

Graco Pump Armor

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 10/12/2014 Revision date: 22/05/2017



SDSPAR

ENEU

Rev. B

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Graco Pump Armor
Product code : 253574, 245133, 253574, 244168, 16P358

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Corrosion inhibitor

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Graco BVBA
Industrieterrein Ounde Bunders
Maasmechelen - Belgium
T +32 89 770 700 - F +32 89 770 777
reach@graco.com

1.4. Emergency telephone number

Emergency number : 1- 703-741-5970 (Chemtrec)
24 hours

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning
Hazard statements (CLP) : H302 - Harmful if swallowed
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

2.3. Other hazards not contributing to the classification

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanediol, ethylene glycol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) not available	40 - 60	Acute Tox. 4 (Oral), H302
sodium nitrite	(CAS-No.) 7632-00-0 (EC-No.) 231-555-9 (EC Index-No.) 007-010-00-4 (REACH-no) not available	0,1 - 1	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 M=1

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash contaminated clothing before reuse. Take off immediately all contaminated clothing. Wash with plenty of soap and water.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting unless directed to do so by medical personnel. Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: carbon dioxide (CO ₂), water, dry chemical powder.
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Heavier than air, vapours may travel long distances along ground, ignite and flash back to source.
Explosion hazard	: Extremely flammable vapours may be generated by material below normal ambient temperatures.
Hazardous decomposition products in case of fire	: Toxic gases and fumes may be released in a fire. Carbon dioxide. Carbon monoxide. Phosphorus oxides. Nitrogen oxides. Sulfur oxides.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Cool tanks/drums with water spray/remove them into safety. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Evacuate area.
Protective equipment for firefighters	: In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing.
Emergency procedures	: Eliminate all ignition sources if safe to do so. Evacuate personnel to a safe area.

6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing. In case of fire: Wear self-contained breathing apparatus.
Emergency procedures	: Evacuate area. Ventilate affected area.

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6.2. Environmental precautions

Avoid release to the environment. Relevant water authorities should be notified of any large spillage to water course or drain.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. In case of small spillages in closed waters, contain product with floating barriers or other equipment.
- Methods for cleaning up : Collect in closed containers for disposal. Use approved industrial vacuum cleaner for removal. Remove from the water surface (e.g. skimming, sucking).
- Other information : Relevant water authorities should be notified of any large spillage to water course or drain.

6.4. Reference to other sections

For disposal of residues refer to section 13 : Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Keep container closed when not in use. Open and handle container with care. Ensure adequate ventilation.
- Handling temperature : > 60 °C
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Take care for general good hygiene and housekeeping.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store tightly closed in a dry, cool and well-ventilated place.
- Incompatible products : Oxidizing agent.
- Storage temperature : < 45 °C
- Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium nitrite (7632-00-0)		
Lithuania	NRV (mg/m ³)	0,1 mg/m ³
Lithuania	Remark (LT)	Ū
ethanediol, ethylene glycol (107-21-1)		
EU	IOELV TWA (mg/m ³)	52 mg/m ³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m ³)	104 mg/m ³
EU	IOELV STEL (ppm)	40 ppm
Austria	MAK (mg/m ³)	26 mg/m ³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (ppm)	20 ppm
Bulgaria	OEL TWA (mg/m ³)	52 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	104 mg/m ³
Cyprus	OEL TWA (mg/m ³)	52 mg/m ³
Cyprus	OEL TWA (ppm)	20 ppm
Cyprus	OEL STEL (mg/m ³)	104 mg/m ³
Cyprus	OEL STEL (ppm)	40 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	50 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	26 mg/m ³ 10 mg/m ³ (atomized)
Denmark	Grænseværdie (langvarig) (ppm)	10 ppm
Estonia	OEL TWA (mg/m ³)	52 mg/m ³ (total concentration of aerosol and vapor)
Estonia	OEL TWA (ppm)	20 ppm (total concentration of aerosol and vapor)
Estonia	OEL STEL (mg/m ³)	104 mg/m ³ (total concentration of aerosol and vapor)
Estonia	OEL STEL (ppm)	40 ppm (total concentration of aerosol and vapor)
Finland	HTP-arvo (8h) (mg/m ³)	50 mg/m ³
Finland	HTP-arvo (8h) (ppm)	20 ppm

