

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product name: **LORD 7800A**  
Product Use/Class: **Urethane Adhesive, Part 1 of 2**

LORD Corporation  
111 LORD Drive  
Cary, NC 27511-7923 USA

Telephone: 814 868-3180  
Non-Transportation Emergency: 814 763-2345  
Chemtrec 24 Hr Transportation Emergency No.  
800 424-9300 (Outside Continental U.S. 703 527-3887)

**EFFECTIVE DATE:** 05/03/2018

**2. HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Acute toxicity Inhalation - Dust and Mist Category 4 - 32.3% of the mixture consists of ingredient(s) of unknown toxicity.  
Acute toxicity Inhalation - Vapours Category 4 - 32.3% of the mixture consists of ingredient(s) of unknown toxicity.  
Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2A  
Skin sensitization Category 1A  
Respiratory sensitization Category 1  
Specific target organ systemic toxicity (single exposure) Category 3  
Specific target organ systemic toxicity (single exposure) Category 1 Respiratory system  
Specific target organ systemic toxicity (repeated exposure) Category 1 Respiratory system

**GHS LABEL ELEMENTS:****Symbol(s)****Signal Word**

DANGER

**Hazard Statements**

Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Causes damage to organs.(Respiratory system)  
Causes damage to organs through prolonged or repeated exposure.(Respiratory system)

**Precautionary Statements****Prevention**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/eye protection/face protection.  
Use personal protective equipment as required.  
In case of inadequate ventilation wear respiratory protection.  
Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.

**Response**

Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed: Call a POISON CENTER or doctor/physician.  
Specific treatment (see supplemental first aid instructions on this label).  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Take off contaminated clothing and wash before reuse.

**Storage**

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

**Disposal:**

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

**Other Hazards:**

**This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).**

**Acute:** Possible irritation of the respiratory system can occur causing a variety of symptoms such as dryness of the throat, tightness of the chest, and shortness of breath. Animal tests have indicated that respiratory sensitization can result from skin contact with certain isocyanates. May cause lung damage. May be harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

**Chronic:** IARC has designated carbon black as Group 2B - inadequate evidence for carcinogenicity in humans, but sufficient evidence in experimental animals. In 2006 IARC reaffirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. Further, epidemiological evidence from well-conducted investigations has shown no causative link between carbon black exposure and the risk of malignant or non-malignant respiratory disease in humans.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Range
4,4'-Diphenylmethane diisocyanate	101-68-8	15 - 20 %
Aromatic polyisocyanate	PROPRIETARY	10 - 15 %
Diphenylmethane diisocyanate	26447-40-5	5 - 10 %
Carbon black	1333-86-4	0.1 - 0.9 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

**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**

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

**UNSUITABLE EXTINGUISHING MEDIA:** Not determined for this product.

**SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL:** 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 PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:** Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

**6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:** Avoid breathing vapors. Use self-contained breathing equipment. Avoid contact.

**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:** Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. 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. Avoid breathing of vapor or spray mists. 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.

**INCOMPATIBILITY:** Strong oxidizers, acids, bases, water.; This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids. The reaction with water is accelerated at temperatures higher than 122F (50C) and in the presence of alkalis, tertiary amines, and metal compounds. Some reactions can be violent.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**COMPONENT EXPOSURE LIMIT**

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>Skin</u>
4,4'-Diphenylmethane diisocyanate	0.005 ppm	N.E.	N.E.	0.2 mg/m3 0.02 ppm	N.A.
Aromatic polyisocyanate	N.E.	N.E.	N.E.	N.E.	N.A.
Diphenylmethane diisocyanate	N.E.	N.E.	N.E.	0.2 mg/m3 0.02 ppm	N.A.
Carbon black	3 mg/m3	N.E.	3.5 mg/m3	N.E.	N.A.

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

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

**PERSONAL PROTECTION MEASURES/EQUIPMENT:**

**RESPIRATORY PROTECTION:** This product contains isocyanates which have poor odor warning properties. If occupational exposure limits are exceeded, a NIOSH approved supplied-air respirator is required. For respirator use observe OSHA regulations (29CFR 1910.134) or use in accordance with applicable laws and regulations of your country or particular locality.

**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. Use long-sleeved shirt to minimize skin exposure.

**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**

Typical values, not to be used for specification purposes.

