significant hazards. Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

SECTION 3



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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
1H-BENZOTRIAZOLE	95-14-7	202-394-1	NE	0.1 - < 1%	Acute Tox. 4 H302,
					Acute Tox. 4 H332,
					Eye Irrit. 2 H319,
					[Aquatic Acute 3 H402],
					Aquatic Chronic 2 H411
ethane-1,2-diol	107-21-1	203-473-3	01-2119456816-	40 - < 50%	Acute Tox. 4 H302,
			28		STOT RE 2 H373

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#		DSD Symbols/Risk
				Concentration*	Phrases
1H-BENZOTRIAZOLE	95-14-7	202-394-1	NE	0.1 - < 1%	Xn;R20/22, Xi;R36, R52/53
ethane-1,2-diol	107-21-1	203-473-3	01-2119456816- 28	40 - < 50%	Xn;R22

^{*} 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

Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

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.



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EYE CONTACT

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

INGESTION

Seek immediate medical attention.

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

Headache, dizziness, drowsiness, nausea and other CNS effects. 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

This product contains ethylene glycol and/or diethylene glycol which, if ingested, are metabolized to toxic metabolites by the enzyme alcohol dehydrogenase, for which ethanol and 4-methylpyrazole {U.S. drug name Fomepizole, trade name Antizol} are antagonists. Administration of oral or intravenous ethanol or intravenous 4-methylpyrazole may arrest further metabolism of this material and thereby ameliorate the toxicity. Use of ethanol or 4-methylpyrazole does not affect toxic metabolites that are already present and is not a substitute for hemodialysis.

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5

FIRE FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

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

Unsuitable Extinguishing Media: Straight streams of water or standard foam

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

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

5.3. ADVICE FOR FIRE FIGHTERS

Fire Fighting Instructions: Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

FLAMMABILITY PROPERTIES

Flash Point [Method]: [No data available] [test method unavailable]

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 15.3 LEL: 3.2 [test method

unavailable]

Autoignition Temperature: 410°C (770°F) [test method unavailable]

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



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regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the 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.

6.2. ENVIRONMENTAL PRECAUTIONS

Remove debris in path of spill prior to oiling and remove contaminated debris from shoreline and water surface. Dispose of according to local regulations. Remove debris in path of spill and remove contaminated debris from shoreline and water surface. Dispose of according to local regulations. 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. Do not touch or walk through spilled material. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Consult an expert. Warn other shipping. Material will sink. Remove material, as much as possible, using mechanical equipment.

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

Avoid breathing mists or vapour. Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Do not store in open or unlabelled containers.

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



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EXPOSURE LIMIT VALUES

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

Substance Name	Form	Limit/Sta	andard	Note	Source	
ethane-1,2-diol	Vapour.	STEL	104	40 ppm	Skin	UK EH40
			mg/m3			
ethane-1,2-diol		TWA	10 mg/m3		Skin	UK EH40
	Particulat					
	e.					
ethane-1,2-diol	Vapour.	TWA	52 mg/m3	20 ppm	Skin	UK EH40
ethane-1,2-diol	Aerosol.	Ceiling	100			ACGIH
			mg/m3			

UK EH40 Workplace Exposure Limits. Exposure limits for use with Control of Substances Hazardous to Health Regulations 2002 (as amended)

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
ethane-1,2-diol	106 mg/kg bw/day DNEL, Chronic Exposure,	35 mg/m3 DNEL, Chronic Exposure,
	Systemic Effects	Local Effects

Consumer

Substance Name	Dermal	Inhalation	Oral
ethane-1,2-diol	53 mg/kg bw/day DNEL, Chronic Exposure, Systemic Effects	7 mg/m3 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.

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance Name	Aqua	Aqua	Aqua	Sewage	Sediment	Soil	Oral
	(fresh	(marine	(intermittent	treatment			(secondary



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water) water) release) plant poisoning)

ethane-1,2-diol	10 mg/l	1 mg/l	10 mg/l	199.5 mg/l	20.9 mg/kg (dry wt)	NA	NA
	'	1			,		

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 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:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves. Nitrile, minimum 0.38 mm thickness or comparable protective barrier material with a high performance level for continuous contact use conditions, permeation breakthrough minimum 480 minutes in accordance with CEN standards EN 420 and EN 374.

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 manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

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.



