



SAFETY DATA SHEET

Revision Date 18-November-2015

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Foremost 2038 TFE Lube Aerosol

UN/ID No UN1950
Product Code 2038

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Industrial lubricant

Details of the Supplier of the Safety Data Sheet

Supplier Address

Delta Foremost Chemical Corporation
3915 Air Park St.
Memphis, Tennessee 38118

Emergency Telephone Number

Company Phone Number (901) 363-4340
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Specific Target Organ Toxicity – Single Exposure (Narcotic Effects)	Category 3
Aspiration Hazard	Category 1
Reproductive toxicity	Category 1A
Eye Irritation	Category 2A
Flammable Aerosol	Category 1

Signal Word

Danger

Hazard Statements

Extremely flammable aerosol
May cause drowsiness or dizziness
May be fatal if swallowed and enters airways
Causes serious eye irritation
May damage fertility or the unborn child



Appearance Clear, colorless liquid

Physical State Liquid / aerosol

Odor Solvent

Precautionary Statements - Prevention

Keep out of reach of children

Do not handle until all safety precautions have been read and understood.

Obtain special instructions before use

Keep away from heat/sparks/open flames/hot surfaces. NO SMOKING

Do not spray on an open flame or other ignition source.

Pressurized container: Do not pierce or burn, even after use.

Avoid breathing gas.

Wash thoroughly after handling.

Wear protective gloves/protective clothing, eye protection, and face protection.

Use only outdoors or in a well-ventilated area

Precautionary Statements – Response

IF ON SKIN: Immediately remove contaminated clothing. Wash with plenty of soap and water.

IF EXPOSED OR CONCERNED: Get medical advice/ attention. Call a poison center/doctor if you feel unwell.

IF SKIN IRRITATION OCCURS: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

IF SWALLOWED: Immediately call a poison control center or physician. Do NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation occurs: get medical advice/ attention.

In case of fire: Use water fog, dry chemical, or carbon dioxide to extinguish.

Collect spillage.

Precautionary Statements - Storage

Store locked up

Protect from sunlight, heat, and sparks.

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Acetone	67-64-1	Proprietary
Butane	106-97-8	Proprietary
Heptane	142-82-5	Proprietary
Propane	74-98-6	Proprietary
Toluene	108-88-3	Proprietary
Ethyl Alcohol	64-17-5	Proprietary
Cyclohexane	110-82-7	Proprietary
Aliphatic Petroleum Solvent	64742-89-8	Proprietary

Product contains a proprietary mixture of ingredients.

4. FIRST AID MEASURES

First Aid Measures**General Advice**

In cases of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned, get medical advice/attention.

Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention/advice.
Skin Contact	Take off immediately all contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops and persists.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell. Give oxygen or artificial respiration if needed.
Ingestion	If swallowed: Immediately call a POISON CENTER or physician. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms	Dizziness. Drowsiness. Irritation of eyes and mucous membranes.
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Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians	Provide general supportive measures and treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use powder, alcohol resistant foam, or carbon dioxide. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unsuitable Extinguishing Media None known.

Specific Hazards Arising from the Chemical

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force.

Protective Equipment and Precautions for Firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Use standard firefighting procedures and consider the hazards of other involved materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of this SDS.
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Methods and Material for Containment and Cleaning Up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in the immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. Use a non-combustible material like vermiculite, sand, or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements, or confined areas.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling

Do not handle until all safety precautions have been read and understood. Vapors may form explosive mixtures with air. May be ignited by open flame. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid exposure – obtain special instructions before use. Do not breathe mist or vapor. Do not breathe gas. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged and repeated contact. Avoid prolonged exposure. Do not get this material on clothing. When using, do not eat, drink, or smoke. Use only in well-ventilated areas. Should be handled in closed systems, if possible. Pregnant or breast-feeding women must not handle this product. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep in properly labeled containers. Store locked up. Protect from sunlight and do not expose to temperatures above 122 F. Do not puncture, incinerate, or crush. Do not handle or store near flame, heat, or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Refrigeration recommended. Store away from incompatible materials (see section 10 of this SDS).