<p><b>ODOR:</b> Slight</p> <p><b>APPEARANCE:</b> Black</p> <p><b>PHYSICAL STATE:</b> Viscous liquid</p> <p><b>FLASH POINT:</b> ≥ 201 °F, 93 °C</p> <p style="padding-left: 20px;">Setaflash Closed Cup</p> <p><b>BOILING RANGE:</b> N.A.</p> <p><b>AUTOIGNITION TEMPERATURE:</b> N.D.</p> <p><b>DECOMPOSITION TEMPERATURE:</b> N.D.</p> <p><b>ODOR THRESHOLD:</b> N.D.</p> <p><b>SOLUBILITY IN H2O:</b> Insoluble</p> <p style="padding-left: 20px;"><b>pH:</b> N.A.</p> <p><b>FREEZE POINT:</b> N.D.</p> <p><b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b> N.D.</p>	<p><b>VAPOR PRESSURE:</b> N.D.</p> <p><b>VAPOR DENSITY:</b> Heavier than Air</p> <p><b>LOWER EXPLOSIVE LIMIT:</b> Not Applicable</p> <p><b>UPPER EXPLOSIVE LIMIT:</b> Not Applicable</p> <p><b>EVAPORATION RATE:</b> Slower than n-butyl-acetate</p> <p><b>DENSITY:</b> 1.38 g/cm<sup>3</sup> - 11.46 lb/gal</p> <p><b>VISCOSITY, DYNAMIC:</b> ≥20,000 mPa.s @ 25 °C</p> <p><b>VISCOSITY, KINEMATIC:</b> ≥14,493 mm<sup>2</sup>/s @ 25 °C</p> <p><b>VOLATILE BY WEIGHT:</b> 0.00 %</p> <p><b>VOLATILE BY VOLUME:</b> 0.00 %</p> <p><b>VOC CALCULATED:</b> 0 lb/gal, 0 g/l</p>
--	--

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

**10. STABILITY AND REACTIVITY**

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

**STABILITY:** Product is stable under normal storage conditions.

**CONDITIONS TO AVOID:** Moisture.; High temperatures.; Unwanted, rapid and potentially hazardous polymerization may occur upon reaction with water at high temperatures or in the presence of alkalies, tertiary amines, and metal compounds.

**INCOMPATIBILITY:** Strong oxidizers, acids, bases, water.; This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalies and acids. The reaction with water is accelerated at temperatures higher than 122F (50C) and in the presence of alkalies, tertiary amines, and metal compounds. Some reactions can be violent.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Monomeric isocyanate, traces of hydrogen cyanide, nitrogen dioxide, Carbon monoxide, carbon dioxide

**11. TOXICOLOGICAL INFORMATION**

**EXPOSURE PATH:** Refer to section 2 of this SDS.

**SYMPTOMS:** Refer to section 2 of this SDS.

**TOXICITY MEASURES:**

<b>Chemical Name</b>	<b>LD50/LC50</b>
4,4'-Diphenylmethane diisocyanate	Oral LD50: Rat 31,600 mg/kg Dermal LD50: rabbit > 5,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 11 mg/l /4 h GHS LC50 (dust and mist): Acute toxicity point estimate 1.5 mg/l /4 h
Aromatic polyisocyanate	Oral LD50: Rat 49 g/kg Dermal LD50: Rabbit > 9,400 mg/kg Dermal LD50: Rabbit > 9.4 g/kg GHS LC50 (vapour): Acute toxicity point estimate 11 mg/l GHS LC50 (dust and mist): Acute toxicity point estimate 1.5 mg/l
Diphenylmethane diisocyanate	Oral LD50: Rat > 10,000 mg/kg Dermal LD50: Rabbit > 10,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 11.0 mg/l GHS LC50 (dust and mist): Acute toxicity point estimate 1.5 mg/l Inhalation LC50: Rat 490 mg/m3 /4 h
Carbon black	Oral LD50: Rat > 15,400 mg/kg Dermal LD50: Rabbit > 3 g/kg GHS LC50 (vapour): Acute toxicity point estimate 55 mg/l

**Germ cell mutagenicity:** No classification proposed

**Carcinogenicity:** No classification proposed

**Reproductive toxicity:** No classification proposed

**12. ECOLOGICAL INFORMATION**

**ECOTOXICITY:**

<b>Chemical Name</b>	<b>Ecotoxicity</b>
4,4'-Diphenylmethane diisocyanate	Fish: Species > 1,000 mg/196 h Invertebrates: Daphnia magna > 1,000 mg/148 h
Aromatic polyisocyanate	N.D.
Diphenylmethane diisocyanate	N.D.
Carbon black	N.D.