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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: Blue

Odour: Characteristic

Odour Threshold: No data available **pH**: 7.5[test method unavailable]

Melting Point: -12°C (10°F) [test method unavailable]

Freezing Point: No data available

Initial Boiling Point / and Boiling Range: 107°C (225°F) - 197°C (387°F) [test method unavailable]

Flash Point [Method]: [No data available] [test method unavailable]

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

Flammability (Solid, Gas): Not technically feasible

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 15.3 LEL: 3.2 [test method

unavailable1

Vapour Pressure: 0.007 kPa (0.05 mm Hg) at 20 °C [test method unavailable]

Vapour Density (Air = 1): 2.1 at 101 kPa [test method unavailable]

Relative Density (at 15 °C): 1.07 [test method unavailable]

Solubility(ies): water Complete

Partition coefficient (n-Octanol/Water Partition Coefficient): -1.36 [test method unavailable]

Autoignition Temperature: 410°C (770°F) [test method unavailable]

Decomposition Temperature: No data available

Viscosity: <5 cSt (5 mm2/sec) at 40°C | <1 cSt (1 mm2/sec) at 100°C [test method unavailable]

Explosive Properties: None **Oxidizing Properties:** None

9.2. OTHER INFORMATION

None

SECTION 10 STABILITY AND REACTIVITY



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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: 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

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity (Human): LDLo 100 ml	Moderately 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 for material.	Not expected to be a germ cell mutagen. Based on assessment of 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.	Concentrated, prolonged or deliberate exposure may cause organ damage. Based on assessment of the components.

TOXICITY FOR SUBSTANCES



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NAME	ACUTE TOXICITY
ethane-1,2-diol	Oral Lethality: LD 50 4700 mg/kg (Rat)

OTHER INFORMATION

For the product itself:

Target Organs Repeated Exposure: Kidney

Contains:

ETHYLENE GLYCOL (EG): Repeated high oral exposure has caused kidney damage, neurological effects, degeneration of the liver and changes in blood chemistry and circulating blood cells in laboratory animals. Repeated overexposure has the potential to cause similar toxic effects in humans. EG causes developmental and reproductive effects at high dose levels in laboratory animals. The relevance of these findings to humans is uncertain.

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:

Material -- Expected to be readily biodegradable.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

12.3. BIOACCUMULATIVE POTENTIAL

Material -- Potential to bioaccumulate is low.

12.4. MOBILITY IN SOIL

Material -- Expected to remain in water or migrate through soil.

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.

12.6. OTHER ADVERSE EFFECTS

No adverse effects are expected.



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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

Even though this product is readily biodegradable, it must not be indiscriminately discarded into the environment. 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.

REGULATORY DISPOSAL INFORMATION

European Waste Code: 16 01 14*

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

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]

98/24/EC [... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.

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

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:

AcronymFull textN/ANot applicableN/DNot determinedNENot 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)



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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

Classification according to Regulation (EC) No 1272/2008

Classification according to Regulation (EC) No 1272/2009	Classification procedure
Acute Tox. 4; H302	Calculation
STOT RE 2; H373	Calculation

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

R20; Harmful by inhalation.

R22; Harmful if swallowed.

R36: Irritating to eyes.

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

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

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

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

Acute Tox. 4 H332: Harmful if inhaled; Acute Tox Inh, Cat 4

STOT RE 2 H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated,

Cat 2

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

Aquatic Chronic 2 H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 05: Fire Fighting Measures - Fire Fighting Instruction information was modified.

Section 09: Colour information was modified.

Section 11: Inhalation Lethality Test Comment information was modified. Section 05: Hazardous Combustion Products information was modified.

Section 06: Accidental Release - Spill Management - Water information was modified.

Section 09: Viscosity information was modified.

Section 16: RCode Key information was modified.

Section 15: National Chemical Inventory Listing information was modified.

Section 06: Accidental Release Measures - Environmental Precautions information was modified.

Section 16: Code to PPEs information was modified.



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Section 16: MSN, MAT ID information was modified.

GHS Precautionary Statements - Response information was modified. Composition: Component Table for REACH information was modified.

Composition: Component Table information was modified.

Section 11 Substance Toxicology table information was modified.

Section 09: Relative Density information was modified. Section 09: Flash Point °C(°F) information was modified.

Section 09: Flammable Limits - LEL information was modified.

Section 09: Flammable Limits - UEL information was modified.

Section 09: Autoignition Temperature information was modified. Section 09: Boiling Point °C(°F) information was modified.

Section 09: Vapor density information was modified.

Section 09: Vapour Pressure information was modified.

Section 09: pH information was modified.

Section 09: n-Octanol/Water Partition Coefficient information was modified.

Section 09: Melting Point C(F) information was modified.

Section 09: Viscosity information was modified.

Section 09: Vapour Pressure information was modified.

Section 09: LEL Flammability test method information was modified.

Section 16: HCode Key information was modified.

Section 04: First Aid Notes information was modified.

Section 08: Exposure Limits Table information was modified.

Section 02: GHS (REACH Registration Name) Contains for LABEL_GHS codes information was modified.

Section 08: Respiratory CEN Standards - EU information was deleted.

Section 15: Special Cases - Header information was deleted.

Section 15: Special Cases Table information was deleted.

Section 15: Inventory - Header information was deleted.

Section 15: Status - Header information was deleted.

Section 10: Conditions to Avoid information was deleted.

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ANNEX

Annex not required for this material.