

Originating DCR		56821	REVISIONS		
REV	DESCRIPTION			DATE	APPROVED
A	Changed Revision date per DCR 57477			3/2/08	BB

## REFERENCE SPECIFICATION

APPROVALS		DATE	<b>MarathonNorco Aerospace, Inc.</b> WACO, TEXAS					
ORIGINATOR CV		01/12/06	SAFETY DATA SHEETS – ANTI FOAM					
CHECKED								
APPROVED Charles Vonasek		01/30/06	SIZE	FSCM	DWG NO	RS-95337	REV	A
DIST. CODE		14A	A				SHEET 1 OF 5	

## MATERIAL SAFETY DATA SHEET



8301 Imperial Drive  
P.O. Box 8233  
Waco, Texas 76714-8233  
254-776-0650

Type of Data Sheet:  New  Revised

Date Prepared: March 7, 2008

**This MSDS may be used to comply with the American National Standard Institute (ANSI) 16-paragraph format for MSDS**

**SECTION 1 – PRODUCT AND COMPANY DESCRIPTION**

MarathonNorco Aerospace, Inc.  
8301 Imperial Drive  
Waco, Texas 76712-6588

**For Product Information:**  
254-776-0650

**Product Name:**  
Anti-Foam Agent

**Emergency Phone Number:**  
USA: 800-424-9300  
International: 11-1-703-527-3887

**Product Number:**  
31865-001

**National Stock Class:**

**SECTION 2 – CHEMICAL COMPOSITION**

HAZARDOUS COMPONENT [SPECIFIC CHEMICAL IDENTIFICATION COMMON NAME(S)]	CAS NUMBER	% WEIGHT
Tributyl phosphate	126-73-8	40 - 60
Ethyl alcohol	64-17-5	35 - 55
Acetone	67-64-1	1 - 7
Water	231-791-2	1 - 7

**SECTION 3 – HAZARDS IDENTIFICATION**

ROUTE OF ENTRY:	INHALATION	ABSORPTION	INGESTION
	Primary route of exposure	Primary route of exposure	Possible
<b>HEALTH HAZARDS:</b>			
<p><b>ACUTE:</b> May be irritating to the eyes, skin, and respiratory system. May cause central nervous system depression.</p> <p><b>CHRONIC:</b> Long-term exposure can also cause loss of appetite, weight loss, nervousness, memory loss, mental retardation and liver damage. May cause dermatitis by defatting the skin from prolonged or repeated contact.</p>			
<b>CARCINOGENICITY:</b>	<b>NTP</b>	<b>IARC MONOGRAPHS</b>	<b>OSHA REGULATED</b>
	None	None	None
<p><b>The American Conference of Governmental Industrial Hygienists (ACGIH) list ethyl alcohol as an A4 – Not classifiable as a Human Carcinogen.</b> These are agents, which cause concern that they are carcinogenic for humans, but which cannot be assessed conclusively because of a lack of data. Animal studies do not provide indications carcinogenicity that is sufficient to classify the agent into one of their other categories.</p>			
<b>SIGNS and SYMPTOMS of EXPOSURE:</b>			
<p>May cause eye, skin and upper respiratory tract irritation. Short-term overexposure above 1,000 ppm by the inhalation route may cause central nervous system (CNS) effects such as headache and irritation of eyes, nose and throat. If continued for more than an hour additional CNS effects may occur such as: dizziness, drowsiness, loss of appetite, and an inability to concentrate. Gastrointestinal (stomach) effects may occur with symptoms such as nausea and vomiting.</p>			
<b>MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:</b>			
<p>Persons with pre-existing skin, respiratory, or diseases of the nervous system may be at increased risk if exposed to this material.</p>			

**SECTION 4 – FIRST AID MEASURES****EMERGENCY FIRST AID PROCEDURES:****Inhalation**

If symptoms are experienced, move the victim to fresh air. Obtain medical attention if breathing difficulty persists.

**Skin**

Immediately flush affected area with plenty of soap and water while removing contaminated clothing. Wash contaminated clothing before reuse. If irritation persists, get medical attention.

**Eye**

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If the victim is wearing contact lenses, remove them. Get medical attention immediately.

**Ingestion**

If swallowed, get medical attention by calling a physician or a poison control center immediately. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head below hips to reduce the risk of aspiration.

**SECTION 5 – FIRE FIGHTING MEASURES****FLASH POINT (METHOD USED)**

EPA 1010 Pensky-Martens  
Closed Cup Method

**FLAMMABLE LIMITS**

Flashpoint less than 70 degrees  
Fahrenheit

**LEL**

N/D Not determined

**UEL**

N/D Not determined

**EXTINGUISHING MEDIA**

SMALL FIRE: Use dry chemicals, CO<sub>2</sub>, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

**SPECIAL FIRE FIGHTING PROCEDURES**

Fire fighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive pressure mode. Dike fire control water for later disposal.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Flammable liquid. May decompose under fire conditions to give off toxic materials such as phosphorus oxides and flammable organic constituents.

**SECTION 6 – ACCIDENTAL RELEASE****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Flammable liquid. Eliminate all sources of ignition. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements, or confined areas. Absorb liquid with a suitable absorbent, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

**SECTION 7 – HANDLING AND STORAGE****PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Open and handle container with care. Metal containers involved in the transfer of this material should be grounded and bonded. Keep container closed and exercise care to prevent damage to, or leakage from, the container. Inside storage should be in an NFPA approved flammable liquids storage room or cabinet. All ignition sources should be eliminated. NFPA 30, Flammable and Combustible Liquids Code, should be followed for all storage and handling. Consult local fire codes for additional storage information.

**SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION**

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code. A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Wear chemical resistant gloves such as rubber, neoprene or vinyl. When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn. Use splash goggles when eye contact due to splashing or spraying liquid is possible.

**Additional Remarks**

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES									
Chemical	Boiling Point (°C)	Specific Gravity	Vapor Pressure	Melting Point (°C)	Vapor Density	Evaporation Rate	Solubility in Water	Odor	Appearance
Tributyl Phosphate	358.00 F (181.11 C) @ 22mmHg & decomposes @ 289 C	0.978 @ 68F(20C)	0.14@68F (20C)	-122F (-80C)	(Air 1.0) 9.2	LT 0.1	0.14 g/100ml @ 68F (20C)	N/D	Liquid. Colorless to pale yellow liquid
Ethyl Alcohol	173.12F (78.4C)	0.8118 @ 68F (20C)	44.6mm Hg @ 68.F (20C)	-114.3C	(Air 1.0) 1.59	Specific data not available – expected to be rapid	Complete	Sweet. Alcohol-like.	Liquid. Colorless liquid / visible vapor
Acetone	56.5C d(133F) @ 760 mm Hg	0.79 @ 20C/4C	181.72 mmHg @ 68.F (20C)	-95.4C	(Air 1.0) 2.0	(BuAc=1) ca. 7.7	Miscible in all proportions in water	Fragrant, mint-like	Liquid. Clear, colorless, volatile.

SECTION 10 – STABILITY AND REACTIVITY			
<b>STABILITY</b>	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
Contact with strong oxidizers, excessive heat, sparks or open flame.			
<b>INCOMPATIBILITY (MATERIALS TO AVOID)</b> Acetyl chloride or other oxidizing agents.			
<b>HAZARDOUS DECOMPOSITION OR BY-PRODUCTS</b> Under wet alkaline conditions, this product hydrolyzes slowly to form butyl alcohol and butyl phosphoric acid salts.			
<b>HAZARDOUS POLYMERIZATION</b>	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	
Not expected to occur.			

SECTION 11 – TOXICOLOGICAL INFORMATION			
HAZARDOUS COMPONENTS [S CHEMICAL IDENTITY; COMMON NAME(S)]	OSHA PEL	ACGIH TLV	CAS NUMBER
Tributyl Phosphate	2.5mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>	126-73-8
Ethyl Alcohol	1,000 ppm 8 HRS/TWA	1,000 ppm 8 HRS/TWA	64-17-5
Acetone	1,000 ppm 8 HRS/TWA	500 ppm 8 HRS/TWA 750 ppm 15 MIN/STEL	67-64-1

SECTION 12 – ECOLOGICAL INFORMATION
Avoid release to the environment. This material is not classified as harmful or toxic to fish, algae or higher aquatic plants. In both soil and water this material is expected to biodegrade.

SECTION 13 – DISPOSAL INFORMATION
<b>WASTE DISPOSAL METHOD</b>
Contaminated products/soil/water may be Resource Conservation and Recovery Act (RCRA) hazardous waste/Occupational Safety and Health Administration (OSHA) hazardous material due to low flash point (see 40 Code of Federal Regulations (CFR) 261 and 29 CFR 1910). Comply with federal, state, or local regulations for disposal.

SECTION 14 – TRANSPORT INFORMATION	
<b>Proper Shipping Name</b>	Ethanol solutions
<b>ID No.</b>	UN1170
<b>Hazard Class</b>	3
<b>PG</b>	II

<i>SECTION 15 – REGULATORY INFORMATION</i>					
<b>FEDERAL REGULATIONS</b>					
TSCA Status: The intentional ingredients of this product are listed					
CERCLA RQ – 40 CFR 302.4(a)	<table border="1"> <thead> <tr> <th>Component</th> <th>RQ (lbs)</th> </tr> </thead> <tbody> <tr> <td>Acetone / CAS# 67-64-1</td> <td>5000</td> </tr> </tbody> </table>	Component	RQ (lbs)	Acetone / CAS# 67-64-1	5000
Component	RQ (lbs)				
Acetone / CAS# 67-64-1	5000				
No chemical in this material with known CAS numbers are subject to the reporting requirements of CERCLA.					
SARA 302 Components – 40 CFR 355 Appendix A:	None				
Section 311/312 Hazard Class – 40 CFR 370.2					
Immediate ( X )    Delayed ( X )    Fire ( X )    Reactive (   )    Sudden Release of Pressure (   )					
SARA 313 Components – 40 CFR 372.65					
This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.					
OSHA Process Safety Management - 29 CFR 1910	None Listed				
EPA Accidental Release Prevention - 40 CFR 68	None Listed				

<i>SECTION 16 – OTHER INFORMATION</i>
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**NFPA Ratings:** Health: **2** Flammability: **3** Reactivity: **0**

**Key Legend Information:**

ACGIH – American Conference of Governmental Industrial Hygiene  
CAS – Chemical Abstract Service  
CERCLA – Comprehensive Environmental Response Compensation and Liability Act  
CFR – Code of Federal Register  
EPA – Environmental Protection Agency  
IARC – International Agency on Research of Cancer  
LEL – Lower Explosion Limit  
NTP – National Toxicology Program  
N/A – Not Applicable  
OSHA – Occupational Safety and Health Administration  
RCRA – Resource Conservation and Recovery Act  
TSCA – Toxic Substance Control Act  
SARA – Superfund Amendments and Reauthorization Act

PEL – Permissible Exposure Limit  
UEL – Upper Explosion Limit  
TLV – Threshold Limit Value  
TWA – Time Weighted Average  
N/D – Not Determined

**Disclaimer Of Responsibility:**

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