

Material Safety Data Sheet



CROWN P/N



061004-018

Revision Number: 005.0

Issue date: 10/24/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® 222MS™ THREADLOCKER LOW STRENGTH PART NO. 22241
Product type: Anaerobic Sealant
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
IDH number: 135335
Item number: 22241
Region: United States
Contact information: Telephone: 860.571.5100
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid	HMIS:	HEALTH: *2
Color: Purple		FLAMMABILITY: 1
Odor: mild		PHYSICAL HAZARD: 1
		Personal Protection: See MSDS Section 8

WARNING: CAUSES EYE IRRITATION.
 MAY CAUSE ALLERGIC SKIN REACTION.
 MAY CAUSE SKIN IRRITATION.
 MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Polyglycol dimethacrylate	25852-47-5	30 - 60
Oleic acid 5.5EO	9004-96-0	30 - 60
Saccharin	81-07-2	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
Propanediol-1,2	57-55-6	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1
Cumene	98-82-8	0.1 - 1

IDH number: 135335

Product name: LOCTITE® 222MS™ THREADLOCKER LOW STRENGTH PART NO. 22241
 Page 1 of 5

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms develop and persist, get medical attention.
Skin contact:	Wash with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Autotemperature:	Not available.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation.
Storage:	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Polyglycol dimethacrylate	None	None	None	None
Oleic acid 5.5EO	None	None	None	None
Saccharin	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Propanediol-1,2	None	None	10 mg/m3 TWA Aerosol.	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 TWA Total dust.	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m3) TWA (SKIN)	None	None

Engineering controls: No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

Respiratory protection: Use a NIOSH approved supplied air respirator with an organic cartridge if the potential to exceed established exposure limits exists.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Purple
Odor: mild
Odor threshold: Not available.
pH: Not applicable
Vapor pressure: < 5 mm hg (27 °C (80.6 °F))
Boiling point/range: > 149 °C (> 300.2 °F)
Melting point/ range: Not available.
Specific gravity: 1.05
Vapor density: Not available.
Flash point: > 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: Not available.
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available.
VOC content: 0.19 %; 1.79 g/l

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.

Hazardous decomposition products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

Incompatible materials: Strong oxidizing agents.

Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: LD50 (rat) > 10,000 mg/kg

Acute dermal product toxicity: LD50 (rabbit) > 5,000 mg/kg

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyglycol dimethacrylate	No	No	No
Oleic acid 5.5EO	No	No	No
Saccharin	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Cumene hydroperoxide	No	No	No
Propanediol-1,2	No	No	No
Titanium dioxide	No	Group 2B	No
Cumene	No	Group 2B	No

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Irritant, Allergen
Oleic acid 5.5EO	Irritant
Saccharin	No Target Organs
Silica, amorphous, fumed, crystal-free	Nuisance dust
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Propanediol-1,2	Irritant
Titanium dioxide	Irritant, Respiratory, Some evidence of carcinogenicity
Cumene	Central nervous system, Irritant, Lung

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9).
California Proposition 65:	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 3, 8, 11, 15

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

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Material Safety Data Sheet



Crown P/N
061004-021



Revision Number: 005.0

Issue date: 04/09/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® 680™ NSF™ RETAINING COMPOUND/ COMPUESTO RETENDOR
IDH number: 135535
Product type: Anaerobic Adhesive
Item number: 68060
Region: United States
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
Contact information: Telephone: 860.571.5100
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HMIS:	
Color:	Green	HEALTH:	*2
Odor:	Mild	FLAMMABILITY:	1
		PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8

WARNING: CAUSES EYE IRRITATION.
 MAY CAUSE ALLERGIC SKIN REACTION.
 MAY CAUSE SKIN IRRITATION.
 MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: May be harmful if swallowed.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
2-Propenoic acid, 2-methyl-, (1-methylethylidene)	24448-20-2	30 - 60
Hydroxyalkyl methacrylate	27813-02-1	30 - 60
Bisphenol A fumarate resin	39382-25-7	10 - 30
Cumene hydroperoxide	80-15-9	1 - 5
Polyglycol dimethacrylate	25852-47-5	1 - 5
1-Acetyl-2-phenylhydrazine	114-83-0	0.1 - 1
Cumene	98-82-8	0.1 - 1

IDH number: 135535

Product name: LOCTITE® 680™ NSF™ RETAINING COMPOUND/ COMPUESTO RETENDOR
 Page 1 of 5

