# **TRIBOLITH 1327 LUBRICATING GREASE**

### **SAFETY DATA SHEET (GHS / CLP FORMAT)** HCS 2012 (29 CFR 1910.1200) / (EC) No. 1907/2006 / (EC) 453/2010

English Version 2.1.1

1. IDE	1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY					
1.1	Product Name	Tribolith 1327				
1.2	Identified Uses :	Lubricating Grease				
	Uses advised against :	Medical & implantation uses, intentional food contact.				
1.3	Company :	Aerospace Lubricants, Inc. 1600 Georgesville Rd. Columbus, OH 43228 USA				
	Customer Service:	Tel: 1 (614) 878-3600				
	General E-mail:	info@aerospacelubricants.com				
	SDS Prepared by: SDS E-mail:	Joseph Heer, Ph.D. joe@aerospacelubricants.com				
1.4	Emergency Phone Number :	Tel: (614) 878-3600				
2. HA	2. HAZARDS IDENTIFICATION					

## 2.1 Classification according to US GHS regulation HCS 2012 (29 CFR 1910.1200), European regulation (EC) 1272/2008 and European Directive 67/548/EEC or 1999/45/EC

Skin corrosion/irritation, 3 Sensitization, skin, 1B Aquatic environment hazard, long-term, 3

Signal word:	Warning!
Hazard statements:	
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statements:	
Prevention:	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	
P321	Specific treatment: Wash exposed skin thoroughly with soap and water.
P332+P313	If skin irritation occurs, get medical advice/attention
P362+P364	Take off contaminated clothing and wash before reuse.
Storage:	
Disposal: P501	Dispose of contents & container in accordance with local & national regulations
Label elements / pictograms:	
	GHS07 (Exclamation)

## 2.3 Other Hazards

Thermal decomposition can lead to release of toxic and corrosive gases. Smoking contaminated tobacco is a common way to inhale hazardous decomposition vapors.

### 2.4 Emergency Overview

Thermal decomposition can lead to release of toxic and corrosive gases. Ecological injuries are not known or expected under normal use.

Skin:
Eyes:

On heating, vapor or fumes may cause: Discomfort, itching, redness, or swelling. On heating, vapor or fumes may cause: Discomfort, tearing, redness. Prepared: 5-Jul-2016

# 2.5 Decomposition Vapor Hazard:

## 2.6 HMIS / NFPA Information

Material may decompose if severely overheated or burned. 1,1,0B/ 1,1,0

COMPOSITION / INFORMATION ON INGREDIENTS						
Useendeurs / Descentable Incrediente	0/	CAC mumber		Classification		
Hazardous / Reportable Ingredients	%	CAS number	EC Number	29 CFR 1910.1200 & (EC) 1272/2008	Hazard Codes	
Polyalphaolefin	80 - 95%	151006-63-2	polymer	Not classified	None	
Lithium stearate soap	5 - 15%	7620-77-1	231-536-5	Not classified	None	
Phenyl benzenamine derivative	0 - 1%	68411-46-1	270-128-1	Aquat. Chron. 3	H412	
Benzotriazole methanamine derivative	0 - 1%	94270-86-7	unknown	Skin Corr./Irrit. 2; Skin Sens. 1; Aquat. Chron. 2	H315, H317, H411	
Barium sulfonate derivative	0 - 1%	25619-56-1	247-132-7	Acute Tox. 4	H302	
Polyalphaolefin	0 - 1%	68037-01-4	500-183-1	Asp. Tox. 1	H304	
Dithiocarbamate derivative	1 - 5%	10254-57-6	233-593-1	Not classified	None	

Other ingredients, if present, are under reportable limits and do not require reporting under current laws & regulations. GHS & CLP classifications are based on all current available data, and are subject to revision as more information becomes available.

#### 4. FIRST AID MEASURES

### 4.1 Description of Necessary First Aid Measures :

#### 4.1.0 General information:

Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. In case of persisting adverse effects, consult a physician. Show this safety data sheet to the doctor in attendance.

#### 4.1.1 Inhalation

In case of persisting adverse effects, consult a physician. Show this safety data sheet to the doctor in attendance.

#### Exposure to decomposition products (Inhalation):

Move affected person to fresh air.

Provide oxygen or artificial respiration if needed.

Symptoms of poisoning may develop many hours after exposure.

Consult a physician. Keep under medical supervision for at least 48 hours.

#### 4.1.2 Eye Contact:

Rinse eyes immediately with plenty of water for 15 minutes, including under the eyelids. If eye irritation develops or persists, consult a specialist.

