

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product identifier****Product name** MOLYFILM**Recommended use of the chemical and restrictions on use****Product code** F00389**Product Type** Extremely Flammable Aerosol  
**Synonyms** None**Supplier's details****Recommended Use** Dry lubricant.  
**Uses advised against** No information available**Manufactured For:**  
Kano Laboratories  
1000 East Thompson Lane  
Nashville, TN 37211**Emergency telephone number**  
**Chemical Emergency Phone Number** CHEMTREC : 1-800-424-9300  
**Company Emergency Phone Number** 615-833-4101

**2. HAZARDS IDENTIFICATION**

**Classification**


Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Flammable Aerosols	Category 1
Gases under pressure	Compressed Gas

**GHS Label elements, including precautionary statements**

**Emergency Overview**

**DANGER**

**Hazard Statements**  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May cause respiratory irritation. May cause drowsiness or dizziness.  
 May be fatal if swallowed and enters airways.  
 Extremely Flammable Aerosol  
 Contains gas under pressure; may explode if heated



**Appearance** Opaque                      **Physical state** Aerosol                      **Odor** Solvent

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling.  
 Wear protective gloves, eye protection, face protection.  
 Avoid breathing fumes, gas, mist, vapors, spray.  
 Use only outdoors or in a well-ventilated area.  
 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.

**Precautionary Statements - Response**

Specific treatment (see first aid on this label).  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice, attention  
 IF ON SKIN: Wash with plenty of soap and water.  
 If skin irritation occurs: Get medical advice, attention.  
 Take off contaminated clothing and wash it before reuse.  
 IF INHALED : Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER or doctor, physician if you feel unwell.  
 IF SWALLOWED: Immediately call a POISON CENTER, doctor, physician.  
 Do NOT induce vomiting.

**Precautionary Statements - Storage**

Store locked up.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

**Precautionary Statements - Disposal**

Dispose of contents, container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC)**

None

**Other information**

0% of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %*
PROPANE/ISOBUTANE/N-BUTANE	68476-86-8	40-50
ACETONE	67-64-1	20-30
HEPTANE	142-82-5	20-30
ISOPROPYL ALCOHOL	67-63-0	1-10
MOLYBDENUM DISULFIDE	1317-33-5	0.1-1.0

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures for different exposure routes**

<b>General advice</b>	Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, mist, or gas.
<b>Eye contact</b>	Rinse immediately with plenty of water for 15 minutes and seek medical advice if skin irritation persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing has stopped, contact emergency medical services immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician immediately. Never give anything by mouth to unconscious person. Risk of product entering the lungs on vomiting after ingestion.

**Most important symptoms/effects, acute and delayed**

<b>Main Symptoms</b>	Causes skin and eye irritation. May cause respiratory irritation. May cause dizziness or drowsiness. Harmful and may be fatal if swallowed and enters airways.
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**Indication of immediate medical attention and special treatment needed, if necessary**

<b>Notes to physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Water fog.Dry chemical. Foam.Carbon dioxide (CO2). Cool containers/tanks with water spray.

**Unsuitable Extinguishing Media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

Extremely Flammable / Flammable. Keep product and empty container away from heat and sources of ignition.

**Explosion Data**

**Sensitivity to Mechanical Impact** none.

**Sensitivity to Static Discharge** Yes.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use shielding to protect fire-fighters from bursting containers. In the event of fire and/or explosion do not breathe fumes.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use with adequate ventilation to keep the exposure levels below the OELS.

**Environmental precautions**

**Environmental precautions** Vapors can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use personal protective equipment. Dam up. Cover liquid spill with sand, earth, or other noncombustible absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with eyes. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Avoid skin contact. Use with adequate ventilation. Keep container away from heat, flames, and all other sources of ignition. Keep can away from all sources of electricity such as electric motors and batteries. Do not spray on hot surfaces.

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces, and sources of ignition. Keep in properly labeled containers. Keep out of the reach of children. Store locked up.

**Incompatible products** Strong acids, alkalis, oxidizing agents.

**Aerosol Level** 3

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	74-98-6: TWA: 1000 ppm 106-97-8: STEL: 1000 ppm 75-28-5: STEL: 1000 ppm	74-98-6:TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm	74-98-6:IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>