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ethanediol, ethylene glycol (107-21-1)		
Finland	HTP-arvo (15 min)	100 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	40 ppm
France	VME (mg/m ³)	52 mg/m ³ (vapeur)
France	VME (ppm)	20 ppm (vapeur)
France	VLE (mg/m ³)	104 mg/m ³ (vapeur)
France	VLE (ppm)	40 ppm (vapeur)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	26 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar	Eight hours mg/m ³	52 mg/m ³
Gibraltar	Eight hours ppm	20 ppm
Gibraltar	Short-term mg/m ³	104 mg/m ³
Gibraltar	Short-term ppm	40 ppm
Greece	OEL TWA (mg/m ³)	125 mg/m ³ (vapor)
Greece	OEL TWA (ppm)	50 ppm (vapor)
Greece	OEL STEL (mg/m ³)	125 mg/m ³ (vapor)
Greece	OEL STEL (ppm)	50 ppm (vapor)
Hungary	AK-érték	52 mg/m ³
Hungary	CK-érték	104 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ (particulate) 52 mg/m ³ (vapour)
Ireland	OEL (8 hours ref) (ppm)	20 ppm (vapour)
Ireland	OEL (15 min ref) (mg/m ³)	104 mg/m ³ (vapour)
Ireland	OEL (15 min ref) (ppm)	40 ppm (particulate)
Italy	OEL TWA (mg/m ³)	52 mg/m ³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m ³)	104 mg/m ³
Italy	OEL STEL (ppm)	40 ppm
Latvia	OEL TWA (mg/m ³)	52 mg/m ³
Latvia	OEL TWA (ppm)	20 ppm
Lithuania	IPRV (mg/m ³)	25 mg/m ³ (aerosol and vapor)
Lithuania	IPRV (ppm)	10 ppm (aerosol and vapor)
Lithuania	TPRV (mg/m ³)	50 mg/m ³ (aerosol and vapor)
Lithuania	TPRV (ppm)	20 ppm (aerosol and vapor)
Luxembourg	OEL TWA (mg/m ³)	52 mg/m ³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m ³)	104 mg/m ³
Luxembourg	OEL STEL (ppm)	40 ppm
Malta	OEL TWA (mg/m ³)	52 mg/m ³
Malta	OEL TWA (ppm)	20 ppm
Malta	OEL STEL (mg/m ³)	104 mg/m ³
Malta	OEL STEL (ppm)	40 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	10 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	104 mg/m ³
Poland	NDS (mg/m ³)	15 mg/m ³
Poland	NDSch (mg/m ³)	50 mg/m ³
Romania	OEL TWA (mg/m ³)	52 mg/m ³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m ³)	104 mg/m ³
Romania	OEL STEL (ppm)	40 ppm

