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TIPS-100030

Subject: Food Grade Grease

For applications that require food grade grease, Medallion FM grease may be specified as a special grease. Please note that the actuator itself cannot be offered as food grade compatible since this requires the actuator to be made out of stainless steel or be coated in a food grade compatible coating or plating which we don't offer as a special option.

Please see the following documents regarding the technical specification and the material safety data sheet (MSDS).

Revision History	Issue Date	Note
TIPS-100030	March 5, 2010	Initial Issue by Gene Changnon



TECHNICAL DATA SHEET

MEDALLION™ FM GREASE

NSF Registered for H-1/Kosher Approved

Medallion™ FM Grease is a premium quality lubricant which provides excellent protection from wear. It is registered with NSF as an H-1 grease. This makes it suitable for use in food processing plants where incidental contact with food is possible.

Medallion™ FM Grease is highly water-resistant, minimizing loss of lubricant that sometimes occurs when machines are washed.

Medallion™ FM Grease contains antiwear additives to protect metal surfaces from wear under conditions of metal-to-metal contact. Medallion™ FM Grease is adhesive (sticks to metal) and cohesive (sticks to itself). As a result it resists pounding out of bearings and bushings when shock loads are encountered.

Medallion™ FM Grease is produced under the supervision of VA'AD HAKASHRUS of Dallas, Inc. doing business as Dallas Kosher and is considered Kosher-Pareve for year-round use including during Passover.

Contains an NSF-approved preservative that limits the growth of bacteria.

BENEFITS:

- RESISTS POUND-OUT - provides extra protection and reduces consumption.
- WATER RESISTANT - superior capability to stay in place even during frequent wash downs.
- WIDE TEMPERATURE OPERATING RANGE - can be pumped from 0°F (-18°C) to 350°F (175°C).

APPLICATIONS:

Medallion™ FM Grease is very versatile and may be used to lubricate bearings, bushings, slides, rollers and cam followers. Medallion™ FM Grease can also be used as an antitrust film and as a release agent for gaskets and seals. It is available in Grades 0, 1, and 2 and can be applied manually or automatically. Medallion™ FM Grease is able to withstand the effects of steam as well as harsh temperature extremes. NLGI Grades 1 and 2 are packaged in convenient cartridges for manual application.

ASTM #		TYPICAL CHARACTERISTICS		
		0	1	2
	Grade	0	1	2
	NSF Registration	H-1	H-1	H-1
D-217	Cone Penetration (Worked)	355-385	310-340	265-295
D-2265	Dropping Point, °F (°C)	>480 (>249)	>480 (>249)	>480 (>249)
D-445	Kinematic Viscosity (Base Oil)			
	cSt @ 40°C	142	142	142
	cSt @ 100°C	14	14	14
D-2161	Saybolt Viscosity (Base Oil with Polymer)			
	SUS @ 100°F	752	752	752
	SUS @ 210°F	74.2	74.2	74.2
D-2266	Four Ball Wear, Scar Width, mm	0.70	0.70	0.70
D-1264	Water Washout, % Loss	N/A	<10	<5
D-4048	Copper Strip Corrosion for Greases 212°F (100°C) 24 hrs	1B	1B	1B
	Thickener Type	Aluminum Complex	Aluminum Complex	Aluminum Complex
OEM Standard	Low Temperature Pumpability Lincoln Ventmeter @ 400 psi, °F (°C)	0 (-18)	10 (-12)	15 (-9)
	Color	White	White	White
	Operating Range, °F (°C)	0 (-18) to 380 (193)	10 (-12) to 380 (193)	15 (-9) to 380 (193)

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

PACKAGING

Drums	Kege	Pails	Cartridges 50 per case
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THE WHITMORE MANUFACTURING COMPANY

930 Whitmore Drive • P.O. Box 9300 • Rockwall, Texas 75087 • USA • (972) 771-1000 • Fax: (972) 722-2108

An ISO 9001, ISO/TS 16949, and ISO 14001 Registered Company • <http://www.whitmores.com>

Performance Under Pressure Since 1893

LIMITED WARRANTY: The Whitmore Manufacturing Company makes the Limited Express Warranty that at the date of delivery, its goods shall be free from defects in Whitmore's materials and workmanship and shall meet the express written statements of quality, if any, made by Whitmore in connection with the sale of the goods. Other than such Limited Express Warranty, there are no express warranties made with respect to the sale of goods and all implied warranties existing under the law are expressly disclaimed and negated, particularly, Whitmore NEGATES AND DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. All other liability, either in contract or tort, including without limitation, strict liability found in Section 402A of the Restatement of Torts or otherwise, is negated and disclaimed. The sole remedy for Whitmore's breach of such Limited Express Warranty shall be a refund of the purchase price of its goods, and Whitmore shall have no responsibility for incidental or consequential damages sustained as a result of the use of the goods, whether sustained to the goods themselves or to other property. Data listed are subject to usual manufacturing variations.

