

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: FUSOR 019 BARE-METAL BRUSH SEAM SLR, PT A

Product Use/Class: ACRYLIC ADHESIVE, PART 1 OF 2

Reference: Applies to Stock Number 019

LORD Corporation 111 LORD Drive Cary, NC 27511-7923

Telephone: 814 868-0924

Non-Transportation Emergency: 814 763-2345 Chemtrec 24 Hr Transportation Emergency No.

800 424-9300 (Outside Continental U.S. 703 527-3887)

EFFECTIVE DATE: 12/19/2012

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING	<u>Skin</u>
Methyl methacrylate	80-62-6	50.0 %	50 ppm	100 ppm	410 mg/m3 100 ppm	N.E.	N.A.
Methacrylic acid	79-41-4	10.0 %	20 ppm	N.E.	N.E.	N.E.	N.A.
Methacrylate phosphate ester	PROPRIETARY	5.0 %	N.E.	N.E.	N.E.	N.E.	N.A.
N,N-Dimethylaniline	121-69-7	5.0 %	5 ppm	10 ppm	25 mg/m3 5 ppm	N.E.	S
Amine curative	PROPRIETARY	5.0 %	N.E.	N.E.	N.E.	N.E.	N.A.
Calcium molybdate	7789-82-4	1.0 %	3 mg/m3	N.E.	5 mg/m3	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

3. HAZARDS IDENTIFICATION

*** **EMERGENCY OVERVIEW** ***: Off-white Liquid, with Sweet odor. Flammable liquid. Harmful if absorbed through skin. May cause allergic skin reaction. Causes respiratory tract irritation. Causes skin and eye irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Causes skin irritation. May be absorbed through the skin in harmful amounts. May cause skin sensitization.

EFFECTS OF OVEREXPOSURE - INHALATION: May cause headache and nausea. Causes respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Prolonged or repeated contact may result in dermatitis. Contains N,N-Dimethylaniline. Excessive overexposure by skin absorption or ingestion may result in anoxia due to the formation of methemoglobin. This condition impairs the blood's ability to transport oxygen. ACGIH considers molybdenum to be an A3 carcinogen (confirmed animal carcinogen with unknown relevance in humans).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Skin Contact, Skin Absorption, Ingestion, Inhalation

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4. FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

FIRST AID - INHALATION: Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 65 °F, 18 °C
Setaflash Closed Cup

LOWER EXPLOSIVE LIMIT (%): 1 %(V)
UPPER EXPLOSIVE LIMIT (%): 8.8 %(V)

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid and vapor. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, open flame, and other sources of ignition. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep non-essential personnel a safe distance away from the spill area. Remove all sources of ignition (flame, hot surfaces, and electrical, static or frictional sparks). Avoid breathing vapors. Use self-contained breathing equipment. Notify appropriate authorities if necessary. Avoid contact. Using non-sparking tools, scoop the spilled material into a container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill).

7. HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Ground and bond containers when transferring material. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Because empty containers may retain product residue and flammable vapors, keep away from heat, sparks and flame; do not cut, puncture or weld on or near the empty container. Do not smoke where this product is used or stored.

STORAGE: Refer to OSHA 29CFR Part 1910.106 "Flammable and Combustible Liquids" for specific storage requirements. Store only in well-ventilated areas. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor/air mixtures from accumulating.

RESPIRATORY PROTECTION: Contains a small amount of dimethylaniline (DMA)which has poor odor-warning properties. If the exposure limit for DMA is exceeded, an air-supplied respirator is recommended. Otherwise, a NIOSH

Product: FUSOR 019 BARE-METAL BRUSH SEAM SLR, PT A, Effective Date: 12/19/2012

approved properly-fitted organic vapor, air purifying respirator is recommended. For emergency situations, confined space use, or other conditions where exposure limits may greatly exceeded, use an approved air-supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact. If contact with the product is prolonged or repeated, Silver Shield or Butyl rubber gloves are recommended.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:SweetBOILING RANGE:N.A.APPEARANCE:Off-whiteVAPOR PRESSURE:N.D.

PHYSICAL STATE: Liquid VAPOR DENSITY: Heavier than Air ODOR THRESHOLD: N.D. EVAPORATION RATE: Faster than n-butyl-

acetate.

SOLUBILITY IN H2O: Insoluble DENSITY, LB/GL: 8.85 lb/gal pH: N.A. VOLATILE BY WEIGHT: 0.00 % FREEZE POINT: N.D. VOLATILE BY VOLUME: 0.00 %

COEFFICIENT OF WATER/OIL N.D.

DISTRIBUTION:

(See section 16 for abbreviation legend)

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Storage above 100 degrees F and below 32 degrees F. Exposure to sunlight, ultraviolet light irradiation. Avoid dropping or puncture of containers.