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms develop and persist, get medical attention.
Skin contact:	Wash with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Autoignition temperature:	Not available.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Extinguishing media:	Foam, dry chemical or carbon dioxide. Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	None None
Hazardous combustion products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours. Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
Storage:	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Propenoic acid, 2-methyl-, (1-methylethylidene)	None	None	None	None
Hydroxyalkyl methacrylate	None	None	None	1 ppm TWA 3 ppm STEL
Bisphenol A fumarate resin	None	None	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m ³) TWA (SKIN)	None
Polyglycol dimethacrylate	None	None	None	None
1-Acetyl-2-phenylhydrazine	None	None	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m ³) TWA (SKIN)	None	None

Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Use an organic vapor respirator for concentrations exceeding the Occupational Exposure Limit.

Eyeface protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Green
Odor:	Mild
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	< 5 mm hg (27 °C (80.6 °F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not available.
Specific gravity:	1.11 at 26.6 °C (79.88 °F)
Vapor density:	Not available.
Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	4.22 %; 40.3 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Irritating organic vapours. Phenolics.
Incompatible materials:	Strong oxidizing agents. Reducing agents. Acids. Bases. Rust. Zinc. Aluminum. Iron. Copper. Alkalis. Aldehydes. Amines. Free radical initiators. Peroxides.
Conditions to avoid:	Exposure to sunlight. Heat, flames, sparks and other sources of ignition. See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Propenoic acid, 2-methyl-, (1-methylethylidene)	No	No	No
Hydroxyalkyl methacrylate	No	No	No
Bisphenol A fumarate resin	No	No	No
Cumene hydroperoxide	No	No	No
Polyglycol dimethacrylate	No	No	No
1-Acetyl-2-phenylhydrazine	No	No	No
Cumene	No	Group 2B	No

Hazardous components	Health Effects/Target Organs
2-Propenoic acid, 2-methyl-, (1-methylethylidene)	Irritant, Allergen
Hydroxyalkyl methacrylate	Irritant, Allergen
Bisphenol A fumarate resin	No Target Organs
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Polyglycol dimethacrylate	Irritant, Allergen
1-Acetyl-2-phenylhydrazine	Allergen, Blood, Kidney, Mutagen, Some evidence of carcinogenicity
Cumene	Central nervous system, Irritant, Lung

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9).
CERCLA Reportable quantity:	Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg)
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New information added in Section(s): 1, 3, 8, 11, 15

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



LUBRIPLATE®

MATERIAL SAFETY DATA SHEET

CROWN P/N
063002-046

Section 1

PRODUCT NAME OR NUMBER

LUBRIPLATE MAG-1, MAG-00

GENERIC/CHEMICAL NAME:

Petroleum Lubricating Grease

Manufacturer's Name

Fiske Brothers Refining Co.

Address

1500 Oakdale Ave., Toledo, Ohio 43605 - 129 Lockwood St., Newark, NJ 07105

FORMULA

Lithium Soap, Mineral Oil and Additives

USDA AUTHORIZATION:

H-2

Emergency Telephone Number

1-800-255-3924 - CHEM-TEL (24 hour)

Telephone Number for Information

419-691-2491 - Toledo Office

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Non-hazardous				

Non-hazardous

Hazardous Material Identification System (HMIS): Health - 1, Flammability - 1, Reactivity - 0

Not a Controlled Product under (WHMIS) - Canada

Special Protection: See Section 9

Section 3 - Health Hazard Data

Threshold Limit Value 5 mg/m³ for oil mist in air. OSHA Regulation 29 CFR 1910.1000 - 0.5 mg/m³ for Antimony Compound (as Sb)

Effects of Overexposure Prolonged or repeated skin contact may cause skin irritation. Product contacting the eyes may cause eye irritation. Human health risks vary from person to person. As a precaution, exposure to liquids, vapors, mists and fumes should be minimized. This product has a low order of acute oral toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Section 4 - Emergency and First Aid Procedures

EYE CONTACT: Flush with clear water for 15 minutes or until irritation subsides. If irritation persists, consult a physician.

SKIN CONTACT: Remove any contaminated clothing and wash with soap and warm water. If injected by high pressure under skin, regardless of the appearance or its size, contact a physician IMMEDIATELY. Delay may cause loss of affected part of the body.

INHALATION: Vapor pressure is very low and inhalation at room temperature is not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician.

INGESTION: If ingested, call a physician immediately. Do not induce vomiting.

