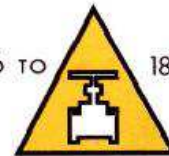


ΛΙΠΑΝΤΙΚΟ ΕΓΚΑΤΑΣΤΑΣΗΣ ΠΑΡΕΜΒΥΣΜΑΤΩΝ

Από το 1882



ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

GRINNELL LUBRICANT

During installation of a Grinnell Coupling, always lubricate the gasket.

Grinnell offers three kinds of lubricant;

- Grinnell Traditional Lubricant
- Quick Dry Lubricant
- Grease, Extreme Temperature Lubricant (GETL)

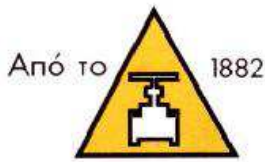
Check lubricant chart to be certain of the proper lubricant recommended for the service intended. For information on health safety see the attached material safety data sheets.



Application	Traditional Lubricant	Quick Dry Lubricant	GETL (Grinnell Extreme Temperature Lubricant)
Fire Protection	•	•	•
Chilled Water	•		•
Heating			•
Compressed Air	•	•	•
Drainage	•	•	•
Sewage	•	•	•
Process < 66°C (150°F)	•		•
Process > 66°C (150°F)			•
Drinking Water	•	•	

The below table will give an indication on the number of gaskets which can be lubricated with 1 kg lubricant

Gasket Size	Traditional Lubricant	Quick Dry Lubricant	GETL (Grinnell Extreme Temperature Lubricant)
50 mm / 2"	440	440	1000
80 mm / 3"	300	300	700
100 mm / 4"	220	220	500
150 mm / 6"	135	135	300
200 mm / 8"	110	110	250
250 mm / 10"	85	85	200
300 mm / 12"	65	65	160
350 mm / 14"	55	55	140
400 mm / 16"	50	50	120
450 mm / 18"	38	38	90
500 mm / 20"	33	33	80
600 mm / 24"	20	20	50



ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

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MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTITY

Product Name: Grinnell Lubricant
Common Name: Grinnell Traditional Lubricant
Chemical Family: Soap
Formula: Proprietary

SECTION 2 - HAZARDOUS INGREDIENTS

This product does not contain any hazardous ingredients (Non -Hazardous)

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point, Deg. F:	Not Applicable	Physical State:	Paste
Vapor Pressure:	Not Applicable	Odor:	Soapy
% volatile (Vol):	16.5% Maximum	Color:	Amber
Vapor Density:	Not Applicable	Specific Gravity:	1.0-1.2 (water-1)
Evaporation Rate:	Not Applicable		
Solubility In Water:	Complete		

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point, Deg. F:	>250
Flammability:	Not Applicable
Extinguishing Media:	Water, alcohol foam, carbon dioxide, dry chemical
Unusual Fire and Explosion Hazards:	None
Special Fire Fighting Procedures:	None

SECTION 5 - HEALTH HAZARD INFORMATION

First Aid
Eyes: Flush with water for 15 minutes. If irritation persists, contact physician.
Skin: Flush with water. If irritation persists, contact physician.
Ingestion: Induce vomiting. Contact physician if necessary.
No toxic. LD50 for simular products exceeds 5 mg/kg.
Effects of Overexposure: Irritation at site of contact.

SECTION 6 - REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur
Incompatibility (Materials to Avoid):	Stronoxidizers
Conditions to Avoid:	Not Applicable
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide

SECTION 7 - SPILL OR LEAK PROCEDURES

Action to be taken if material is released or spilled: Flush to drain. Material is diodegradable.
Slippery material, use caution when cleaning spill.
Disposal Method: Flush to drain or bury in a approved landfill for water soluble, non-toxic chemicals.

SECTION 8 - SPECIAL PROTECTION INFORMATION

The use of rubber gloves and safety glasses or goggles are recommended.

SECTION 9 - SPECIAL PRECAUTIONS

Avoid eye contact. Wash soiled clothing before reuse.

The information contained herein is obtained from sources and based on data believed to be reliable and accurate. However, Grinnell makes no warranty expressed or implied as to the absolute correctness or sufficiency of particular conditions of handling, storage use and disposal beyond our knowledge or control.

Mechanical

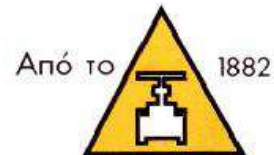
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Grinnell®

31/1/2003

ΛΙΠΑΝΤΙΚΟ ΥΨΗΛΗΣ ΘΕΡΜΟΚΡΑΣΙΑΣ

MATERIAL SAFETY DATA SHEET



ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

SECTION 1 - IDENTITY

Product Name: Lubricant
 Common Name: Grinnell, Extreme Temperature Lubricant (GETL)
 Chemical Family: Mixture
 Formula: Proprietary

SECTION 2 - HAZARDOUS INGREDIENTS

This product does not contain any hazardous ingredients (Non -Hazardous) per 29 CFR 1900.1200

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point, Deg. F:	Not Applicable	Physical State:	Paste Like
Vapor Pressure(mmHg):	< 5% @ 20°C	Odor:	Very Little
% volatile (Vol):	< 5%	Color:	Off White
Vapor Density:	Not Applicable	Specific Gravity (68°F):	0.97@25°C
Rel. Evaporation Rate:	< 1% (Ether = 1)		(water-1)
Flash Point, (TCC, °F):	200°F/93°C(Close Cup)		

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point, Deg. F: >200 (93°C)
 Flammability: Not Applicable
 Extinguishing Media: Dry chemical, Carbon
 Dioxide or a universal: type foam
 Unusual Fire and Explosion Hazards: None
 Special Fire Fighting Procedures: Wear appropriate protective equipment including respiratory protection as conditions warrant. Stop spill/release if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purpose.

SECTION 5 - HEALTH HAZARD INFORMATION

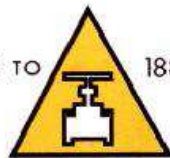
Eyes Contact: Direct contact may cause temporary discomfort with mild dryness and redness.
 Skin Contact: Short exposures should cause no known adverse effects. Prolonged exposure (24-48 hrs) may cause irritation.
 Inhalation (breathing): Not considered a hazard under normal operating conditions. Is not likely to be inhaled.
 Ingestion (swallowing): Not considered a hazardous material for cases of ingestion.
 Swallowing large amounts of product may cause digestive discomfort.

SECTION 6 - REACTIVITY DATA

Stability: Stable
 Hazardous Polymerization: Will not occur
 Incompatibility (Materials to Avoid): Strong acids and bases
 Hazardous Decomposition Products: Oxides of carbon and silica emitted on combustion

SECTION 7 - SPILL OR LEAK PROCEDURES

Action to be taken if material is released or spilled: Contain spill in a diked area and clean to prevent from entering storm drains and streams.
 Waste Disposal Method: Dispose of product in accordance with local, county, state and federal regulations.



ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

MATERIAL SAFETY DATA SHEET

SECTION 8 - SPECIAL PROTECTION INFORMATION

- Ventilation: Normal ventilation for the condition is required.
- Respiratory Protection: Not required under normal operating conditions.
- Protective Gloves: The use of gloves impermeable to the specific material handled is advised to prevent skin contact and possible irritation for workers with a sensitivity to this product.
- Eye Protection: Approved eye protection to safeguard against potential eye contact, especially when hot, is recommended.

SECTION 9 - SPECIAL PRECAUTIONS

Handling and storage precautions: Keep all containers tightly closed, cool, dry and away from all sources of ignition.

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