INCOMPATIBILITY: Inorganic acids, organic acids, caustics, oxidizing agents, amines, peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of nitrogen

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

PRODUCT LD50 (ORAL) No Data (DERMAL) No Data

PRODUCT LC50 No Data

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information

13. DISPOSAL CONSIDERATIONS

Product: FUSOR 019 BARE-METAL BRUSH SEAM SLR, PT A, Effective Date: 12/19/2012

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Adhesives

DOT HAZARD CLASS: 3
SECONDARY HAZARD: None
DOT UN/NA NUMBER: 1133
PACKING GROUP: II
EMERGENCY RESPONSE GUIDE 128

NUMBER:

The listed transportation classification applies to US DOT non-bulk road shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard.)

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372.:

Chemical Name

Method graphs and the Second second

 Methyl methacrylate
 80-62-6
 50.0 %

 N,N-Dimethylaniline
 121-69-7
 5.0 %

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS

The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

NONE

16. OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* FLAMMABILITY: 3 PHYSICAL HAZARD: 1

VOLATILE ORGANIC COMPOUNDS

Calculated: 0 lb/gal, 0 g/l

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DISCLAIMER

^{* -} Indicates a chronic hazard; see Section 3

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: FUSOR 019 BARE-METAL BRUSHED SEAM SLR, PT B

Product Use/Class: ACRYLIC ADHESIVE

LORD CORPORATION 111 LORD DRIVE CARY, NC 27511-7923 TRANSPORTATION EMERGENCY: CHEMTREC 24 HR EMERGENCY NO. 800 424-9300

(Outside Continental U.S. 703 527-3887)

NON-TRANSPORTATION EMERGENCY: 814 763-2345

INFORMATION TELEPHONE: 814 868-0924

EFFECTIVE DATE: 02/10/2011

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING	Skin
Epoxy resin	PROPRIETARY	55.0 %	N.E.	N.E.	N.E.	N.E.	N.A.
Isodecyl benzoate	131298-44-7	5.0 %	N.E.	N.E.	N.E.	N.E.	N.A.
Benzoyl peroxide	94-36-0	5.0 %	5 mg/m3	N.E.	5 mg/m3	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

3. HAZARDS IDENTIFICATION

*** **EMERGENCY OVERVIEW** ***: Off-white Viscous liquid, with Odorless odor. May cause skin and eye irritation. May cause allergic skin reaction. May cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause allergic skin reaction. May cause skin irritation. May cause skin sensitization.

EFFECTS OF OVEREXPOSURE - INHALATION: May cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Prolonged or repeated contact may result in dermatitis.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Skin Contact, Inhalation, Ingestion

4. FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

Product: FUSOR 019 BARE-METAL BRUSHED SEAM SLR, PT B, Effective Date: 02/10/2011

FIRST AID - INHALATION: Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Give victim one or two glasses of water or milk. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 201 °F, 93 °C

Setaflash Closed Cup

LOWER EXPLOSIVE LIMIT (%): Not Applicable

UPPER EXPLOSIVE LIMIT (%): Not Applicable

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors. Notify appropriate authorities if necessary. Avoid contact. Use appropriate respiratory protection for large spills or spills in confined area. Keep non-essential personnel away from spill area. Scoop spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill).

7. HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Empty containers should not be re-used. Use with adequate ventilation.

STORAGE: Store only in well-ventilated areas. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

RESPIRATORY PROTECTION: Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

Product: FUSOR 019 BARE-METAL BRUSHED SEAM SLR, PT B, Effective Date:

02/10/2011

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Odorless **BOILING RANGE:** 100 °C **APPEARANCE:** Off-white **VAPOR PRESSURE:** N.D.

PHYSICAL STATE: Viscous liquid VAPOR DENSITY: Heavier than Air **ODOR THRESHOLD: EVAPORATION RATE:** Not Applicable N.D. **SOLUBILITY IN H2O:** Insoluble **DENSITY, LB/GL:** 12.81 lb/gal N.A. **VOLATILE BY WEIGHT:** 0.92 % pH: FREEZE POINT: N.D. **VOLATILE BY VOLUME:** 1.42 %

COEFFICIENT OF WATER/OIL N.D.

DISTRIBUTION:

(See section 16 for abbreviation legend)

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY: Amines, acids, water, hydroxyl, or active hydrogen compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, aldehydes.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

PRODUCT LD50 (ORAL) No Data

(DERMAL) No Data

PRODUCT LC50 No Data

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

14. TRANSPORT INFORMATION

The listed transportation classification applies to US DOT non-bulk road shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard.)

Product: FUSOR 019 BARE-METAL BRUSHED SEAM SLR, PT B, Effective Date:

02/10/2011

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372.

<u>Chemical Name</u> <u>CAS Number</u> <u>Weight % Less Than</u>

Benzoyl peroxide 94-36-0 5.0 %

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS

The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

NONE

16. OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 1 PHYSICAL HAZARD: 1

* - Indicates a chronic hazard; see Section 3

VOLATILE ORGANIC COMPOUNDS

Calculated: 0 lb/gal, 0 g/l

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DISCLAIMER

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.