**PERSISTENCE AND DEGRADABILITY:** Not determined for this product.

**BIOACCUMULATIVE:** Not determined for this product.

**MOBILITY IN SOIL:** Not determined for this product.

**OTHER ADVERSE EFFECTS:** Not determined for this product.

**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**

This product is NOT REGULATED for non-bulk shipments. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS: AS FOLLOWS:**

**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>
4,4'-Diphenylmethane diisocyanate	101-68-8	20.0 %
Aromatic polyisocyanate	PROPRIETARY	15.0 %
Diphenylmethane diisocyanate	26447-40-5	10.0 %

**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

<b>16. OTHER INFORMATION</b>
------------------------------

Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

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

\* - Indicates a chronic hazard; see Section 2

**Revision:** Section 2, Section 11

**Effective Date:** 05/03/2018

<b>DISCLAIMER</b>
-------------------

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.

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product name: **LORD 7800C**  
Product Use/Class: **Urethane Adhesive, Part 2 of 2**

LORD Corporation  
111 LORD Drive  
Cary, NC 27511-7923 USA

Telephone: 814 868-3180  
Non-Transportation Emergency: 814 763-2345  
Chemtrec 24 Hr Transportation Emergency No.  
800 424-9300 (Outside Continental U.S. 703 527-3887)

**EFFECTIVE DATE:** 05/03/2018

**2. HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Acute toxicity Inhalation - Dust and Mist Category 4  
Skin sensitization Category 1  
Respiratory sensitization Category 1  
Reproductive toxicity Category 2  
Specific target organ systemic toxicity (repeated exposure) Category 1 Respiratory system

**GHS LABEL ELEMENTS:****Symbol(s)****Signal Word**

DANGER

**Hazard Statements**

Harmful if inhaled.  
May cause an allergic skin reaction.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure.(Respiratory system)

**Precautionary Statements****Prevention**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves.  
Use personal protective equipment as required.  
In case of inadequate ventilation wear respiratory protection.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.

**Response**

Call a POISON CENTER or doctor/physician if you feel unwell.  
Specific treatment (see supplemental first aid instructions on this label).

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.

**Storage**

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

**Other Hazards:**

**This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).**

**Acute:** Vapors generated at high temperatures may be irritating. Liquid and mists may cause irritation with redness of the conjunctiva. May cause skin and eye irritation. May be harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

**Chronic:** Prolonged or repeated contact may result in dermatitis.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Range
Piperazine	110-85-0	0.9 - 1 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

**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**

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

**UNSUITABLE EXTINGUISHING MEDIA:** Not determined for this product.

**SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL:** 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 PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:** Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

**6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:** Avoid breathing vapors. Use self-contained breathing equipment. Avoid contact.



**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:** Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. 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. Avoid breathing of vapor or spray mists. 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.

**INCOMPATIBILITY:** Strong oxidizers, acids, bases, water.; This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalies and acids. The reaction with water is accelerated at temperatures higher than 122F (50C) and in the presence of alkalies, tertiary amines, and metal compounds. Some reactions can be violent.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**COMPONENT EXPOSURE LIMIT**

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>Skin</u>
Piperazine	N.E.	N.E.	N.E.	N.E.	N.A.

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

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

**PERSONAL PROTECTION MEASURES/EQUIPMENT:**

**RESPIRATORY PROTECTION:** Use a NIOSH approved chemical/mechanical filter respirator designed to remove a combination of particulates and organic vapor 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. For respirator use observe OSHA regulations (29CFR 1910.134) or use in accordance with applicable laws and regulations of your country or particular locality.

**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. Use long-sleeved shirt to minimize skin exposure.

**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**

Typical values, not to be used for specification purposes.

