

AMERIGAS INC, INDUSTRIAL GASES DIV. -- NITROUS OXIDE -- 6505-00-130-1940

===== Product Identification =====

Product ID:NITROUS OXIDE

MSDS Date:11/25/1985

FSC:6505

NIIN:00-130-1940

MSDS Number: BPDYN

=== Responsible Party ===

Company Name:AMERIGAS INC, INDUSTRIAL GASES DIV.

Address:LEIGHTON BLDG

Box:965

City:VALLEY FORGE

State:PA

ZIP:19481

Country:US

Info Phone Num:215-337-8900

Emergency Phone Num:

215-337-8900

CAGE:KO161

=== Contractor Identification ===

Company Name:AMERIGAS INC INDUSTRIAL GASES DIV

Address:LEIGHTON BLDG

Box:965

City:VALLEY FORGE

State:PA

ZIP:19481

Country:US

Phone:215-337-7000

CAGE:2W147

Company Name:AMERIGAS INC, INDUSTRIAL GASES DIV.

Address:LEIGHTON BLDG

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City:VALLEY FORGE

State:PA

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Phone:215-337-8900

CAGE:KO161

===== Composition/Information on Ingredients =====

Ingred Name:NO INGREDIENT FOR THIS FORMULATION\_INGREDIENT



===== Hazards Identification =====

LD50 LC50 Mixture:LC50 (ORAL RAT) IS 1068 MG/M3

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:HIGH CONCENTRATIONS MAY CAUSE DEEP BREATHING, DIZZINESS, NAUSEA AND EVENTUAL UNCONSCIOUSNESS DUE TO INADEQUATE OXYGEN. CAUSES ANESTHETIC EFFECTS; ACTS AS A SLIGHT NARCOTIC. DIRECT PHYSICAL CONTACT WITH LIQUID NITROUS OXIDE WILL

CAUSE FROSTBITE AND COLD BURN DAMAGE.

Explanation of Carcinogenicity:NITROUS OXIDE IS NOT LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN.

Effects of Overexposure:DEEP BREATHING, DIZZINESS, NAUSEA. ACTS AS AN ANESTHETIC WITH MILD NARCOTIC EFFECTS. LAUGHTER EFFECTS SEEM TO OCCUR AFTER INCIPIENT ASPHYXIA ACCOMPANIED BY THE SUDDEN RETURN OF OXGEN AS IN AIR. CONTACT WITH SKIN/EYES WILL CAUSE FROSTBITE.

Medical Cond Aggravated by Exposure:PERSONS WITH A HISTORY OF RESPIRATORY DI

SORDERS MAY BE AT INCREASED RISK FROM EXPOSURE.

===== First Aid Measures =====

First Aid:EYES: REMOVE VICTIM FROM EXPOSURE AND ALLOW LIQUID TO EVAPORATE. CONSULT AN OPHTHALMOLOGIST. SKIN:FLUSH AFFECTED AREAS WITH LUKEWARM WATER. INHALATION:REMOVE VICTIM TO FRESH AIR AND GIVE ARTIFICIAL RESUSCITATION AND SUPPLEMENTAL OXYGEN AS NEEDED. CONSULT A PHYSICIAN IN ALL CASES OF EXPOSURE.

===== Fire Fighting Measures =====

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Flash Point:NONE

Extinguishing Media:USE COPIOUS QUANTITIES OF WATER FOR FIRES WITH NITROUS OXIDE AS THE OXIDIZER. USE EXTINGUISHER BASED ON MATERIALS BURNED

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. EVACUATE AREA. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

Unusual Fire/Explosion Hazard:COMBUSTION OR HEAT OF FIRE MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS AND VAPORS. NITROUS OXIDE MAY



OXIDIZE SOME METALS AT ELEVATED TEMPERATURES.

===== Accidental Release Measures =====

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT, ELIMINATE SOURCES OF IGNITION, AND VENTILATE AREA AS REQUIRED. PIPING AND OTHER EQUIPMENT MAY NEED TO BE PURGED.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN A COOL, DRY, WELL VENTILATED AREA AWAY F

ROM SOURCES OF IGNITION. KEEP CONTAINER CLOSED WHEN NOT IN USE. PROTECT FROM PHYSICAL DAMAGE.

Other Precautions:VALVE PROTECTION CAPS SHOULD BE USED UNLESS CONTAINER IS SECURED. DO NOT DRAG, SLIDE, OR ROLL CYLINDERS. USE A PRESSURE REDUCING REGULATION. DO NOT HEAT CYLINDER TO INCREASE PRODUCT FLOW. DO NOT STORE ABOVE 125F.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF VENTILATION DOES NOT MAINTAIN INHALATION EXPOSURES BELOW P

EL (TLV), USE POSITIVE PRESSURE AIR LINE WITH MASK OR SCBA FOR EMERGENCY USE.

Ventilation:LOCAL VENTILATION MAY BE NEEDED.

Protective Gloves:GLOVES TO PROTECT AGAINST FROSTBITE.

Eye Protection:SAFETY GLASSES/CHEMICAL SPLASH GOGGLES

Other Protective Equipment:SAFETY SHOWER AND EYE BATH. INDUSTRIAL TYPE WORK CLOTHING AND APRON AS REQUIRED INCLUDING SAFETY SHOES.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING OR DRINKING. LAUNDRY CONTAMINATED CLOTHING BEFORE RE USE.

Supplemental Safety and Health

KEEP CYLINDERS SECURED. AVOID USE IN CONFINED SPACES. AVOID BREATHING VAPORS.

===== Physical/Chemical Properties =====

HCC:G4

Boiling Pt:B.P. Text:-127F,-88C

Melt/Freeze Pt:M.P/F.P Text:-131.5F

Vapor Pres:GAS

Vapor Density:1.529

Evaporation Rate & Reference:GAS

Solubility in Water:SLIGHTLY SOLUBLE

Appearance and Odor:COLORLESS GAS; REFRIGERATED LIQUID IS WATER WHITE; SLIGHTLY SWEET ODOR

Percent Volatiles by Volume:100



===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

ALL FLAMMABLE MATERIALS, ALUMINUM, BORON, HYDRIDES, SODIUM, PHOSPHINE.

Stability Condition to Avoid: HIGH HEAT AND OPEN FLAMES; ALL FLAMMABLE MATERIALS.

Hazardous Decomposition Products: AT ELEVATED TEMPERATURES, NITROUS

OXIDE DECOMPOSES INTO NITROGEN AND OXYGEN. N<sub>2</sub>O MAY EXPLODE IN SOME FIRE CASES.

===== Disposal Considerations =====

Waste D

Disposal Methods: DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

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