		(vacated) TWA: 1800 mg/m <sup>3</sup> 106-97-8: (vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	106-97-8:TWA: 800 ppm TWA: 1900 mg/m <sup>3</sup> 75-28-5:TWA: 800 ppm TWA: 1900 mg/m <sup>3</sup>
ACETONE 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m <sup>3</sup> (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m <sup>3</sup> (vacated) STEL: 2400 mg/m <sup>3</sup> 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 <sup>3</sup>
HEPTANE 142-82-5	STEL: 500 ppm TWA: 400 ppm	TWA: 500 ppm TWA: 2000 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 1600 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 2000 mg/m <sup>3</sup>	IDLH: 750 ppm Ceiling: 440 ppm 15 min Ceiling: 1800 mg/m <sup>3</sup> 15 min TWA: 85 ppm TWA: 350 mg/m <sup>3</sup>
TOLUENE 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m <sup>3</sup> (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m <sup>3</sup> Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m <sup>3</sup> STEL: 150 ppm STEL: 560 mg/m <sup>3</sup>
ISOPROPYL ALCOHOL 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>
MOLYBDENUM DISULFIDE 1317-33-5	TWA: 10 mg/m <sup>3</sup> Mo inhalable particulate matter TWA: 3 mg/m <sup>3</sup> Mo respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> Mo	IDLH: 5000 mg/m <sup>3</sup> Mo
1,3,5-TRIMETHYLBENZENE 108-67-8	-	-	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
1,2,4-TRIMETHYL BENZENE 95-63-6	-	-	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
XYLENE 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m <sup>3</sup> (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m <sup>3</sup>	Not Established
ETHYL BENZENE 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m <sup>3</sup> (vacated) STEL: 125 ppm (vacated) STEL: 545 mg/m <sup>3</sup>	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>
BENZENE 71-43-2	STEL: 2.5 ppm TWA: 0.5 ppm Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028 TWA: 1 ppm (vacated) TWA: 10 ppm unless specified in 1910.1028 (vacated) STEL: 50 ppm 10 min unless specified in 1910.1028 (vacated) Ceiling: 25 ppm unless specified in 1910.1028 Ceiling: 25 ppm STEL: 5 ppm see 29 CFR 1910.1028	IDLH: 500 ppm TWA: 0.1 ppm STEL: 1 ppm

ACGIH: (American Conference of Governmental Industrial Hygienists)  
OSHA: (Occupational Safety & Health Administration)

NIOSH IDLH: *Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

#### Exposure controls

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems.

#### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Safety glasses with side-shields.

**Skin and body protection** Chemical resistant apron. Protective gloves.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

<b>Physical state</b>	Aerosol	<b>Odor</b>	Solvent
<b>Appearance</b>	Opaque	<b>Odor Threshold</b>	
<b>Color</b>	Dark Green		

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH	No information available	
Melting/freezing point	No information available	
Boiling point/boiling range		
Flash Point	-96 °C / -141 °F	Based on propellant
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
upper flammability limit		
lower flammability limit		
Vapor pressure		
Vapor density		
Specific Gravity	0.719	
Water solubility	Practically insoluble	Negligible
Partition coefficient: n-octanol/water		
Autoignition temperature	No information available	Not applicable
Decomposition temperature		
Viscosity	No information available	
Explosive properties		

### Other information

**VOC Content(%)** 69.03

## 10. STABILITY AND REACTIVITY

### Reactivity

Stable under recommended storage conditions

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to Avoid**

Extremes of temperature and direct sunlight.

**Incompatible Materials**

Strong acids, alkalis, oxidizing agents.

**Hazardous Decomposition Products**

Carbon oxides , Hydrocarbons, Fumes.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Avoid inhaling vapors or mists. Harmful if inhaled. May cause irritation to respiratory system.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	Harmful and may be fatal if swallowed and enters airways and lungs.

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
ACETONE 67-64-1	= 5800 mg/kg ( Rat )	> 15700 mg/kg ( Rabbit )	= 50100 mg/m <sup>3</sup> ( Rat ) 8 h
HEPTANE 142-82-5	>5,000 mg/kg (Rat)	= 3000 mg/kg ( Rabbit )	= 103 g/m <sup>3</sup> ( Rat ) 4 h
ISOPROPYL ALCOHOL 67-63-0	= 1870 mg/kg ( Rat )	= 4059 mg/kg ( Rabbit )	= 72600 mg/m <sup>3</sup> ( Rat ) 4 h
MOLYBDENUM DISULFIDE 1317-33-5	-	-	> 2820 mg/m <sup>3</sup> ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** Causes skin and eye irritation. May cause respiratory irritation. May cause drowsiness and dizziness. Harmful and may be fatal if ingested and enters airways.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Causes skin irritation.  
**Eye damage/irritation** Irritating to eyes.  
**Irritation** Causes skin and eye irritation. May cause respiratory irritation.  
**Sensitization** No information available.  
**Germ cell mutagenicity** Not a germ cell mutagen.  
**Carcinogenicity** The table below indicates whether each agency has evaluated a listed ingredient as a carcinogen.  
 Xylene has been identified as a IARC Group 3 Carcinogen and in the product at <0.1 %.