Section 5 - Fire and Explosion Hazard Data

Flash Point (Method Used) COC - 335°F **Flammable Limits** LEL 0.9% UEL 7.0%

Extinguishing Media Foam, Dry Chemical, Carbon Dioxide or Water Spray (Fog)

Special Fire Fighting Procedures Cool exposed containers with water. Use air-supplied breathing equipment for enclosed or confined spaces.

Unusual Fire and Explosion Hazards Do not store or mix with strong oxidants. Empty containers retain residue. Do not cut, drill, grind, or weld, as they may explode.

PRODUCT NAME OR NUMBER - LUBRIPLATE MAG-1, MAG-00**Section 6 - Physical/Chemical Characteristics**

Boiling Point	>550°F	Specific Gravity (H₂O = 1)	0.87 -0.89
Vapor Pressure (mm Hg.)	<0.01	Melting Point	Semi-solid
Vapor Density (AIR = 1)	>5	Evaporation Rate (Butyl Acetate = 1)	<0.01
Solubility in Water	Negligible		
Appearance and Odor	Smooth, off-white grease with mineral oil odor.		

Section 7 - Reactivity Data

Stability	Unstable	Conditions to Avoid	N/A
	Stable X		
Incompatibility (Materials to Avoid)	Avoid contact with strong oxidants like liquid chlorine, concentrated oxygen.		
Hazardous Decomposition or Byproducts	May form SO ₂ . If incomplete combustion, Carbon Monoxide.		
Hazardous Polymerization	May Occur	Conditions to Avoid	N/A
	Will Not Occur X		

Section 8 - Spill or Leak Procedures**Steps to be taken in case material is released or spilled**

Scrape up grease, wash remainder with suitable petroleum solvent or add absorbent. Keep petroleum products out of sewers and water courses. Advise authorities if product has entered or may enter sewers and water courses.

Waste disposal method

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste disposal facility or site.

SARA/TITLE III, Section 313 Status - Zinc Compounds - <5% Antimony Compounds - <3%

Section 9 - Special Protection Information

Respiratory Protection (Specify type)	Normally not needed		
Ventilation	Local Exhaust	Used to capture fumes and vapors	Special N/A
	Mechanical (General)		Other N/A
Protective Gloves	Use oil-resistant gloves, if needed.	Eye Protection	If chance of eye contact, wear goggles.
Other Protective Equipment	Use oil-resistant apron, if needed.		

Section 10 - Special Precautions**Precautions to be taken in handling and storing**

Keep containers closed when not in use. Do not handle or store near heat, sparks, flame, or strong oxidants.

Other Precautions

Remove oil-soaked clothing and laundry before reuse. Cleanse skin thoroughly after contact.

The above information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Fiske Brothers Refining Company. The data on these sheets relates only to the specific material designated herein. Fiske Brothers Refining Company assumes no legal responsibility for use or reliance upon this data.

Date Prepared: January, 2003

Prepared by: James R. Kontak

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924
 International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 133K ANTI-SEIZE LUBRICANT 8OZ
 Item No: 80078
 Product Type: Lubricant

Crown P/N
 # 065005-003

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Weight Percent	ACGIH TLV:	OSHA PEL:
MINERAL OIL 64741-44-2	35-40	5 mg/m ³ TWA	10 mg/m ³ TWA
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	20-30	5 mg/m ³ mist	5 mg/m ³ mist
CALCIUM OXIDE 1305-78-8	15-25	2 mg/m ³ TWA	5 mg/m ³ TWA
ALUMINIUM POWDER 7429-90-5	5-15	10 mg/m ³ TWA (metal dust) ACGIH	15 mg/m ³ TWA (total dust), 5 mg/m ³ TWA (respirable)
GRAPHITE 7782-42-5	1-10	2 mg/m ³ respir.dust	15 mppcf TWA

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. May cause nose, throat and respiratory irritation. May cause gastrointestinal irritation. High concentrations may cause central nervous system (CNS) depression.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation
Signs and Symptoms of Exposure: Overexposure may cause eye and skin redness, difficulty breathing and vomiting. Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Inhalation of dust at levels above recommended exposure limit may cause metallic or sweet taste, irritation of pharynx and possible ulceration with perforation of the nasal septum. Repeated skin contact may cause allergic skin reactions.

