



Material Safety Data Sheet

General Information    Caution: Transport Vehicle May Contain Ammonia Vapors

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Item Name: **AMMONIUM HYDROXIDE 5% - 29%**

CAS#            **1336-21-6**

Company's Name: Borden & Remington Corp.

Company's Street: 106 Ferry St,

Company's P. O. Box: 2573

Company's City: Fall River

Company's State: MA

Company's Country: US

Company's Zip Code: 02722

Company's Emerg Ph #: 800-424-9300(CHEMTREC)

Company's Info Ph #: 508-675-0096

Distributor/Vendor # 1 Cage: 1CBN1

Date MSDS Prepared: January 2, 1998

Safety Data Review Date: January 2, 1999

Supply Item Manager: JC

MSDS Preparer's Name: MSDS COORDINATOR

Preparer's Company: Borden & Remington

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Ingredients/Identity Information

Proprietary: NO

Ingredient: AMMONIA (SARA III)

Ingredient Sequence Number: 01

Percent: 5%-29%

NIOSH (RTECS) Number: BO0875000

CAS Number: 7664-41-7

OSHA PEL: 25 PPM

ACGIH TLV: 25 PPM/35 STEL; 9293

Other Recommended Limit: N/A

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Proprietary: NO

Ingredient: WATER

Ingredient Sequence Number: 02

Percent: 95%-72%

## ASTRO PRODUCT CODE # 18016

NIOSH (RTECS) Number: ZC0110000

CAS Number: 7732-18-5

OSHA PEL: N/A

ACGIH TLV: N/A

Other Recommended Limit: N/A

### Physical/Chemical Characteristics

Appearance And Odor: CLEAR, COLORLESS SOLUTION, AMMONIA ODOR

Boiling Point: 97.0F,36.1C

Melting Point: -98F,-72C

Vapor Pressure (MM Hg/70 F): 115 to 560

Vapor Density (Air=1): 1.2

Specific Gravity: 0.9

Decomposition Temperature: UNKNOWN

Evaporation Rate And Ref: NOT GIVEN

Solubility In Water: INFINITE

Corrosion Rate (IPY): UNKNOWN

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### Fire and Explosion Hazard Data

Flash Point: NONFLAMMABLE

Lower Explosive Limit: 16 %

Upper Explosive Limit: 27 %

Extinguishing Media: USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING

FIRE.

Special Fire Fighting Proc: USE WATER SPRAY TO BLANKET FIRE, COOL FIRE EXPOSED CONTAINERS AND TO FLUSH NON-IGNITED SPILLS OR VAPORS AWAY FROM

FIRE. WEAR FULL PROTECTIVE GEAR AND SCBA.

Unusual Fire And Expl Hazrds: NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

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### Reactivity Data

Stability: YES

Cond To Avoid (Stability): NONE SPECIFIED

Materials To Avoid: ACIDS, ACROLEIN, DIMETHYL SULFATE, HALOGENS, SILVER

NITRATE, PROPYLENE OXIDE, NITROMETHANE, SILVER OXIDES, OLEUM

Hazardous Decomp Products: EMITS TOXIC FUMES OF AMMONIA AND NITRIC OXIDES

WHEN HEATED TO DECOMPOSITION.

Hazardous Poly Occur: NO

## ASTRO PRODUCT CODE # 18016

Conditions To Avoid (Poly): NONE. WILL NOT OCCUR.

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### Health Hazard Data

LD50-LC50 Mixture: LD50 (RAT) ORAL = 350 MG/KG

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: YES

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: RESPIRATORY TRACT IRRITATION,  
LARYNGITIS,

TRACHEITIS, PULMONARY EDEMA, PNEUMONITIS, BURNS TO DIGESTIVE  
TRACT, STOMACH

PERFERATION/PERITONITIS, SKIN BURNS, EYE IRRITATION, GLAUCOMA,  
CORNEAL

SCARS, IRIS ATROPHY, CATARACTS.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: PRODUCT CONTAINS NO INGREDIENTS  
CURRENTLY

CLASSIFIED AS CARCINOGENIC BY NTP, IARC OR OSHA.

Signs/Symptoms Of Overexp: COUGHING, SORE THROAT, LABORED  
BREATHING, CHEST

PAINS, CORROSION TO ESOPHAGUS/STOMACH, MOUTH PAIN, ABDOMEN  
PAIN, VOMITING,

COLLAPSE, SKIN BURNS WITH VESICATION, SEVERE EYE PAIN/INJURY.

Med Cond Aggravated By Exp: PRESONS WITH PRE-EXISTING EYE DISORDERS  
OR

IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE  
EFFECTS OF

THIS MATERIAL.