#### Exposure to decomposition products (Eyes) :

Remove contact lenses, if present. Rinse eyes immediately with plenty of water for 15 minutes, including under the eyelids. Get medical attention immediately.

#### 4.1.3 Skin contact:

Wash off affected area with soap and water. Remove contaminated clothing and launder clothing before reuse. Get medical attention if symptoms develop or persist.

#### Exposure to decomposition products (Skin):

Wash off with plenty of water. Call a physician if irritation develops or persists.

#### 4.1.4 Ingestion:

4.2.1

Rinse out mouth and give plenty of water to drink. Do NOT induce vomiting.

Never give anything by mouth to an unconscious person.

If symptoms develop or persist, call a physician.

If large quantities of this material are swallowed, seek medical advice immediately.

#### 4.2 Most important symptoms/effects, acute and delayed

Overview of symptoms:	See Section 11.1 for information on toxicological effects.
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- Inhalation: Inhalation of fumes may cause irritation.
- 4.2.2 Skin contact: Contact with skin may cause irritation, redness.
- 4.2.3 Eye Contact: Contact with eyes may cause irritation, redness.
- 4.2.4 Ingestion: Ingestion may provoke the following symptoms: Nausea, Vomiting, Diarrhea, Abdominal Pain

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Indications: No special treatments required. Treat symptomatically.

# 5. FIRE-FIGHTING MEASURES

## 5.1 Extinguishing media

#### Suitable extinguishing media

Water Spray or Mist Extinguishing Powder Alcohol-resistant Foam Dry Chemical Carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

Full water jet, which may spread fire.

## 5.2 Special exposure hazards in a fire

In high temperature or fire conditions, hazardous or toxic decomposition products may be produced (see 5.3 below)

#### 5.3 Hazardous decomposition products

Exposure to decomposition products may be a hazard to health. Various decomposition products may be formed, including: Carbon oxides and other hydrocarbon combustion compounds, smoke, and fumes.

#### 5.4 Advice for firefighters

#### Special protective equipment for firefighters

Wear NIOSH/MSHA-approved self-contained breathing apparatus and protective suit.

#### Special procedures in a fire

Evacuate personnel to safe areas.

Approach from upwind.

Protect intervention team with a water spray as they approach the fire.

Keep containers and surroundings cool with water spray.

Keep product and empty containers away from heat and sources of ignition.

Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

#### 5.5 Other information

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

## 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment during clean-up.

### Advice for non-emergency personnel

Prevent further leakage or spillage if safe to do so.

#### Advice for emergency responders

Ensure adequate ventilation. Avoid dust or mist formation. Keep away from open flames, hot surfaces and sources of ignition. Material can create slippery conditions. Sweep or soak up to prevent slipping hazard. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Refer to protective measures listed in sections 7 and 8.

#### 6.2 Environmental precautions

Product should NOT be released into the environment.

Do not flush into surface water or sanitary sewer system. Prevent material from entering sewers, waterways, or low areas. In case of accidental release or spill, immediately notify the appropriate authorities if required by national, state/provincial and local laws and regulations.

#### 6.3 Methods and materials for containment and cleaning up

 Sweep up or soak up with inert absorbent material. Put in suitable container for disposal.

 Clean contaminated floors and objects thoroughly while observing environmental regulations.

 Suitable Material for picking up:
 Dry Earth, Sand, Other non-combustible materials

## 6.4 <u>References to other sections</u>

For emergency contact information, see section 1. For protective measures, see sections 7 and 8. For disposal instructions, see section 13.

### 7. HANDLING AND STORAGE

The information in this section contains generic advice and guidance. Specific situations may require additional actions.

#### 7.1 <u>Precautions for safe handling</u>

If workplace exposure limits are exceeded, wear suitable respiratory equipment. Avoid dust or vapor formation. Avoid inhalation of vapor or mist. Do not contaminate tobacco products. Ensure adequate ventilation. Use personal protective equipment. (Section 8) Keep away from heat and sources of ignition. To avoid thermal decomposition, do NOT overheat. Take measures to prevent the build up of electrostatic charge. Clean and dry piping circuits and equipment before any operations. Ensure all equipment is electrically grounded before beginning transfer operations. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling. Remove and wash contaminated clothing before reuse.

## 7.2 Conditions for storage, including incompatibilities

#### **Storage**

Keep container tightly closed, dry, and upright. Protect from contamination. Always keep in containers of the same material as the original material. Keep in a cool well-ventilated place. Keep away from heat and sources of ignition. Keep in properly labelled containers. Keep away from combustible materials. Provide tight electrical equipment well protected against corrosion. Keep away from tobacco products. Stable under recommended storage conditions. For further information see Section 10 . **Recommended Storage Temperatures:** 0°C to 40°C (32 to 104°F)

### Packaging materials

## **Incompatibilities**

#### Keep away from:

Combustible materials, flammable materials, non-aqueous alkalis, molten alkali metals.

