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MSDS No: 76 Date: 10/

SUPPLIER ADDRESS:

6141 Easton Road, Bldg. 1 PO Box 310

EMERGENCY PHONE NUMBER:

(215)766

Plumsteadville, PA 18949-

0310

1. CHEMICAL PRODUCT

PRODUCT AMMONIA NAME:

SYNONYMS: Anhydrous Ammonia

2. COMPOSITION, INFORMATION ON INGREDIENTS

Exposure Limits (PPM)

Ingredient Name **AMMONIA**

Formula NH3

CAS# 7664-41-

Concentration 99+%

ACGIH TLV 25

OSHA PEL

50

MAC 25

3

S/A = SIMPLE ASPHYXIANT

3. HAZARD INDENTIFICATION

Note: NE = NONE ESTABLISHED

* * * EMERGENCY OVERVIEW * * *

Corrosive liquid and gas under pressure. Can cause eye, skin, and respiratory tract burns.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation, Skin, Eye

ACUTE EFFECTS: Irritating and corrosive to skin, eyes, respiratory tract, and mucous membrane. Symptoms include dyspnea, coughing, chest pains, and pulmonary edema. exposure levels can cause burning and blistering of skin, permanent corneal damage ar be fatal. Contact with liquid can cause severe burns of skin and eyes.

CHRONIC EFFECTS: Skin and respiratory related disease.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPORSURE: None

CARCINOGENICITY (US ONLY):

NTP - No IARC MONOGRAPHS - No OSHA REGULATED - No

4. FIRST AID MEASURES

INHALATION: Immediately remove victim to fresh air.If breathing has stopped, give artif respiration.If breathing is difficult, give oxygen.

EYE CONTACT: Immediately flush with copious amounts of water for at least 15 minute

SKIN CONTACT: Immediately flush with copious amounts of water for at least 15 minut removing contaminated clothing.

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

5. FIRE FIGHTING MEASURES

FLASH POINT: N/Av

AUTOIGNITION TEMPERATURE: 850 deg.C

FLAMMABLE LIMITS:

LOWER: 15% UPPER: 25%

EXTINGUISHING MEDIA: Water spray or fog.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained bre apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray.

HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes of nitrogen exides.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinder rupture may occur under fire conditions. Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Douse with water to retard atmospheric dispersion, ventila area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: None

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect f falling. Use suitable hand truck to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in well ventilated areas. Keep valve protection cap on cylinders when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentration below exposure limits.

EYE / FACE PROTECTION: Safety glasses

SKIN PROTECTION: None

RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing appar

OTHER PROTECTIVE EQUIPMENT: Safety shoes when handling cylinders.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Pungent

PHYSICAL PRESSURE: Gas

VAPOR PRESSURE: @25.7 deg.C: 10 atm

VAPOR DENSITY (AIR=1): 0.597

BOILING POINT (C): -33.4

SOLUBILITY IN WATER: v/v 20 deg.C: 42.8

SPECIFIC GRAVITY (H2O=1): Gas

EVAPORATION RATE: Gas

ODOR THRESHOLD: 0.6-0.7 ppm

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat sourc

MATERIALS TO AVOID: Copper, zinc, mercury and their alloys, and strong mineral acid

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: None

11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC50): 7338 ppm, rat 1 hour.

LETHAL DOSE 50 (LD50): N/Ap

TERATOGENICITY: N/Ap

REPRODUCTIVE EFFECTS: N/Ap

MUTAGENICITY: N/Ap

12. ECOLOGICAL INFORMATION

No adverse ecological effects are expected.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Limited amount of gas may be released to atmosphere appropriate conditions. Return cylinders to supplier with any valve outlet plugs or caps so and valve protection cap in place.

14. TRANSPORT INFORMATION

CONCENTRATION: 99+%

DOT DESCRIPTION (US ONLY):

PROPER SHIPPING NAME: Ammonia, anhydrous

HAZARD CLASS: 2.2 (nonflammable)
INDENTIFICATION NUMBER: UN1005
REPORTABLE QUANTITIES: 100 lbs.
LABELING: NONFLAMMABLE GAS

ADR / RID (EU Only): Class 2, 2TC

SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position well ventilated truck.

15. REGULATORY INFORMATION

OSHA: Process Safety Management: Material is not listed in appendix A of 29 CFR 191 as highly hazardous chemical.

TSCA: Material is listed in TSCA inventory.

SARA: The threshold planning quantity for this material is500 lbs.

EU NUMBER: 231-163-5

NUMBER IN ANNEX 1 OF DIR 67/548: Material is listed in annex 1.

EU CLASSIFICATION: N/Av

R: 10, 23

S: 7/9, 16, 38

16. OTHER INFORMATION

OTHER PRECAUTIONS: Protect containers from physical damage. Do not deface cylin labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment compressed gas cylinder which has not been filled by the owner or with his written cons violation of federal law (49 CFR).

ABBREVIATIONS: N/Ap - Not Applicable N/Av - Not Available SA - Simple Asphyxiant I None Established

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