



**Valvoline™**  
**Global**

**SAFETY DATA SHEET**  
Valvoline™ RESTORE & PROTECT FULL  
SYNTHETIC 5W-20 Motor Oil

Version: 2.0

Revision Date: 12/11/2023

Print Date:  
02/06/2024

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**SECTION 1. IDENTIFICATION**

Product name : Valvoline™ RESTORE & PROTECT FULL SYNTHETIC 5W-20 Motor Oil

Product code : 904540

**Manufacturer or supplier's details**

Company name of supplier : Valvoline Global Operations

Address : 100 Valvoline Way  
Lexington, KY 40509  
United States of America (USA)

Telephone : 1-800-TEAMVAL (1-800-832-6825)

E-mail address : SDS@valvolineglobal.com

Emergency telephone number : +1-800-VALVOLINE (+1-800-825-8654)

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**SECTION 2. HAZARDS IDENTIFICATION**

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Not a hazardous substance or mixture.

**GHS label elements**

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture



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**Components**

Chemical name	CAS-No.	Concentration (% w/w)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>= 40 - < 50
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>= 30 - < 40
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>= 10 - < 15

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- General advice : Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of eye contact : Remove contact lenses.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.  
Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



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Unsuitable extinguishing media	:	High volume water jet
Hazardous combustion products	:	carbon dioxide and carbon monoxide
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8. Use personal protective equipment.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

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**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	:	Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	:	No materials to be especially mentioned.
Further information on storage stability	:	No decomposition if stored and applied as directed.



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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH

**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye protection : Safety glasses
- Skin and body protection : Protective suit
- Hygiene measures : General industrial hygiene practice.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : liquid
- Odour : No data available



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Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	394 - 473 °F / 201 - 245 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.855 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	48 mm <sup>2</sup> /s (104 °F / 40 °C)
Oxidizing properties	:	No data available



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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation



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**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation  
Result : Slight, transient irritation

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation  
Result : Slight, transient irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation  
Assessment : No eye irritation

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation  
Assessment : No eye irritation

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation  
Assessment : No eye irritation

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation  
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)



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**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Carcinogenicity - Assessment : Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Carcinogenicity - Assessment : Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

**IARC** Group 1: Carcinogenic to humans  
Distillates (petroleum), solvent-dewaxed heavy paraffinic (Mineral oils, untreated or mildly treated) 64742-65-0

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** Known to be human carcinogen  
Distillates (petroleum), solvent-dewaxed heavy paraffinic (Mineral Oils: Untreated and Mildly Treated) 64742-65-0

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

No aspiration toxicity classification

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks : No data available



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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

**Ecotoxicology Assessment**

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Toxicity to fish : LL50 (Fish): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EL50 (Aquatic invertebrates): > 10,000 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : EL50 (Algae, algal mat (Algae)): > 100 mg/l  
plants Exposure time: 72 h

Toxicity to fish (Chronic : NOEC (Fish): 10 mg/l  
toxicity)

Toxicity to daphnia and other : NOEC (Aquatic invertebrates): 10 mg/l  
aquatic invertebrates  
(Chronic toxicity)

**Ecotoxicology Assessment**

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

**Ecotoxicology Assessment**

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Toxicity to fish : LL50 (Fish): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EL50 (Aquatic invertebrates): > 10,000 mg/l



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aquatic invertebrates	Exposure time: 48 h
Toxicity to algae/aquatic plants	: EL50 (Algae, algal mat (Algae)): > 100 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	: NOEC (Fish): 10 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Aquatic invertebrates): 10 mg/l

**Ecotoxicology Assessment**

Acute aquatic toxicity	: Not classified based on available information.
Chronic aquatic toxicity	: Not classified based on available information.

**Persistence and degradability**

No data available

**Bioaccumulative potential**

**Components:**

**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Partition coefficient: n-octanol/water	: log Pow: Expected > 7
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**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Ozone-Depletion Potential	: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
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Additional ecological information	: No data available
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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

**National Regulations**

**49 CFR**

Not regulated as a dangerous good

**Special precautions for user**

Not applicable

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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**SECTION 15. REGULATORY INFORMATION**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards



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**SARA 313**

: The following components are subject to reporting levels established by SARA Title III, Section 313:

Zinc O,O,O',O'- 2215-35-2 >= 0.1 - < 1 %  
tetrakis(1,3-  
dimethylbutyl)  
bis(phosphorodit  
hioate

Zinc, bis[O,O- 4259-15-8 >= 0.1 - < 1 %  
bis(2-ethylhexyl)  
phosphorodithioa  
to-S,S']-, (T-4)-

PHOSPHORODI 84605-29-8 < 0.1 %  
THIOIC ACID,  
MIXED O,O-  
BIS(1,3-  
DIMETHYLBUTY  
L AND ISO-PR)  
ESTERS, ZINC  
SALTS

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations**

**Massachusetts Right To Know**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY 64742-54-7  
PARAFFINIC

**Pennsylvania Right To Know**



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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
PROPRIETARY SUBSTANCE OF HITEC 11188 - 000000276110	Not Assigned
Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate)	2215-35-2
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0
Zinc, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-S,S']-, (T-4)-	4259-15-8
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8
DIPHENYLAMINE	122-39-4
<b>Maine Chemicals of High Concern</b>	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8
DIPHENYLAMINE	122-39-4
<b>Vermont Chemicals of High Concern</b>	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8
DIPHENYLAMINE	122-39-4
<b>Washington Chemicals of High Concern</b>	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8
DIPHENYLAMINE	122-39-4
<b>California List of Hazardous Substances</b>	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7
<b>California Permissible Exposure Limits for Chemical Contaminants</b>	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7



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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7

**The components of this product are reported in the following inventories:**

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AiIC	: Not in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Inventories**

AiIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

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**SECTION 16. OTHER INFORMATION**

**Further information**



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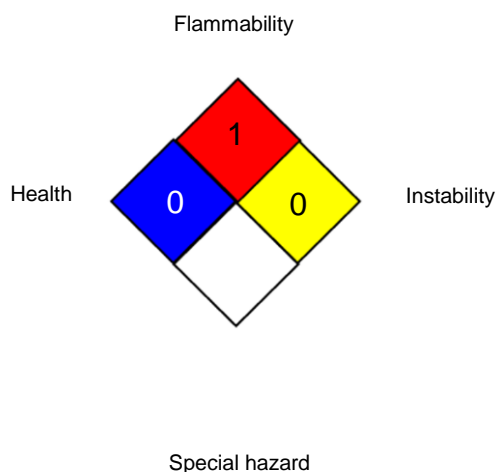
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**NFPA 704:**



**HMIS® IV:**

<b>HEALTH</b>	/	0
<b>FLAMMABILITY</b>		1
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1  
Limits for Air Contaminants  
ACGIH / TWA : 8-hour, time-weighted average  
OSHA Z-1 / TWA : 8-hour time weighted average

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration;



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NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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