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with respiratory problems such as emphysema and asthma should avoid inhalation.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.
Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Greater than 200 degrees F. Method: Tag Closed Cup
Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.
Hazardous Products of Combustion: Metal oxide fumes, Oxides of carbon, Incomplete combustion may emit component hydrocarbons.
Unusual Fire/Explosion Hazards: May ignite when sufficient heat is applied.
Lower Explosive Limit: 30% aluminum metal; 1% oil
Upper Explosive Limit: 7% oil

Product name: 133K ANTI-SEIZE LUBRICANT
8OZ

Item No: 80078

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F.
Handling: Avoid prolonged skin contact. Keep away from eyes. Do not inhale vapors. Do not use near heat, sparks or open flame. Wash hands and face after handling this compound.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses
Skin: Rubber or plastic gloves.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.
Respiratory Protection: Not required under normal use. An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silver paste
Odor: petroleum distillates
Boiling Point: Not determined
pH: Does not apply
Solubility in Water: Nil
Specific Gravity: 1.17
VOC Content(Wt.%): None
Vapor Pressure: Less than 5 mm Hg
Vapor Density (Air=1): Not Determined
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur
Incompatibilities: Strong oxidizers, alkalies, mineral acids, selected amines.
Conditions to Avoid: Heat.
Hazardous Products of Combustion: Metal oxide fumes, Oxides of carbon, Incomplete combustion may emit component hydrocarbons.

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: None
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/NA Number: None

Product name: 133K ANTI-SEIZE LUBRICANT
8OZ

Item No: 80078

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

Listed on Inventory: **YES** All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1, INSTABILITY 1

Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager

Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT USA 06106

Revision Date: 07/18/2006

Revision 6

Number:

Telephone No.: 1-87-Permatex (877) 376-2839

Material Safety Data Sheet



Crown P/N
805044



Revision Number: 004.1

Issue date: 07/08/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE® 574™ FLANGE SEALANT	IDH number:	230649
Product type:	Anaerobic Sealant	Item number:	24018
		Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: 860.571.5100		
One Henkel Way	Emergency telephone: 860.571.5100		
Rocky Hill, Connecticut 06067	860.571.5100		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Paste	HEALTH:	*2
Color:	Orange	FLAMMABILITY:	1
Odor:	Mild	PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8

WARNING: CAUSES EYE IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	May cause respiratory tract irritation.
Skin contact:	May cause allergic skin reaction. May cause skin irritation.
Eye contact:	Contact with eyes will cause irritation.
Ingestion:	Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Polyglycol dimethacrylate	25852-47-5	30 - 60
Polyglycol dioctanoate	18268-70-7	5 - 10
Decan-1-ol	112-30-1	5 - 10
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Rheological additive	Proprietary	1 - 5
1-Acetyl-2-phenylhydrazine	114-83-0	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

IDH number: 230649

Product name: LOCTITE® 574™ FLANGE SEALANT

Skin contact:	Remove contaminated clothing and footwear. Wash with soap and water. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93.3 °C (> 199.94 °F) Pensky Martens closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Ventilate area. Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation.
Storage:	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Polyglycol dimethacrylate	None	None	None	None
Polyglycol dioctanoate	None	None	None	None
Decan-1-ol	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m ³ TWA Inhalable dust. 3 mg/m ³ TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m ³ TWA	None	None
Rheological additive	None	None	None	None
1-Acetyl-2-phenylhydrazine	None	None	None	None

Engineering controls:	No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Orange
Odor:	Mild
Odor threshold:	Not available
pH:	Not applicable
Vapor pressure:	< 5 mm hg (27 °C (80.6 °F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not available
Specific gravity:	1.1518
Vapor density:	Not available
Flash point:	> 93.3 °C (> 199.94 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Autoignition temperature:	Not available
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	0.6 %; 6.01 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Reducing agents. Acids. Alkalis. Oxygen scavengers.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity:	LD50 (rat) > 10,000 mg/kg (Estimated)
Acute dermal product toxicity:	LD50 (rabbit) > 5,000 mg/kg

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyglycol dimethacrylate	No	No	No
Polyglycol dioctanoate	No	No	No
Decan-1-ol	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Rheological additive	No	No	No
1-Acetyl-2-phenylhydrazine	No	No	No

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Irritant, Allergen
Polyglycol dioctanoate	Irritant
Decan-1-ol	Irritant
Silica, amorphous, fumed, crystal-free	Nuisance dust
Rheological additive	No Data
1-Acetyl-2-phenylhydrazine	Allergen, Blood, Kidney, Mutagen, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

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