**Legend:**

IARC: (International Agency for Research on Cancer)  
 Group 3 - Not Classifiable as to Carcinogenicity in Humans  
 OSHA: (Occupational Safety & Health Administration)  
 X - Present

**Reproductive toxicity** The ingredients are not reproductive hazards.  
**Specific target organ systemic** May cause respiratory irritation. May cause drowsiness and dizziness.

**toxicity (single exposure)****Specific target organ systemic toxicity (repeated exposure)**

No information available.

**Chronic toxicity**

Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest.

**Target Organ Effects**

Skin, Eyes, Respiratory System, and Central Nervous System.

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Numerical measures of toxicity - Product Information****Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**The following values are calculated based on chapter 3.1 of the GHS document .****ATEmix (dermal)** 12592 mg/kg**ATEmix (inhalation-dust/mist)** 432.3 mg/l**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	-	-	-	-
ACETONE 67-64-1	-	4.74 - 6.33 mL/L LC50 Oncorhynchus mykiss 96h 6210 - 8120 mg/L LC50 Pimephales promelas 96h static 8300 mg/L LC50 Lepomis macrochirus 96h	-	10294 - 17704 mg/L EC50 Daphnia magna 48h Static 12600 - 12700 mg/L EC50 Daphnia magna 48h
HEPTANE 142-82-5	-	375.0 mg/L LC50 Cichlid fish 96h	-	-
ISOPROPYL ALCOHOL 67-63-0	1000 mg/L EC50 Desmodesmus subspicatus 96h 1000 mg/L EC50 Desmodesmus subspicatus 72h	9640 mg/L LC50 Pimephales promelas 96h flow-through 11130 mg/L LC50 Pimephales promelas 96h static 1400000 µg/L LC50 Lepomis macrochirus 96h	-	13299 mg/L EC50 Daphnia magna 48h

**Persistence and degradability****Bioaccumulation**

Chemical Name	log Pow
PROPANE/ISOBUTANE/N-BUTANE 68476-86-8	2.8
ACETONE 67-64-1	-0.24
HEPTANE 142-82-5	4.66
ISOPROPYL ALCOHOL 67-63-0	0.05

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment**



<b>Waste Disposal Methods</b>	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose of in accordance with federal, state, and local regulations.
<b>Contaminated packaging</b>	Do not re-use empty containers.

#### 14. TRANSPORT INFORMATION

<b>DOT Ground</b>	CONSUMER COMMODITY ORM-D or QUANTITY
<b>IATA</b>	UN1950, AEROSOLS, FLAMMABLE, 2.1, LTD.QTY.
<b>IMDG</b>	UN1950, AEROSOLS, 2.1, LTD. QTY.

#### 15. REGULATORY INFORMATION

##### International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
PROPANE/ISOBUTANE/N-BUTANE	X	X	X	x	X	X	X	X
ACETONE	X	X	X	X	X	X	X	X
HEPTANE	X	X	X	X	X	X	X	X
ISOPROPYL ALCOHOL	X	X	X	X	X	X	X	X
MOLYBDENUM DISULFIDE	X	X	X	X	X	X	X	X

##### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**CHINA** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

##### U.S. Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does contain a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %*	SARA 313 - Threshold Values %
ISOPROPYL ALCOHOL - 67-63-0	67-63-0	1-10	1.0

##### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Star Hazard</b>	Yes

<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	Yes
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does contain substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
ACETONE 67-64-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**U.S. State Regulations**

**California Proposition 65**

This product does not contain chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm.

No warning is required.

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
ACETONE 67-64-1	X	X	X
HEPTANE 142-82-5	X	X	X
TOLUENE 108-88-3	X	X	X
ISOPROPYL ALCOHOL 67-63-0	X	X	X
MOLYBDENUM DISULFIDE 1317-33-5		X	
1,3,5-TRIMETHYLBENZENE 108-67-8		X	
1,2,4-TRIMETHYL BENZENE 95-63-6	X	X	X
XYLENE 1330-20-7	X	X	X
ETHYL BENZENE 100-41-4	X	X	X
BENZENE 71-43-2	X	X	X

**EPA Pesticide Registration Number** Not applicable

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazard 2	Flammability 4	Instability 0	Physical and chemical hazards -
<b>HMIS</b>	Health Hazard 2*	Flammability 4	Physical Hazard 1	Personal protection B

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*Chronic Hazard Star Legend*

*Chronic Health Star Hazard Repeated or prolonged exposure may cause central nervous system damage*

**Prepared By** Regulatory Affairs  
**Issuing date** 04-Jun-2015  
**Revision Date** 27-Dec-2018

**Revision Note**

(M)SDS sections updated 2 3 9 11 15

**Disclaimer**

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**