## 7.3 Specific end uses

Lubricating greases and fluids For further information on specific applications, please contact: Aerospace Lubricants, Inc.

#### 7.4 Other information

Provide tight electrical equipment well protected against corrosion. Refer to protective measures listed in sections 7 and 8.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The information in this section contains generic advice and guidance. Specific situations may require additional actions.

#### Occupational exposure limit values:

	Ingredient Name:	Source	Туре	Limit	Comments		
8.2	For the second state of th						
8.2	Environmental exposure controls: General:	Dispose of rinse water in accordance with local and national regulations.					
	Engineering Controls:	Apply technical measures to comply with the occupational exposure limits. Provide appropriate local exhaust when product is heated. Refer to protective measures listed in sections 7 and 8.					
8.3	Personal protective measures and equipment: Respiratory protection :						
	Hand protection :	Recommended: Rubber, neoprene, or nitrile gloves.					
		Select and use gloves based on the likelihood and severity of exposure, following manufacturers' recommendations.					
		In case of high-temperatu	re processing wear: heat r	esistant gloves. (EN 407).			
		If risk of decomposition, w	vear: rubber or neoprene	gloves (EN 374).			
	Eye/face protection :	Recommended: Safety gla	isses with side-shields (EN	166)			
		If splashes are likely to occ	cur, wear: Tightly fitting sa	ifety goggles			
		In case of high-temperatu	re processing wear: Tightl	y fitting safety goggles			
	Skin & body protection :	Recommended: Normal chemical work clothing (Long-sleeved clothing, safety shoes)					
		If splashes are likely to occur, wear: Coverall, chemical splash goggles, face shield.					
		In case of high-temperature processing wear: Heat resistant clothing and footwear.					
	General hygiene measures :	Ensure that eyewash station When using, do NOT eat, o	•	e close to the workstation lo	cation.		

 Wash hands before breaks and at the end of workday.

 Handle in accordance with good industrial hygiene ands safety practice.

 Regularly clean equipment, work area and clothing.

 Do not breathe fumes evolved from hot lubricant materials.

 Additional information :
 These precautions are for room temperature handling. Use at elevated temperatures or conditions that generate fine particles may require additional precautions.

 9. PHYSICAL AND CHEMICAL PROPERTIES
 Semi-solid Grease

 Color :
 Light Tan

 Oder :
 Singht oder

Odor :	Slight odor
Odor Threshold.	No information available.
pH:	Not applicable.
Boiling Point:	Not applicable
Melting Point (Dropping Point):	> 170°C
Specific Gravity:	0.75 - 0.95 (25°C / 77°F)
Solublity in water:	Insoluble.
Partition coefficient: (n-octanol / water):	No data available.
Decomposition Temperature:	> 250°C ( >482°F)
Viscosity:	Not applicable.

The above information is not intended for use in preparing product specifications. Please contact Aerospace Lubricants before writing specifications.

10. ST/	ABILITY AND REACTIVITY	
10.1	Reactivity :	No dangerous reactions known under conditions of normal use.
10.2	Stability :	Stable under recommended storage conditions. Contact with some metals lowers decomposition temperature.
10.3	Possibility of hazardous reactions :	Hazardous polymerization will not occur. No dangerous reaction known under conditions of normal use.
10.4	Conditions to avoid :	Avoid use in presence of high voltage electric arc and in absence of oxygen.
		Keep away from heat, flames & sparks. To avoid thermal decomposition, keep at temperatures below: 250°C ( >482°F)
		Stable under normal conditions. High temperatures can produce irritating and toxic fumes.
10.5	Materials to avoid :	
		Metals promote and lower decomposition temperature.
		Contact with incompatible materials can cause fire and explosion.
	Keep away from:	
		Combustible material, Flammable materials, non-aqueous alkalis, molten alkali metals
		Strong oxidizers, strong acids and bases, caustic material
10.6	Hazardous decomposition products :	
	Under normal conditions:	Hazardous decomposition products should not be produced.
	Under combustion or decomposition conditions:	
		Carbon oxides and other hydrocarbon combustion compounds.