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ethanediol, ethylene glycol (107-21-1)		
Slovakia	NPHV (priemerná) (mg/m ³)	52 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	104 mg/m ³
Slovenia	OEL TWA (mg/m ³)	52 mg/m ³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m ³)	104 mg/m ³
Slovenia	OEL STEL (ppm)	40 ppm
Spain	VLA-ED (mg/m ³)	52 mg/m ³
Spain	VLA-ED (ppm)	20 ppm
Spain	VLA-EC (mg/m ³)	104 mg/m ³
Spain	VLA-EC (ppm)	40 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	25 mg/m ³ (aerosol and vapor)
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm (aerosol and vapor)
Sweden	kortidsvärde (KTV) (mg/m ³)	104 mg/m ³ (aerosol and vapor)
Sweden	kortidsvärde (KTV) (ppm)	40 ppm (aerosol and vapor)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ particulate 52 mg/m ³ vapour
United Kingdom	WEL TWA (ppm)	20 ppm vapour
United Kingdom	WEL STEL (mg/m ³)	104 mg/m ³ vapour
United Kingdom	WEL STEL (ppm)	40 ppm vapour
Russian Federation	OEL TWA (mg/m ³)	5 mg/m ³ (aerosol and vapor)
Norway	Grenseverdier (AN) (mg/m ³)	20 mg/m ³ (equal to the standard for nuisance dust-dust) 52 mg/m ³ (Total sum of limit values for both vapor and dust)
Norway	Grenseverdier (Kortidsverdi) (ppm)	40 ppm (value from the regulation)
Switzerland	MAK (mg/m ³)	26 mg/m ³
Switzerland	MAK (ppm)	10 ppm
Switzerland	KZGW (mg/m ³)	52 mg/m ³
Switzerland	KZGW (ppm)	20 ppm
Turkey	OEL TWA (mg/m ³)	52 mg/m ³
Turkey	OEL TWA (ppm)	20 ppm
Turkey	OEL STEL (mg/m ³)	104 mg/m ³
Turkey	OEL STEL (ppm)	40 ppm
Canada (Quebec)	PLAFOND (mg/m ³)	127 mg/m ³
Canada (Quebec)	PLAFOND (ppm)	50 ppm
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	125 mg/m ³
USA - OSHA	OSHA PEL (TWA) (ppm)	50 ppm

8.2. Exposure controls

Appropriate engineering controls:

A washing facility/water for eye and skin cleaning purposes should be present.

Personal protective equipment:

Protective goggles. Gloves.

Hand protection:

Wear suitable gloves tested to EN374. Neoprene. NBR (Nitrile rubber).

Eye protection:

Safety glasses with side shields

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: Sweet. Mild odour.
Odour threshold	: No data available
pH	: $\approx 10 - 11$
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 118 °C ASTM D92 for Ethylene Glycol
Auto-ignition temperature	: 345 °F
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Greater than air.
Relative density	: 1,08 g/cm ³ @15.6°C
Solubility	: Soluble in water. Insoluble in organic solvents.
Log Pow	: No data available
Viscosity, kinematic	: 127,86 cSt @20°C
Viscosity, dynamic	: No data available
Explosive properties	: not explosive.
Oxidising properties	: not oxidizing.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

Nitrogen oxides. Sulfur oxides. Reactive hydrocarbons. On incomplete combustion releases : Carbon dioxide. Carbon monoxide. aldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Graco Pump Armor	
LD50 dermal rat	> 5000 mg/kg
ATE CLP (oral)	500 mg/kg bodyweight

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Skin corrosion/irritation	: Not classified pH: $\approx$ 10 - 11
Additional information	: (OECD 404)
Serious eye damage/irritation	: Not classified pH: $\approx$ 10 - 11
Additional information	: OECD 405
Respiratory or skin sensitisation	: Not classified. (Results based on a similar product)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Graco Pump Armor	
Viscosity, kinematic	127,86 mm ² /s @20°C

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Graco Pump Armor	
ErC50 (algae)	> 100 mg/l

12.2. Persistence and degradability

Graco Pump Armor	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Graco Pump Armor	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Component	
ethanediol, ethylene glycol (107-21-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Not regulated

- Transport by sea

Not regulated

- Air transport

Not regulated

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on Turkish inventory of chemical

Taiwan Chemical Substance Inventory

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

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15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

SECTION 16: Other information

Indication of changes:

2.1. Classification of the substance or mixture. 2.2. Label elements. According to Regulation (EU) 2015/830 (REACH Annex II). 14. Transport information

Other information

: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product. This SDS was prepared by Intertek. However, the information is provided without any warranty, expressed or implied regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. Users should make their own investigations to determine the suitability of the information or products for their particular purpose. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, Intertek does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with handling, storage, use or disposal of the product.

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser
H301	Toxic if swallowed
H302	Harmful if swallowed
H400	Very toxic to aquatic life

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302	
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SDS EU (REACH Annex II)

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