Level 3 aerosol

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m ³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m ³ (vacated) STEL: 2400 mg/m ³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³	TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³
Propane 74-98-6		TWA: 1000 ppm	TWA: 1000 ppm
Heptane 142-82-5	STEL: 400 ppm	TWA: 400 ppm	
Butane 106-97-8	TWA: 1,000 ppm	TWA: 1,000 ppm	TWA: 800 ppm TWA: 1,900 mg/m ³
Ethyl Alcohol 64-17-5	TWA: 1,000 ppm	TWA: 1,000 ppm TWA: 1,900 mg/m ³	TWA: 1,000 ppm TWA: 1,900 mg/m ³
Cyclohexane 110-82-7	TWA: 100 ppm	TWA: 1,050 mg/m ³ TWA: 300 ppm	TWA: 1,050 mg/m ³ TWA: 300 ppm
Aliphatic Petroleum Solvent 64742-89-8	TWA: 400 ppm		

Appropriate Engineering Controls

Engineering Controls

Ventilation must be adequate (typically 10 changes per hour) to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide an eyewash station. Handle in accordance with good industrial hygiene and safety practice.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection

Wear face/eye protection. Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Wear protective gloves. Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. If permissible levels are exceeded, use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

General Hygiene Considerations

Do not get in eyes. When using, do not eat, drink, or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Wear appropriate thermal protective clothing, when necessary.

Biological Limit Values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling time
Toluene 108-88-3	0.3 mg/L	o-Cresol, with hydrolysis	Creatinine in Urine	*
	0.03 mg/L	Toluene	Urine	*
	0.02 mg/L	Toluene	Blood	*
Acetone 67-64-1	50 mg/L	Acetone	Urine	*

*-For sampling details, please see the source document.

Exposure Guidelines

US-California OELs, Tennessee OELs, Minnesota Haz Subs, ACGIH Threshold Limit Value, US NIOSH : Skin designation
 Toluene (CAS 108-88-3) Can be absorbed through the skin

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Gas / Liquid upon dispensing	Odor	Solvent
Appearance	Clear liquid	Odor Threshold	Not determined
Color	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	132.89°F estimated	
Flash Point	-156 °F - closed cup	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Typical 9.5V (based on mineral oil)	
Lower Flammability Limit	Typical 1.9V (based on mineral oil)	
Vapor Pressure	135.82 psig @ 70°F estimated	

Vapor Density	Not determined	
Specific Gravity	0.431	(1=Water)
Water Solubility	Not determined	
Solubility in Other Solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Stable

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Incompatible Materials

Strong oxidizing agents. Fluorine. Chlorine. Nitrates.

Hazardous Decomposition Products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	Not determined. This product is not expected to cause skin sensitization.
Inhalation	May be fatal if swallowed and enters airways. Prolonged inhalation may be harmful. Narcotic effects.
Ingestion	May be fatal if swallowed and enters airways.

Product Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Product FM 2038 TFE Lube Aerosol	= 76,819.37 mg/kg (Mouse) estimated = 17,090.92 mg/kg (Rat) estimated	= 55,939.74 mg/kg (Guinea Pig) 24 h estimated = 7,538.98 mg/kg (Rabbit) 24 h estimated = 13,515.04 mg/kg (Rat) 24 h estimated	= 1,901.78 mg/L (Cat) 4.5 h estimated = 868.39 mg/L (Mouse) 4 h estimated = 23,678.40 ppm (Rat) 4 h estimated

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	= 5,800 mg/kg (Rat)	=> 7,426 mg/kg (Guinea Pig) 24 h	
Propane 74-98-6			= 1,237 mg/L (Mouse) 120 min = 1,355 mg/L (Rat) 4 h
Toluene 108-88-3	= 5,580 mg/kg (Rat)	= 12,196 mg/kg (Rabbit)	= 12,500-28,800 mg/m ³ (Rat) 4h
Aliphatic Petroleum Solvent 64742-89-8	= 4,820 mg/kg (Rat)	=> 1,900 mg/kg (Rabbit) 24 h	=> 5,020 mg/m ³ (Rat) 4 h => 4.96 mg/L (Rat) 4 h
Butane 106-97-8			= 1,237 mg/L (Mouse) 120 min = 1,355 mg/L (Rat)
Cyclohexane 110-82-7		=> 2,000 mg/kg (Rabbit)	=> 5,540 ppm (Rat) 4 h
Heptane 142-82-5	>15,000 mg/kg (Rat)		= 25,000 ppm (Rat) 4h = 103 g/m ³ (Rat) 4h
Ethyl Alcohol 64-17-5	= 7060 mg/kg (Rat)		= 20000 ppm (Rat) 10 h

Information on Physical, Chemical and Toxicological Effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Germ Cell Mutagenicity Not applicable.