## **11. TOXICOLOGICAL INFORMATION**

11.1	Information on the likely routes of exposure:	Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough,
	Inhalation:	sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
	Ingestion:	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
	Skin contact:	Contact with the skin during normal product use is not expected to result in significant irritation. Contact with heated material may result in skin irritation or dermatitis.
	Eye contact:	Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
11.2	Acute toxicity:	
	Inhalation:	This product cannot normally be inhaled. However, exposure to decomposition products may harm health, and some serious effects may be delayed following exposure.
	Ingestion:	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
	Skin contact:	May cause skin irritation or dermatitis, especially if product is heated.
	Eye contact:	May cause eye irritation.

### Acute Toxicity Measurements:

Product/Ingredient name	Measurement	Dose / Duration	Species	Remarks
Amine Mixture	LD50 Oral	3.313 mg/kg	Rat	OECD Guideline 401
	LD50 Dermal	> 2,000 mg/kg	Rat	OECD Guideline 402
Phenyl benzenamine derivative	LD50 Oral	> 2,000 mg/kg	Rat	OECD Guideline 401
Phenyi benzenamine derivative	LD50 Dermal	> 2,000 mg/kg	Rat	OECD Guideline 402
Barium alkylnaphthalenesulfonate	LD50 Oral	> 2000 mg/kg	Rat	
Banumaikymaphtnaienesunonate	LC50 Inhalation	> 20 mg/L	Rat	

11.3	Potential chronic health effects	
	Skin Corrosion / Irritation:	Mild irritation. (Rabbit)
	Serious Eye Damage / Irritation:	Mild irritation. (Rabbit)
	Skin Sensitization:	Not a skin sensitizer.
	Respiratory Sensitization:	Not a respiratory sensitizer.
	Aspiration Hazard:	Not an aspiration hazard. This product is not normally respirable.
	Germ Cell Mutagenicity:	Does not show mutagenic effects.
	Reproductive / Developmental Effects:	Does not show reproductive or developmental effects.
	Carcinogenicity:	Not classifiable as a human carcinogen, according to current guidelines.
	Specific organ toxicity - Single exposure: Specific organ toxicity - Repeat exposure:	No evidence of specific organ toxicity. No evidence of specific organ toxicity.
11.4	Toxicokinetics, metabolism and distribution:	No specific information is available.
11.5	Other Information:	This material is a grease or lubricating fluid, and there is almost no risk of inhalation under normal conditions. However, therrmal decomposition can lead to release of toxic and corrosive gases. Exposure to decomposition products can cause severe irritation of eyes, skin and mucous membranes.

Based on product test data from this and similar products.

#### **12. ECOLOGICAL INFORMATION**

### 12.1 Aquatic Ecotoxicity effects

Product/Ingredient name	Measurement	Dose / Duration	Species	Remarks
	LC50 - Fish	1.3 mg/L, 96 hr	Brachydanio Rerio (Zebrafish)	OECD 203 static
Amine Mixture	EC50 - Invert.	2.05 mg/L	Daphnia Magna (Water Flea)	OECD 202 Pt.1 static
	EC50 - Aq. Plants	0.976 mg/L, 72 hr	Desmodesmus subspicatus	OECD 201 static
	EC10 - Aq. Plants	0.658 mg/L, 72 hr	Desmodesmus subspicatus	OECD 201 static
	LC50 - Fish	> 71 mg/L, 96 hr	Brachydanio Rerio (Zebrafish)	OECD 203
Phenyl benzenamine derivative	EC50 - Invert.	51 mg/L, 48 hr	Daphnia Magna (Water Flea)	OECD 202 Pt.1
Phenyi benzenanine derivative	EC50 - Aq. Plants	> 100 mg/L, 72 hr	Green Algae	OECD 201
	IC50 - microorg.	> 100 mg/L, 3 hr	Activated sludge	OECD 209
Polyalphaolefins	LC50 - Fish	> 1000 mg/L, 96 hr	Fish	
Polyalphaolennis	EC50 - Invert.	190 mg/L, 48 hr	Daphnia Magna (Water Flea)	

12.2 Persistence and degradability

Not biodegradable.

12.3	Bioaccumulative Potential	If table below is empty, bioaccumulative potential is low.				
	Product/Ingredient name	Log(P <sub>ow</sub> )	BCF	Potential		
	Polyaphaolefins	> 10		low		

12.4	<u>Mobility in Soil</u> Soil/water partition coefficient (KOC):	Not available
	Mobility:	This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility and high density. This product is not likely to volatilize rapidly into the air because of its low vapor pressure.
12.5	Results of PBT and vPvB assessment: Germany water class (WGK):	No data available. Class 1 - Slightly hazardous to water (German VwVwS legislation, May 1999)
12.6	Other Information:	Ecological injuries are not known or expected under normal use.

