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10/12/2016

311535
Carlson and Stewart
Runestone Arena
Attn: Tim Corbit
802 3rd Ave West
Alexandria, MN 56308

MSDS Enclosed For

Product Id	Product Name:	Revision Date:	Order No
2175	Ammonia Anhydrous	May 04, 2015	2197749 2175

Dear Customer:

Enclosed please find a Safety Data Sheet for the product(s) that you have requested or purchased from Hawkins, Inc.

The legislature of the State of Minnesota has enacted the "Employee Right to Know Act of 1983." This Act requires employers using hazardous substances to provide employees with certain training and information about the hazardous substance and its proper use in the workplace. An employer is mandated by this Act to inform all employees so they are fully aware of any hazards that may be involved.

We at Hawkins, Inc. are constantly striving to achieve a high level of safety in the industry and our objective in sending you this information is to help you protect the health and safety of your personnel. If you have any questions, or need further information regarding the Safety Data Sheets you have received feel free to call or write.

HSE Manager
EMail: HSE@HawkinsInc.com



SAFETY DATA SHEET

AMMONIA

SDS #: 4001

Airgas

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Section 1 – Product and Company Identification

GHS product identifier: Ammonia, Anhydrous

Other means of identification: Ammonia, Anhydrous ammonia; NH₃; CAS #: 7664-41-7

Recommended use of the chemical: Agricultural, Industrial

Restrictions: none known

Supplier Details: Airgas Specialty Products, Inc.; 2530 Sever Rd.; Ste 300; Lawrenceville, GA 30043;

Phone: 770-717-2210

Emergency phone number(s): 800-528-4963 (hrs: 7/24) Chemtrec: 800-424-9300 (hrs: 7/24)

Transportation, Canada (CANUTEC): 1-613-996-6666

Section 2. Hazard(s) identification

OSHA/HCS status: Hazardous as per 29CFR1910.1200;

Signal word: Danger

Hazard statement(s)/Classifications:

Flammable Gas – Category 2

NFPA rating: 3-1-0 outdoors; 3-3-0 indoors

Liquefied, compressed gas; PRVs may vent if tank is heated. Tanks may rupture with extreme heat; Cylinders may rupture if heated.

Acute Toxicity (inhalation hazard)-Category 4. May cause eye and respiratory damage, or death in extreme cases. (See section 4 below)

Skin Corrosion/Irritation: Category 1. May cause severe chemical burns.

Aquatic Hazard (Acute) – Category 1; Very toxic to fish and other aquatic life

HAZARD PICTOGRAMS



Store and use only outdoors or in a well ventilated place.

Extremely hazardous as per Appendix A of 40CFR355

Section 3. Composition/ information on ingredients

Chemical name: Ammonia, anhydrous

CAS #: 7664-41-7

Common name & synonyms: Ammonia, Anhydrous ammonia, NH₃

Purity: 97.0% or greater. Water accounts for most of the impurity (Water CAS #: 7732-18-5).

Section 4. First-aid measures

Eye contact: Immediately flush eyes with excess, low-pressure potable water for at least 15 minutes; lift eyelids in process. Remove contacts ASAP. Seek immediate medical aid. **Symptoms:** Redness, severe burning & watering of the eyes. Liquid ammonia may cause frost bite. **Effects:** Possible permanent damage or even blindness.

Inhalation: Remove from exposure. If breathing is difficult or has stopped, provide oxygen or artificial respiration as appropriate. Seek immediate medical aid. **Symptoms:** Severe burning of nose & other parts of respiratory system. **Effects:** Possible permanent damage to respiratory system (including lungs) or even death.

Skin contact: Immediately flush body with excess, low-pressure potable water for at least 15 minutes while removing all contaminated clothing and shoes. Seek immediate medical aid. **Symptoms:** Burning sensation or even blistering. Liquid exposure may cause frostbite. Wash clothing & shoes before reuse. **Effects:** Potential severe blistering.

Ingestion: Do not induce vomiting. Have victim drink large amount of potable water if conscious. Seek immediate medical aid. **Symptoms/Effects:** May burn mouth, throat & stomach.

Summary: Potable water is preferred in all cases; but, any water is likely to be much better than no water.

Vapor pressure: 128.8 psia @ 70 dF... (psig = psia – atmospheric pressure)
Flash point, Burn time, Burn rate, Evaporation rate: all not available

Critical Temp. = 271.1 dF (132.8 dC)
Sp. Vol. (vapor @ 70 dF) = 22.7 cu ft/lb

AIRGAS SPECIALTY PRODUCTS

AMMONIA SDS 4001

Section 10. Stability and reactivity

Reactivity: Liquid reacts violently with water and acids generating vast amount of heat.

Chemical stability: Stable

Possible hazardous reactions: Generally none, except very exothermic with water and acids.
Avoid mixing with oxidizing materials.

Conditions to avoid: Do not cut, weld, braze, drill, grind, or heat ammonia vessels.

Hazardous decomposition products: not expected; though hydrogen or nitrogen oxides possible.

Section 11. Toxicological information

Rat: LC50 inhalation gas 1 hour exposure in 7338 ppm atmosphere

Corrosive: Ammonia is a strong alkali and readily damages all body tissues.

Toxicity: Ammonia is not a cumulative metabolic poison. Not a known or suspected carcinogen.

Chronic effects: None known (including sensitization, mutagenicity, reproductive toxicity, teratogenicity, or specific target organs).

Section 12. Ecological information

Ammonia is very toxic to aquatic life. Do not allow ammonia or water-ammonia mixture to enter streams, lakes, sewers, etc. Ammonia at very low concentrations in water is very toxic to many species of fish.

Acute LC50.....0.53 ppm in fresh water for Daphnia – Daphnia magna in 48 hours.

Acute LC50.....0.3 ppm in fresh water for Hypophthalmichthys nobilis fish (Bighead carp) in 96 hours.

Section 13. Disposal considerations

Comply with all Federal, State, & Local laws and regulations.

Contact your Airgas Specialty Products sales representative for assistance.

Section 14. Transport information

(GROUND ONLY)

	<u>US DOT</u>	<u>Canada TDG</u>	<u>MEXICO</u>
UN Number	UN1005	UN1005	UN1005
Proper shipping name:	Ammonia, Anhydrous	Ammonia, Anhydrous or Anhydrous Ammonia	Ammonia, Anhydrous
Hazard class(es)	2.2	2.3 (8)	2.2
Placards	Gas Cylinder	Skull & CB and Corrosion	Gas cylinder

Do not ship via air or water without consulting shipping/transportation specialist for applicable regulations.

Section 15. Regulatory information

The following and other Federal regulations can be found at: <http://www.ecfr.gov>.

May be subject to OSHA & EPA regulations including, but not limited to, the following: 29CFR1910.111 (storage & handling of ammonia); 29CFR1910.119 (Process Safety Management), 29CFR1910.1200 (Hazard Communication), 40CFR68 (Chemical Accident Prevention, Risk Management Plans- See all subparts); 40CFR117 (Reportable Quantities), 40CFR302 (Reportable quantities & notification), 40CFR355 (Subpart B--Emergency Planning, Subpart C--Emergency Release Notification; 355.6 Release notification relationships), 40CFR370 (Hazardous Chemical Reporting: Community Right-To-Know; See all parts, Tier 2 reports must be filed by March 1 of each year.); 40CFR372 (Chemical Release Reporting; See all parts, especially Subpart E; You may be required to submit a Toxic Release Inventory (TRI) Form R by July 1 of each year). DOT regulations are contained in 49CFR100-199.

Section 16. Other information

Date prepared: May 4, 2015

Last revision: May 4, 2015