



SAFETY DATA SHEETS

M-21952/E-3

DATE: 21May2015

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

TROY, MI 48083

EMERGENCY PHONE NUMBER: (248) 589-2950

1. CHEMICAL PRODUCT

PRODUCT NAME: ETHYLENE IN NITROGEN

SYNONYMS: None

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)			
				ACGIH TLV	OSHA PEL	MAC	Other STEL
ETHYLENE	C2H4	74-85-1	6.001-50 PCT	200	NE	NE	NE
NITROGEN	N2	7727-37-9	BALANCE	S/A	S/A	S/A	S/A

Note: NE = NONE ESTABLISHED
S/A = SIMPLE ASPHYXIAN

3. HAZARD IDENTIFICATION

*** EMERGENCY OVERVIEW ***
Flammable high pressure gas.
Can cause rapid suffocation.
Can form explosive mixtures in air.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation

ACUTE EFFECTS: Mixture acts as a simple asphyxiant by displacing air necessary for life. Inhalation of high concentrations may result in moderate anesthesia, diminished mental alertness, loss of consciousness, and central nervous (CNS) depression. Symptoms include rapid respiration, muscular incoordination, fatigue, dizziness, nausea, vomiting, unconsciousness, and death.

CHRONIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: 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 is difficult, give oxygen. If breathing has stopped, give artificial respiration.

EYE CONTACT: None

SKIN CONTACT: None

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

5. FIRE FIGHTING MEASURES

FLASH POINT: -136.11 deg. C

AUTOIGNITION TEMPERATURE: 543 deg. C

FLAMMABLE LIMITS: Ethylene

LOWER: 3%

UPPER: 34%

EXTINGUISHING MEDIA: Carbon dioxide, foam, or dry chemical.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing.

Keep fire exposed cylinders cool with water spray. Do not fully extinguish burning gas until flow has been stopped.

HAZARDOUS COMBUSTION PRODUCTS: Toxic carbon monoxide may be given off during combustion.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Cylinder rupture may occur under fire conditions. May form explosive mixture in air. Vapors may travel a considerable distance to the source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area.

SPECIALIZED EQUIPMENT: None

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from 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 concentrations below flammable limits and to avoid asphyxiation.

PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses
SKIN PROTECTION: None
RESPIRATORY PROTECTION: Use a self-contained breathing apparatus in case of emergency or non-routine use.
OTHER PROTECTIVE EQUIPMENT: Safety shoes when handling cylinders.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless
ODOR: Sweet odor.
PHYSICAL STATE: Gas
VAPOR PRESSURE: N/Av
VAPOR DENSITY (AIR=1): .969
BOILING POINT (C): Gas
SOLUBILITY IN WATER: cm³/100cm³ H₂O
1.485
SPECIFIC GRAVITY (H₂O=1): Gas
EVAPORATION RATE: Gas
ODOR THRESHOLD: N/Av

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

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

MATERIALS TO AVOID: Nitrogen reacts with Li, Nd, and Ti at high temperatures. Strong oxidizers. Reacts violently with AlCl₃, O₃, CCl₄, benzoyl peroxide, bromotrichloromethane, and nitromethane with AlCl₃.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Toxic carbon monoxide.

11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC₅₀): NONE ESTABLISHED
LETHAL DOSE 50 (LD₅₀): N/Av
TERATOGENICITY: N/Av
REPRODUCTIVE EFFECTS: N/Av
MUTAGENICITY: N/Av

12. ECOLOGICAL INFORMATION

No adverse ecological effects are expected.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are the refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.

14. TRANSPORT INFORMATION

CONCENTRATION: 6.001-10%
DOT DESCRIPTION (US ONLY):
PROPER SHIPPING NAME: Compressed gases, flammable, n.o.s.
HAZARD CLASS: 2.1 (flammable)
IDENTIFICATION NUMBER: UN1954
REPORTABLE QUANTITIES: None
LABELING: FLAMMABLE GAS
ADR/RID (EU Only): Class 2, 1F
SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position in a well ventilated truck.

15. REGULATORY INFORMATION

OSHA: Process Safety Management: Materials are not listed in appendix A of 29

CFR 1910.119 as highly hazardous chemicals.
TSCA: Materials are listed in TSCA inventory.
SARA: The threshold planning quantity for this mixture is 10,000 lbs.
EU NUMBER: N/Av
NUMBER IN ANNEX 1 OF DIR 67/548: Minor component is listed in annex 1.
EU CLASSIFICATION: N/Av
R: As
S: 9,16,23,33

16. OTHER INFORMATION

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

ABBREVIATIONS:

N/Av - Not Applicable
N/Av - Not Available
SA - Simple Asphyxiant
NE - None Established

DISCLAIMER: Information included in this document is given to the best of our knowledge, however, no warranty is made that the information is accurate or complete. We do not accept any responsibility for damages by the use of the document.