<b>ODOR:</b>	Slight	<b>VAPOR PRESSURE:</b>	N.D.
<b>APPEARANCE:</b>	Tan	<b>VAPOR DENSITY:</b>	Heavier than Air
<b>PHYSICAL STATE:</b>	Viscous liquid	<b>LOWER EXPLOSIVE LIMIT:</b>	Not Applicable
<b>FLASH POINT:</b>	≥ 201 °F, 93 °C	<b>UPPER EXPLOSIVE LIMIT:</b>	Not Applicable
	Setaflash Closed Cup		
<b>BOILING RANGE:</b>	N.A.	<b>EVAPORATION RATE:</b>	Slower than n-butyl-acetate
<b>AUTOIGNITION TEMPERATURE:</b>	N.D.	<b>DENSITY:</b>	1.26 g/cm <sup>3</sup> - 10.45 lb/gal

<b>DECOMPOSITION TEMPERATURE:</b>	N.D.	<b>VISCOSITY, DYNAMIC:</b>	≥40,000 mPa.s @ 25 °C
<b>ODOR THRESHOLD:</b>	N.D.	<b>VISCOSITY, KINEMATIC:</b>	≥31,746 mm <sup>2</sup> /s @ 25 °C
<b>SOLUBILITY IN H<sub>2</sub>O:</b>	Insoluble	<b>VOLATILE BY WEIGHT:</b>	0.00 %
<b>pH:</b>	N.A.	<b>VOLATILE BY VOLUME:</b>	0.00 %
<b>FREEZE POINT:</b>	N.D.	<b>VOC CALCULATED:</b>	0 lb/gal, 0 g/l
<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	N.D.		

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

### 10. STABILITY AND REACTIVITY

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

**STABILITY:** Product is stable under normal storage conditions.

**CONDITIONS TO AVOID:** Moisture.; High temperatures.; Unwanted, rapid and potentially hazardous polymerization may occur upon reaction with water at high temperatures or in the presence of alkalies, tertiary amines, and metal compounds.

**INCOMPATIBILITY:** Strong oxidizers, acids, bases, water.; This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalies and acids. The reaction with water is accelerated at temperatures higher than 122F (50C) and in the presence of alkalies, tertiary amines, and metal compounds. Some reactions can be violent.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Monomeric isocyanate, traces of hydrogen cyanide, nitrogen dioxide, Carbon monoxide, carbon dioxide

### 11. TOXICOLOGICAL INFORMATION

**EXPOSURE PATH:** Refer to section 2 of this SDS.

**SYMPTOMS:** Refer to section 2 of this SDS.

**TOXICITY MEASURES:**

Chemical Name	LD50/LC50
Piperazine	Oral LD50: Rat 600 mg/kg Dermal LD50: Rabbit 1,590 mg/kg

**Germ cell mutagenicity:** No classification proposed

**Carcinogenicity:** No classification proposed

**Reproductive toxicity:** Category 2 - Suspected of damaging fertility or the unborn child.  
Components contributing to classification: Piperazine. Amine catalyst.

### 12. ECOLOGICAL INFORMATION

**ECOTOXICITY:**

Chemical Name	Ecotoxicity
Piperazine	Fish: Lepomis macrochirus > 10,000 mg/l/96 h Static

**PERSISTENCE AND DEGRADABILITY:** Not determined for this product.

**BIOACCUMULATIVE:** Not determined for this product.

**MOBILITY IN SOIL:** Not determined for this product.

**OTHER ADVERSE EFFECTS:** Not determined for this product.

**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**

This product is NOT REGULATED for non-bulk shipments. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS: AS FOLLOWS:**

**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.:

None

**TOXIC SUBSTANCES CONTROL ACT:**

**INVENTORY STATUS**

One or more chemical substances in this product are not yet on the TSCA section 8 inventory. Consequently, this product is presently available only in quantities necessary for research and development purposes as defined by TSCA. The potential health and environmental risks associated with these new chemical substances are not fully characterized. Thus the use of this product is restricted to those technically qualified individuals having the authority to manage the use, storage, or handling of the product so as to minimize any risks.

**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**

Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

**HMIS RATINGS - HEALTH: 2\* FLAMMABILITY: 1 PHYSICAL HAZARD: 0**

\* - Indicates a chronic hazard; see Section 2

**Revision:** Section 2

**Effective Date:** 05/03/2018

**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.