Emergency/First Aid Proc: INHALATION: REMOVE TO FRESH AIR. IF NOT  
BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULT,  
GIVE

OXYGEN. CALL A PHYSICIAN. INGESTION: GIVE SEVERAL GLASSES OF  
WATER TO

DRINK. VOMITING MAY OCCUR SPONTANEOUSLY, BUT DO NOT INDUCE.  
GET IMMEDIATE

MEDICAL ATTENTION. SKINN: IMMEDIATELY FLUSH WITH WATER. CALL A  
PHYSICIAN

IMMEDIATELY. EYES: WASH WITH PLENTY OF WATER FOR 15 MINUTES.  
CALL MD.

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## ASTRO PRODUCT CODE # 18016

### Precautions for Safe Handling and Use

Steps If Matl Released/Spill: VENTILATE AND EVACUATE AREA. CLEAN-UP PERSONNEL REQUIRE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION FROM VAPORS. NEUTRALIZE SPILL. DO NOT FLUSH DIRECTLY TO SEWERS. ABSORB WITH DRY INERT MATERIAL AND COLLECT FOR DISPOSAL.

Neutralizing Agent: DILUTE HYDROCHLORIC ACID OR DILUTE SULFURIC ACID.

Waste Disposal Method: PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

*Precautions-Handling/Storing:* KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. SEPARATE FROM INCOMPATIBLES.

Other Precautions: PROTECT FROM DIRECT SUNLIGHT.

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### Control Measures

Respiratory Protection: IF TLV IS EXCEEDED, RESPIRATOR WITH ammonia cartridge CHEMICAL GOGGLES MAY BE WORN UP TO 10 TIMES THE TLV. CONSULT RESPIRATOR SUPPLIER FOR LIMITATIONS. ALTERNATIVELY, A SUPPLIED AIR FULL FACE PIECE RESPIRATOR OR AIRLINED HOOD MAY BE WORN.

Ventilation: SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED.

Protective Gloves: IMPERVIOUS

Eye Protection: CHEMICAL SAFETY GOGGLES/FULL FACE SHIELD

Other Protective Equipment: IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, LAB COAT, APRON OR COVERALLS TO PREVENT SKIN CONTACT.

Work Hygienic Practices: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING DRINKING OR SMOKING.

Suppl. Safety & Health Data: CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

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### Transportation Data

DOT PSN Code: ANB

DOT Proper Shipping Name: AMMONIA SOLUTIONS

DOT Class: 8

DOT ID Number: UN2672

DOT Pack Group: III

## ASTRO PRODUCT CODE # 18016

DOT Label: CORROSIVE  
IMO PSN Code: AWY  
IMO Proper Shipping Name: AMMONIA SOLUTION  
IMO Regulations Page Number: 8111  
IMO UN Number: 2672  
IMO UN Class: 8  
IMO Subsidiary Risk Label: -  
IATA PSN Code: BKD  
IATA UN ID Number: 2672  
IATA Proper Shipping Name: AMMONIA SOLUTION  
IATA UN Class: 8  
IATA Label: CORROSIVE  
AFI PSN Code: BKD  
AFI Prop. Shipping Name: AMMONIA SOLUTIONS  
AFI Class: 8  
AFI ID Number: UN2672  
AFI Pack Group: III  
AFI Label: CORROSIVE  
AFI Basic Pac Ref: 12-5  
N.O.S. Shipping Name: AMMONIUM HYDROXIDE.

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### Disposal Data

Dispose of in accordance with all Federal, State and Local regulation.

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### Label Data

Label Required: YES  
Common Name: AMMONIUM HYDROXIDE  
Signal Word: DANGER!  
Acute Health Hazard-Severe: X  
Contact Hazard-Severe: X  
Fire Hazard-None: X  
Reactivity Hazard-Slight: X  
Special Hazard Precautions: CONTACT CAUSES BURNS TO SKIN AND EYES. IF INHALED, MAY BE HARMFUL. FIRE MAY PRODUCE IRRITATING OR POISONOUS GASES.  
VAPORS, LIQUIDS, MISTS ARE EXTREMELY CORROSIVE TO NOSE, THROAT, MUCOUS MEMBRANES, EYES, SKIN, AND MOUTH. BRONCHITIS, PULMONARY EDEMA, CHEMICAL PNEUMONITIS, PERMANENT EYE INJURY, BLINDNESS, TISSUE DAMAGE AND BURNS AND EVEN DEATH CAN OCCUR. CHRONIC: NO SPECIFIC INFORMATION AVAILABLE.

## ASTRO PRODUCT CODE # 18016

Protect Eye: Y  
Protect Skin: Y  
Protect Respiratory: Y  
Label Name: Borden & Remington  
Label Street: 106 Ferry St.  
Label P.O. Box: 2573  
Label City: Fall River  
Label State: MA  
Label Zip Code: 02722  
Label Country: US  
Label Emergency Number: 408-435-8700

**Ammonia (CAS# 7664-41-7) is an ingredient of this chemical that is present in concentrations above the TRI reporting de minimis concentration level of 1%. Therefore, use of this product is reportable under EPCRA SARA 313.**