Material Safety Data Sheet

NIAGARA® Heavy Spray Starch

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SECTION #1 - IDENTIFICATION

Product: NIAGARA® Heavy Spray Starch

Description: Aqueous solution/suspension of starch in pressurized aerosol can.

SECTION #2 - HAZARDOUS CHEMICAL COMPONENTS

Product Component: Starch (CAS No. 9005-25-8)

OSHA PEL: 15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)

ACGIH TLV: 10 mg/m³

Propellant Component: Isobutane (CAS No. (75-28-5)

OSHA PEL: 1000 parts per million (ppm) TWA, as Liquified Petroleum Gas

ACGIH TLV: 1000 ppm TWA, as Liquified Petroleum Gas

SECTION #3 - PHYSICAL DATA

Product:

Solubility (H₂O): partial

Percent Volatiles: not applicable

Vapor pressure: not applicable

Evaporation Rate: not applicable

Appearance: milky translucent aqueous mixture, floral odor

Propellant: Vapor pressure: 31 PSIG at 70°F/21°C

Percent Volatiles: 100%

Boiling Point: 11°F/-12°C

Vapor Density (air=1): 2.01

Sp. Gravity ($H_2O=1$): 0.56

Solubility (H2O): Sparingly

Appearance: colorless gas, mild petroleum odor

SECTION #4 - FIRE FIGHTING & EXPLOSION DATA

Propellant: Flash Point: -117°F/-83°C

Autoignition Temperature: 860°F/460°C

Lower Explosive Limit: 1.8%

Upper Explosive Limit: 8.4%

Product:

Product (excluding propellant) is non-flammable and non-explosive.

Fire and Explosion Hazards

Although the contents are non-flammable and non-explosive, the propellant is highly flammable. Do not spray product near an open flame or other source of ignition. Do not expose cans to heat or store at temperatures exceeding 120°F/49°C. Do not puncture or incinerate containers.

Extinguishing Media

See Special Fire Fighting Instructions

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SECTION #4 - FIRE FIGHTING & EXPLOSION DATA Continued...

Special Fire Fighting Instructions

If containers are endangered by fire from an external source, cool them with water spray to prevent rupture of cans and ignition of the propellant. A fire proximate to large quantities of flammable pressurized cans represents and explosion hazard, and should be controlled only by those with appropriate qualifications and training.

SECTION #5 - EXPOSURE EFFECTS and FIRST AID

Route of Exposure - Inhalation

Under normal conditions of use, there are no known health hazards from inhalation.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

First Aid - Inhalation

Give the subject access to fresh air. If symptoms do not resolve quickly, seek medical assistance.

Route of Exposure - Skin

The constituents are not skin irritants nor are they known to be allergenic.

First Aid - Skin

If skin irritation occurs in use, seek medical assistance.

Route of Exposure - Eyes

The product is non-irritating. Contact with the eyes may produce temporary discomfort due to the presence of foreign objects.

First Aid - Eyes

Flush affected areas with water for at least 15 minutes. Seek medical assistance if required.

Route of Exposure - Ingestion

The product is non-irritating. Ingestion may cause temporary discomfort in the mouth and upper gastrointestinal tract.

First Aid - Ingestion

Treat symptomatically. If the individual is unconscious or convulsive, seek medical assistance.

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SECTION #5 - EXPOSURE EFFECTS and FIRST AID Continued...

Miscellaneous Toxicological Information

Carcinogenicity: None of the components of this product are classified as potential or demonstrated human carcinogens by IARC, NTP, or OSHA.

SECTION #6 - REACTIVITY & POLYMERIZATION

Conditions to Avoid

This product is stable when maintained at room temperature. If heated to temperatures above 120°F./49°C., cans may rupture.

Incompatible Materials

Cans should not be exposed to mists or acidic, alkaline, or corrosive chemicals in storage or use.

Hazardous Decomposition Products

If the product is consumed by flame, thermal decomposition byproducts may include carbon monoxide, carbon dioxide, and smoke. Hazardous polymerization will not occur.

SECTION #7 - SPILL, LEAK, & DISPOSAL PROCEDURES

Steps to be Taken in The Event of Spills, Leaks, or Release

If cans are ruptured, eliminate sources of ignition. Evacuate all non-essential personnel and ventilate the area. Contents of cans may be flushed away with large quantities of water. If covered by product, floors may be slippery.

Waste Disposal Methods

Do not puncture or incinerate containers. Dispose of unused containers of product in accordance with applicable Federal, State/Provincial, and local regulations.

SARA Title III Notifications and Information

SARA Title III - Hazard Class(es): None applicable

SARA Title III - Section 313 Supplier Notification: This product contains no chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

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SECTION #8 - SPECIAL PROTECTIVE MEASURES

Ventilation

Mechanical ventilation is not required under normal conditions of use.

Eye Protection

Eye protection is not required under normal conditions of use. If eye contact is likely, wear eye protection.

Skin Protection

Skin protection is not normally required. If gloves are desired for protection against irritation, water-impervious types (e.g. rubber, PVA, or nitrile) are recommended.

Respiratory Protection

Respiratory protection is not normally required. If this product is used in a manner that generates airborne mist not controlled by ventilation, wear a NIOSH-approved respirator with filters for protection against dusts (type N95 or better). For guidance on the selection and use of respiratory protection, consult American National Standard Z88.2-1992 (ANSI, New York, NY 10036 USA).

SECTION #9 - SPECIAL PRECAUTIONS - STORAGE & HANDLING

Storage & Handling Conditions

Store cans in a dry place at temperatures below 120°F./49°C. and way from flames and incompatible materials (see Section #6).

NFPA 30B Storage: Level 1

SECTION #10 - OTHER REGULATORY INFORMATION

Controlled Products Regulations (Canada) Information

Component (CAS No.) LD50 (Route/Species) LC50 (Route/Species)

Starch (9005-25-8) No data

No data available

No data available

Isobutane (75-28-5)

No data available

57pph/15 min (inhalation/rat)

WHMIS Hazard Classification(s): none applicable

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SECTION #11 - DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following: CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching. EXPOSURE LIMITS IN AIR: ACGIH – American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. TLV – Threshold Limit Value – an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit (STEL), and the instantaneous Ceiling Limit. Skin adsorption effects must also be considered.

OSHA – U. S. Occupational Safety and Health Administration. PEL – Permissible Exposure Limit – this exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). FLAMMABILITY LIMITS IN AIR: Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). LEL – the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL – the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

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