



SAFETY DATA SHEET

GEAR GARD 90 GL 4

Version: 4.0

Revision Date: 03.01.2024

Print Date: 04/22/2024

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GEAR GARD 90 GL 4

Product code : 692138

Manufacturer or supplier's details

Company : Valvoline Pte. Ltd.

Address : 8 Jurong Town Hall Road, #30-01
Singapore 609434
Singapore

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

Emergency telephone number : +1-800-VALVOLINE (+1-800-825-8654), or contact your local emergency telephone number at 995

E-mail address : SDS@valvolineglobal.com

2. HAZARDS IDENTIFICATION

GHS Classification

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 which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components



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Chemical name	CAS-No.	Concentration (% w/w)
Amines, C10-14-tert-alkyl	68955-53-3	≥ 0.1 - < 0.25
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	1213789-63-9	≥ 0.025 - < 0.1

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.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES



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|---------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : | Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. |
| Environmental precautions | : | Prevent product from entering drains. 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. |

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 | : | Containers which are opened must be carefully resealed and kept upright to prevent leakage. 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. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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. |

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	:	> 199 °C
		Method: Cleveland open cup
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	:	0.8943 g/cm ³
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	:	17 mm ² /s (100 °C)
Oxidizing properties	:	No data available



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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	:	excessive heat
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

Amines, C10-14-tert-alkyl:

Acute oral toxicity	:	LD50 Oral (Rat, male and female): 612 mg/kg Method: OECD Test Guideline 401 GLP: yes Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat, male and female): Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 GLP: yes Assessment: The component/mixture is highly toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Rat, male and female): 251 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The component/mixture is toxic after single contact with skin.



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(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Acute oral toxicity	:	LD50 (Rat): 1,689 mg/kg Method: OECD Test Guideline 401 Remarks: The toxicological data has been taken from products of similar composition.
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: No mortality observed at this dose. The toxicological data has been taken from products of similar composition.

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Amines, C10-14-tert-alkyl:

Species	:	Rabbit
Result	:	Corrosive after 3 minutes to 1 hour of exposure
GLP	:	yes

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Species	:	Rabbit
Result	:	Corrosive after 3 minutes to 1 hour of exposure
Remarks	:	The toxicological data has been taken from products of similar composition.

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Amines, C10-14-tert-alkyl:

Species	:	Rabbit
Result	:	Corrosive
Method	:	No information available.
GLP	:	yes

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Species	:	Rabbit
Result	:	Corrosive
Remarks	:	The toxicological data has been taken from products of similar composition.



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Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Not classified due to lack of data.

Product:

Assessment : Does not cause skin sensitisation.

Components:

Amines, C10-14-tert-alkyl:

Test Type	: Buehler Test
Exposure routes	: Dermal
Species	: Guinea pig
Assessment	: The product is a skin sensitiser, sub-category 1A.
Method	: Buehler Test
GLP	: yes

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Assessment	: Does not cause skin sensitisation.
Remarks	: The toxicological data has been taken from products of similar composition.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Genotoxicity in vitro	: Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Remarks: The toxicological data has been taken from products of similar composition.
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Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

Not classified due to lack of data.

STOT - single exposure

Not classified due to lack of data.



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Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Exposure routes	: Inhalation
Target Organs	: Respiratory Tract
Assessment	: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

Not classified due to lack of data.

Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Exposure routes	: Ingestion
Target Organs	: Liver, Immune system, Gastro-intestinal system
Assessment	: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity

Not classified due to lack of data.

Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Further information

Product:

Remarks : No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Toxicity to fish	: LC50 (Fish): estimated 0.06 mg/l Exposure time: 96 h Remarks: The toxicological data has been taken from products of similar composition.
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (<i>Daphnia magna</i> (Water flea)): 0.98 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 Remarks: The toxicological data has been taken from products of similar composition.
Toxicity to algae/aquatic plants	: EC50 (<i>Desmodesmus subspicatus</i> (green algae)): 0.083 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: The toxicological data has been taken from products of similar composition.
M-Factor (Acute aquatic toxicity)	: 10
M-Factor (Chronic aquatic toxicity)	: 10

Persistence and degradability

Components:

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Biodegradability	: Result: Readily biodegradable. Biodegradation: 66 % Exposure time: 28 d Method: Regulation (EC) No. 440/2008, Annex, C.4-C Remarks: The toxicological data has been taken from products of similar composition.
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Bioaccumulative potential

Components:

Amines, C10-14-tert-alkyl:

Partition coefficient: n-octanol/water	: log Pow: 2.9 (20 °C)
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(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines:

Partition coefficient: n-octanol/water	: log Pow: estimated 6 - 8
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Mobility in soil

No data available

Other adverse effects

Product:



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Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable

IATA-DGR

UN/ID No. : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Packing instruction (cargo aircraft) : Not applicable
Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
EmS Code : Not applicable
Marine pollutant : Not applicable

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

Not applicable for product as supplied.



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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.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable
Environmental Protection and Management
(Hazardous Substances) Regulations

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

- | | |
|-------|--------------------------------------------------------------------------------------------------------------|
| TCSI | : Not in compliance with the inventory |
| TSCA | : Product contains substance(s) not listed on TSCA inventory. |
| AIIC | : Not in compliance with the inventory |
| DSL | : This product contains the following components that are not on the Canadian DSL nor NDSL.

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| ENCS | : Not in compliance with the inventory |
| KECI | : Not in compliance with the inventory |
| PICCS | : On the inventory, or in compliance with the inventory |
| IECSC | : Not in compliance with the inventory |
| NZIoC | : Not in compliance with the inventory |

Inventories



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AIIIC (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)

16. OTHER INFORMATION

Revision Date : 03.01.2024
Date format : dd.mm.yyyy

Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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



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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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