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.
Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans

Reproductive Toxicity Possible reproductive hazard. May damage fertility or the unborn child.

STOT - Single Exposure Narcotic effects.

Chronic Toxicity Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Aspiration Hazard May be fatal if swallowed and enters airways. Narcotic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Product Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Product FM 2038 TFE Lube Aerosol	21,310.75: 72 h Algae mg/L IC50 Estimated	20.15: 96 h Oncorhynchus mykiss mL/L LC50 Estimated		6,978.20: 48 h Daphnia magna mg/L EC50 Estimated

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetone 67-64-1		4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	EC50 = 14500 mg/L 15 min	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Toluene 108-88-3	245.0: 24 h Chlorella vulgaris mg/L EC50 10.0: 24 h Pseudokirchneriella subcapitata mg/L EC50	7.63: 96 h Oncorhynchus mykiss mg/L LC50 5.44: 7 d Pimephales promelas mg/L NOEC		8.0: 24 h Daphnia magna mg/L EC50
Aliphatic Petroleum Solvent 64742-89-8	4,700: 72 h Algae mg/L IC50			
Cyclohexane 110-82-7		23.03-42.07: 96 h Pimephales promelas mg/L LC50		
Ethyl Alcohol 64-17-5		> 100.0: 96 h Pimephales promelas mg/L LC50		7,700-11,200: 48 h Daphnia magna mg/L EC50
Heptane 142-82-5		375: 96 h Tilapia mossambica mg/L LC50		

Persistence and Degradability

No data is available on the degradability of this product.

Bioaccumulation

Propane 2.36
Toluene 2.73

Partition Coefficient (octanol/water)

Acetone	-0.24
Butane	2.89
Cyclohexane	3.44
Ethyl Alcohol	-0.31
Heptane	4.66
Propane	2.36
Toluene	2.73

Mobility in Soil

No data available.

Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure Do not puncture, incinerate, or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches with chemical or used container.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings, even after container is emptied. Do not reuse empty containers.

US RCRA Hazardous Waste U List: Reference

Toluene (CAS 108-88-3)	U220
Cyclohexane (CAS 110-82-7)	U056
Acetone (CAS 67-64-1)	U002

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1950
Proper Shipping Name	Aerosols, Flammable
Hazard Class	2.1
Packing Group	N/A

IATA

UN/ID No	UN1950
Proper Shipping Name	Aerosols, Flammable
Hazard Class	2.1
Packing Group	N/A

IMDG

UN/ID No	UN1950
Proper Shipping Name	Aerosols
Hazard Class	2.1
Packing Group	N/A

15. REGULATORY INFORMATION**International Inventories**

Not Determined

US Federal Regulations

This product is a hazardous chemical as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All Components are on the U.S. EPA TSCA Inventory List

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3)	Listed
Acetone (CAS 67-64-1)	Listed
Cyclohexane (CAS 110-82-7)	Listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard Categories**

Immediate Hazard	- Yes
Delayed Hazard	- Yes
Fire Hazard	- Yes
Pressure Hazard	- No
Reactivity Hazard	- No

SARA 311/312 Hazardous Chemical: No

SARA 313 (TRI Reporting)

Chemical Name	CAS Number	% by weight
Cyclohexane	110-82-7	1 – 2.5
Toluene	108-88-3	0.1 – 1

OTHER FEDERAL REGULATIONS**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPS) List**

Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Propane (CAS 74-98-6)

Butane (CAS 106-97-8)

Safe Drinking Water Act (SDWA) Not Regulated**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35% WV

Acetone (CAS 67-64-1) 35% WV

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

Acetone (CAS 67-64-1) 6532

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Rhode Island	Massachusetts	Pennsylvania
Acetone 67-64-1	X	X	X	X
Propane CAS 74-98-6	X	X	X	X
Toluene CAS 108-88-3	X	X	X	X
Butane 106-97-8	X	X	X	X
Cyclohexane 110-82-7	X	X	X	X
Heptane 142-82-5	X		X	X
Ethyl Alcohol 64-17-5	X		X	X

California Proposition 65

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

US – California Proposition 65 – CRT: Listed date/ Developmental toxin

Toluene (CAS 108-88-3)

Listed: January 1, 1991

US – California Proposition 65 – CRT: Listed date/ Female reproductive toxin

Toluene (CAS 108-88-3)

Listed: August 7, 2009

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	2	3	0	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	2	3	0	Not determined

Revision Date 18-November-2015
Revision Note New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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 material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet