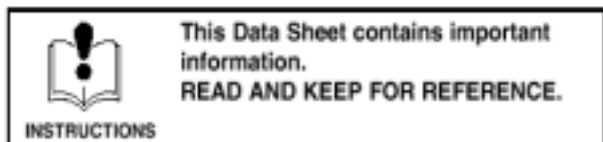


# Material Safety Data Sheet



**MSD029**

Rev. A  
Updated: 10/04

## 1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Graco Pump Armor  
**Chemical Name:** Manufacturer / Supplier

Graco Inc.  
P.O. Box 1441  
60 11th Ave. NE  
Minneapolis, MN 55440-1441

### Emergency Information

Health Emergency (RMPC): (303)- 623-5716

Chemical Spills (Chemtrec): (800)- 424-9300

**Part Number(s):** 243103, 245133, 243104, 244168

**Use:** Corrosion Inhibitor/Lubricant

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	%	CAS NUMBER	EINECS NUMBER
Ethylene glycol	45-60	107-21-1	203-473-3
Water	40-49	7732-18-4	--
Proprietary additives	Balance	--	--

## SECTION 3 HAZARDS IDENTIFICATION

**EU CLASSIFICATION:** Harmful, R 22.

**EU LABEL:** Harmful if swallowed, R22  
Keep out of the reach of children, S2

### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Clear, blue thin fluid.

#### IMMEDIATE CONCERNS:

Causes eye irritation.  
May cause skin irritation.  
Lung aspiration hazard.

### POTENTIAL HEALTH EFFECTS

**EYES:** May cause significant irritation to the eyes.

**SKIN:** May cause significant irritation to the skin. Brief exposure is not expected to cause harm to tissues.

**INGESTION:** May cause kidney damage and even death if swallowed.

**INHALATION:** May cause significant irritation to the lungs, upper respiratory tract, and nose.

### OVEREXPOSURE SYMPTOMS

**EYES:** Redness and possible itching and tearing of the eyes.

**SKIN:** Redness and possible burning of the skin.

**INGESTION:** Possible nausea, vomiting, and/or stomach cramps.

**INHALATION:** Coughing, burning, tightness of chest and/or shortness of breath.

## SECTION 4 FIRST AID MEASURES

**EYE CONTACT:** Flush eyes with large amounts of water for two to three minutes. Remove any contact lenses and continue flushing for fifteen minutes. If irritation persists, get medical attention.

**SKIN CONTACT:** Flush exposed areas with plenty of soap and water. Remove contaminated clothing, including shoes, and launder before reuse.

**INGESTION:** If victim is conscious, give milk or water to dilute stomach contents. Induce vomiting as directed by medical personnel. Do not attempt to give anything by mouth to an unconscious person.

**INHALATION:** Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. If cough or other symptoms develop, seek medical attention.

## SECTION 5 FIRE FIGHTING MEASURES

**NFPA CODES:** HEALTH – 2

FLAMMABILITY – 1

REACTIVITY – 0

SPECIAL – Not applicable.

**FLASHPOINT:** >118°C by Cleveland Open Cup Tester (ethylene glycol.)

**FLAMMABLE LIMITS:** Not determined.

**AUTOIGNITION TEMPERATURE:** Not determined.

**GENERAL HAZARD:** Evacuate personnel upwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke.

**EXTINGUISHING MEDIA:** Chemical type foam, carbon dioxide, dry chemical, water fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Fumes, smoke, carbon dioxide, carbon monoxide (toxic).

**FIRE FIGHTING PROCEDURES:** Use water spray to cool fire exposed surfaces and to protect personnel. Shut off 'fuel' to fire. Use fire extinguishing materials listed above to extinguish fire.

**SPECIAL PRECAUTIONS:** Avoid spraying water directly into large containers due to danger of boilover.

**FIRE FIGHTING EQUIPMENT:** Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (Bunker Gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA may not be required.

**STATIC DISCHARGE SENSITIVITY:** Not determined.

**IMPACT SENSITIVITY:** Material is not impact sensitive.

**NOTE:** For small containers of material, it should be considered if there will be less damage by allowing the material to burn to exhaustion rather than fighting the fire and risk causing environmental contamination and other problems.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**LAND SPILL:** Wearing the appropriate personal protective equipment designated in SECTION 8, move the container, close or cap valves and/or block or plug hole leaking container and transfer to another container if safe to do so. Contain spilled liquid with sand or earth. Recover by pumping (use explosion proof equipment) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels or pails and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

**WATER SPILL:** Warn other shipping. Notify port or relevant authority and keep public away. Shut off source if possible to do so without hazard. Product is fully miscible with water so spill will not be obvious. Containment is not possible without preventing water movement. Consult an expert on disposal of any recovered material and ensure conformity to local disposal regulations.

**GENERAL PROCEDURES:** Eliminate ignition sources, if possible, without causing unreasonable risk to people or the environment. Remove containers of strong oxidizers from the release area.

**RELEASE NOTES:** If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the U.S. Coast Guard National Response Center toll free at 800-424-8802.

In case of accident or road spill contact:

ChemTrec in U.S.A. at 800-424-9300.

CANUTEC in Canada at 613-996-6666.

ChemTrec, other countries, at +1 202 483 7616.

**ADDITIONAL INFORMATION:** See SECTION 13 for disposal information and SECTION 15 for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

## SECTION 7 HANDLING AND STORAGE

**HANDLING:** Use appropriate personal protective equipment as specified in SECTION 8. Handle in a well ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

**STORAGE:** Store in unopened containers under cool, dry conditions. Do not store with, or close to oxidizers. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. This material may be considered a static accumulator - use proper bonding and/or grounding procedures.

**ADDITIONAL INFORMATION:** Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers without commercial cleaning or reconditioning.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE LIMITS FOR COMPONENTS:

	OSHA TWA	NIOSH TWA	ACGIH Ceiling	CANADA Ceiling
Ethylene glycol	50 ppm	--	39.4 ppm	127 ppm

NL = Not Listed

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid.

**ODOR:** Mild.

**APPEARANCE:** Clear blue, thin fluid.

**pH:** 10-11

**VAPOR PRESSURE:** <1 at 20°C (68°F).

**VAPOR DENSITY:** Greater than air.

**BOILING POINT:** Not determined.

**FREEZING / MELTING POINT:** -30°F.

**SOLUBILITY IN WATER:** Fully soluble.

**EVAPORATION RATE (n-Bu Acetate=1):** Not determined.

**SPECIFIC GRAVITY:** 1.08 at 15.6°C (60.0°F).

**VISCOSITY:** Not determined.

**MOLECULAR WEIGHT:** Not applicable (mixture).

## SECTION 10 STABILITY AND REACTIVITY

**STABLE:** Yes.

**HAZARDOUS POLYMERIZATION:** No.

**CONDITIONS TO AVOID:** Heat.

**MATERIALS TO AVOID:** Strong oxidizing agents.

**HAZARDOUS POLYMERIZATION:** No.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide and monoxide.

## SECTION 11 TOXICOLOGICAL INFORMATION

### ACUTE

**INHALATION:** High vapor / aerosol concentrations (greater than approximately 700 ppm) are irritating to the eyes and the respiratory tract, and may cause headache, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

**SKIN CONTACT:** Frequent or prolonged contact may cause mild skin discomfort. Skin contact may aggravate an existing dermatitis condition.

**EYE CONTACT:** Will cause eye discomfort, with prolonged exposure causing retinal damage.

**INGESTION:** Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possibly death.

**TARGET ORGANS:** Eyes, skin, kidneys, gastrointestinal tract, respiratory system.

### CARCINOGENICITY

**IARC:** Not listed.

**NTP:** Not listed.

**OSHA:** Not listed.

**MUTAGENICITY:** Not available.

**REPRODUCTIVE EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Not available.

## SECTION 12 ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** May cause adverse environmental impact if material reaches waterways.