WHITMORE'S

MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY					
Product Name:	Medallion™ FM Grease <i>(All Grades)</i>	Manufacturer/Supplier: The Whitmore Manufacturing Company 930 Whitmore Drive Rockwall, Texas 75087, U.S.A.			
Chemical Family:	Petroleum Hydrocarbons				
Use:	Food Machinery Grease (USDA H-1 rated)				
Emergency Tel. No.:	CHEMTREC	U.S.A. & Canada	800-424-9300 (24 hrs)		
		International	703-527-3887 (Collect - 24 hr)		
		Australia	00-111-703-527-3887 (Collect - 24 hr)		
II. COMPOSITION INFORMATION ON INGREDIENTS					
Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
None					
III. ADVERSE HUMAN HEALTH EFFECTS					
Eyes:	Any eye contact will cause irritation.				
Skin:	Will cause skin irritation.				
Inhalation:	N/A				
Ingestion:	Swallowing large quantities gives cathartic effect.				
IV. FIRST AID MEASURES					
Eyes:	Flush with large amounts of cold water. If irritation persists, SEEK MEDICAL ATTENTION.				
Skin:	Thoroughly wash exposed area with soap and water.				
Inhalation:	N/A				
Ingestion:	Do not induce vomiting. SEEK MEDICAL ATTENTION.				
V. FIRE FIGHTING MEASURES					
Extinguishing Media:	Foam, CO ₂ , Dry Chemical				
Unsuitable Extinguishing Media:	Not Known				
Fire Fighting Protective Equipment:	Treat as an oil fire.				
VI. ACCIDENTAL RELEASE MEASURES					
Personal Precautions:	Wear plastic or neoprene rubber gloves.				
Environmental Precautions:	Do not allow it to enter drains.				
Spillage:	Absorb with dry inert material and shovel up.				
VII. HANDLING AND STORAGE					
Handling:	Keep away from open flame and sparks.				
Storage:	Store in metal containers until disposal.				
VIII. EXPOSURE CONTROL/PERSONAL PROTECTION					
Respiratory Protection:	If product is overheated, use organic NIOSH/MSHA filter-type respirator.				
Hand Protection:	Plastic or Neoprene Rubber				
Eye Protection:	Safety Goggles.				
Body Protection:	None				

HMS SYMBOLS

Health	0
Flammability	1
Reactivity	0
PPI	A

MSDS-074

Effective Date: 8-5-87

Revised Date: 9-19-06

IX. PHYSICAL AND CHEMICAL PROPERTIES							
Physical State:	Grease	Color:	White	Odor:	Petroleum		
Boiling Range/point, °F (°C):	N/A	Melting Point, °F (°C):	>480 (>249)				
Flash Point (COC), °F (°C):	[>375 (>191) (Base Oils)]	Autoignition Temperature, °F (°C):	N/D				
Explosive Properties:	LEL: N/A	UEL: N/A	Evaporation Rate (Butyl Acetate):	N/A			
Partition Coefficient (Log Pow):	N/A		Vapor Pressure (kPa):	Nil			
Density:	<1.0	Flammability:	N/A				
Oxidizing Properties:	Nil	Solubilities in Water:	Nil	Vapor Density:	N/A	% Volatiles:	N/A
X. STABILITY AND REACTIVITY							
Stability:	Chemically stable under normal conditions.						
Conditions to Avoid:	Direct flame.						
Materials to Avoid:	Strong inorganic and organic acids and oxidizing agents.						
Decomposition Products:	Oxides of carbon, sulfur, phosphorus, & hydrocarbon.						
XI. TOXICOLOGICAL INFORMATION							
Acute Toxicity:	Not Known		Skin Irritancy:	Very Mild			
Chronic Toxicity:	Not Known		Skin Sensitization:	Not Known			
Sub-acute/Subchronic Toxicity:	Not Known		Genotoxicity:	Not Known			
California Prop 65:	Not Available		EC Classification (67/548/EEC):	No			
Carcinogenicity:	NTP: No	IARC: No	OSHA:	No			
LC-50:	Not Available		LD-50:	Not Available			
XII. ECOLOGICAL INFORMATION							
Possible Effects:	Unknown						
Behavior:	Relatively well behaved. Bioaccumulation potential nil.						
Environmental Fate:	Not thought to be toxic to marine or land organisms.						
XIII. WASTE DISPOSAL							
Product Disposal:	Observe all local, state & federal regulations concerning disposal of lubricating grease.						
Container Disposal:	Observe all local, state & federal regulations concerning disposal of lubricating grease.						
XIV. TRANSPORT INFORMATION							
DOT:	Not Regulated		UN No.:	Not Regulated			
Air Transport (ICAO/IATA):	Not Regulated						
Sea Transport (IMO/IMDG):	Not Regulated						
Road and Rail Transport (ADR/RID):	Not Regulated						
XV. REGULATORY INFORMATION							
Labeling Information:	N/A		EC Annex 1 Classification:	N/A			
R Phrases:	N/A						
S Phrases:	S2 Keep away from children.						
Ozone Depleting Chemicals:	None/Nil		TSCA:	All Components are listed.			
WHMIS (Canada):	Not Regulated						
EPA Regulation 40 CFR Part 372 (SARA Section 313):	None						
XVI. OTHER INFORMATION							
None							