## 13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. Specific situations may require additional actions.

### 13.1 Waste treatment methods / Waste from residues & unused products:

Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all national, state/provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws and regulations are the responsibility of the waste generator. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

### 13.2 <u>Contaminated Packaging:</u>

Empty and clean contaminated packaging as much as as possible. Do not burn or use a cutting torch on the empty drum. Empty containers can be taken to an approved waste handling site or landfilled, when in accordance with the local regulations. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

## 13.2 RCRA Hazardous Waste (40 CFR 302): No

Disposal should be in accordance with applicable local, regional, national and international laws and regulations.

14.1 International transport regulations US DOT Class (Ground) TDG Class (Canada) ADR / RID Class (EU Road / Rail) IMO / IMDG Class (Sea) ICAO / IATA Class (Air)

# **15. REGULATORY INFORMATION**

No special transport requirements. No special transport requirements. No special transport requirements. No special transport requirements. No special transport requirements.

. RE	GULATORY INFORMATION					
1	Safety, health and environmental regulations / legislati	on specific for the substance or mixture				
	United States: 29 CFR 1910.1200 (HCS 2012, USGHS) as amended.					
	European Union:	Regulation (EC) No 1272/2008 (EU CLP) as	amended.			
		Regulation (EC) No 1907/2006 (EU REACH)	as amended.			
		Directive 98/24/EC (Worker Health & Safe	y Regulations) as	amended.		
		European Waste Catalogue (Note: Waste	codes should be	assigned by the	e user based on the application)	
15.2	International Inventory Lists:					
	Australia Inventory (AICS):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
	Canada Inventory (DSL/NDSL):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
	China Inventory (IECSC):	Other than exceptions listed below, all ingredients listed or exempt.				
	European Inventory (EINECS):	Other than exceptions listed below, all ingredients listed, exempt or notified. (ELINCS)				
	Korea Inventory (KECI):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
	Japan Inventory (ENCS/ISHL):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
	New Zealand Inventory (NZIoC):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
	Philippines Inventory (PICCS):	Other than exceptions listed below, all ing	edients listed, ex	empt or notifie	ed.	
	United States Inventory (TSCA 8b):	Other than exceptions listed below, all ingredients listed, exempt or notified.				
5.3	European Regulations:					
	REACH SVHC List, (EC) 1907/2006:	This product does NOT contain REACH Sub	stances of Very H	ligh Concern (1	5 Jun 2015 SVHC list).	
	Major Accident Hazard Legislation:	Directive 96/82/EC Update: 2003 does not	apply.			
	Water contaminating class (Germany):	WGK1 Slightly hazardous to waters				
.4	North American Regulations:					
	CERCLA Hazardous substances:	No components are regulated.				
	<u>Clean Air Act (CAA) 112</u>	No construction of Council				
	Accidental release prevention:	No components were found.				
	Regulated flammable substances:	No components were found.				
	Regulated toxic substances:	No components were found.				
	Hazardous air pollutants (HAPs):	Not listed.				
	<u>SARA 302/304/311/312</u>					
	302 Extremely hazardous substances:	None			1	
	SARA 313 Form R Reporting Requirements:	Component Name	CAS Number	wt. %		
	Components on US State Right-to-Know Disclosure List	: Any components on State "Right-to-Know"	disclosure lists a	re listed below		
	California Proposition 65	Any components known by the State of Ca	lifornia to cause o	cancer, birth de	fects, or reproductive harm are listed below.	
5.5	Chemical Safety Assessment:	Chemical safety assessments are not requ	red for this subst	ance.		
6. OT	THER INFORMATION					
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	Hazardous Material Information System (USA)	Health     1       Flammability     1       Physical Hazards     0       Personal Protection     B				
	National Fire Protection Association (USA)	Health 1	_			
		Flammability <u>1</u> Instability 0				

The information provided in this Safety Data Sheet is correct to the best of the supplier's knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific product designated and may not be valid for such product when used in combination with any other material or in any process, unless specified in this SDS. Aerospace Lubricants, Inc. specifically disclaims any liability for any loss, injury or damage which may result from use or misuse of this product.

All chemicals should be handled only by competent personnel, within a controlled environment. It is the buyer's/user's responsibility to ensure that his activities comply with all applicable federal, state, provincial and local laws, and to determine the conditions necessary for the safe use of this product. Aerospace Lubricants, Inc. urges each customer or recipient of this SDS to study it carefully and consult appropriate experts to become aware of and understand the data contained in this SDS and any hazards associated with the product.