**ECOTOXICOLOGICAL INFORMATION:** Not determined.

**ENVIRONMENTAL MOBILITY:** Material is readily miscible with water – mobility is expected to be great.

**ENVIRONMENTAL DEGRADABILITY:** This material is expected to be “readily” biodegradable.

## SECTION 13 DISPOSAL CONSIDERATIONS

The following information only applies to the product as supplied and are general recommendations. Combination with other materials may alter how the product can be disposed of. If in doubt, contact the local authorities regarding proper disposal methods.

**DISPOSAL METHOD:** This product is considered an oil. Product is not suitable for disposal by landfill, sewers, drains, or natural streams and rivers. Product will produce ash if burned, and may be incinerated at approved incineration sites. If material has been mixed with gasoline, dispose of the material as waste gasoline. Always dispose of product at supervised incineration or other appropriate waste disposal sites according to current applicable laws and regulations.

**EMPTY CONTAINERS:** Empty drums should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with EC, national and local regulations.

Plastic containers should be locally recycled after being drained of contents.

## SECTION 14 TRANSPORT INFORMATION

**LAND (railroad / road, such as RID / ADR)**

**PROPER SHIPPING NAME:** Not determined.

**LABEL:** Not applicable.

**INLAND WATERWAYS (ADR / RID)**

**HAZARD CLASS, ITEM:** Not determined.

**SEA (IMO / IMDG)**

**PROPER SHIPPING NAME:** Not determined.

**LABEL:** Not applicable.

**AIR (ICAO / IATA)**

**PROPER SHIPPING NAME:** Not determined.

**LABEL:** Not applicable.

## SECTION 15 REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (Superfund Amendments and Reauthorization Act)

##### 311 / 312 HAZARD CATEGORIES:

ACUTE: YES.

FIRE: NO.

PRESSURE: NO.

REACTIVITY: NO.

##### 313 REPORTABLE INGREDIENTS:

This material contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of the emergency planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

Ethylene glycol CAS 107-21-1 <60%

#### CERCLA (Comprehensive Response, Compensation, and Liability Act)

LISTED COMPONENTS: Ethylene glycol CAS 107-21-1

REPORTABLE QUANTITY (RQ): 5000 pounds

#### TSCA (Toxic Substance Control Act)

TSCA REGULATORY: All intentional ingredients are listed on the TSCA Inventory.

NATIONAL RESPONSE CENTER: U.S. Coast Guard National Center telephone number is 1-800-424-8802.

### CANADA

#### WHMIS (Worker Hazardous Materials Information System):

##### WHMIS HAZARD CLASSIFICATION:

Class D, Div 1, Subdiv B: Toxic.

Class D, Div 2, Subdiv A: Teratogenic.

Class D, Div 2, Subdiv B: Chronic toxic effects.

CANADA INGREDIENT DISCLOSURE LIST: Information not available.

CANADA ENVIRONMENTAL PROTECTION ACT: Information not available.

### EUROPEAN COMMUNITY

EU LABEL SYMBOL: St. Andrews' cross, Xn (Sweden.)

R 22 Harmful if swallowed.

S 2 Keep out of the reach of children.

EUROPEAN REGULATORY: All intentional ingredients are listed on the European's EINECS Inventory.

GOVERNING DIRECTIVE: European Community Council Directive EEC 793/93.

## SECTION 16 OTHER INFORMATION

NFPA: HEALTH – 2  
FLAMMABILITY – 1  
REACTIVITY – 0  
SPECIAL – Not applicable

HMIS: HEALTH – 2  
FLAMMABILITY – 1  
REACTIVITY – 0  
PROTECTION – B

REASON FOR ISSUE: European format.

REVISION NUMBER: Original issue.

DATE: 10/11/2004

<b>Prepared By</b>	Graco, Inc.
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**NOTES:** NA = Not Applicable; NE = Not Established; UN = Unavailable

*All written and visual data contained in this document reflects the latest product information available at the time of publication.*

*Graco reserves the right to make changes at any time without notice.*

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