

MATERIAL SAFETY DATA SHEET

Hercules Incorporated
Aqualon Division
Hercules Plaza
1313 North Market Street
Wilmington, DE 19894
(302) 594-5000 24 HOURS

1 PRODUCT IDENTIFICATION

PRODUCT NAME	NATROSOL® HYDROXYETHYLCELLULOSE
CHEMICAL/COMMON NAME	hydroxyethylcellulose
CAS NUMBER	9004-62-0

2 COMPOSITION / INFORMATION ON INGREDIENTS

This product is considered hazardous according to the OSHA Hazard Communication Standard 29CFR1910.1200 due to flammable dust potential.

3 HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****WARNING!**

Static charges generated by emptying package in or near flammable vapors may cause flash fire.
May form flammable dust-air mixtures.
May cause skin irritation by mechanical abrasion.
May cause mild to moderate eye irritation.
Inhalation of dust may cause respiratory tract irritation.
Surfaces subject to spills may become slippery.

Refer to Section 5 for Hazardous Combustion Products, and Section 10 for Hazardous Decomposition/Hazardous Polymerization Products.

4 FIRST AID MEASURES**SKIN**

Wash thoroughly with soap and water. Get medical attention if irritation develops or persists.

EYE

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.

INHALATION

Remove to fresh air. Get medical attention if nasal, throat or lung irritation develops.

INGESTION

Not an ingestion hazard under anticipated conditions of use. For accidental ingestion: If conscious, drink one to two glasses of water (8-16 oz.). Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

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5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Water spray, dry chemical, foam, carbon dioxide or clean extinguishing agents may be used on fires involving this product.

FIRE FIGHTING PROCEDURES

Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product.

CONDITIONS TO AVOID

None known.

HAZARDOUS COMBUSTION PRODUCTS

If heated to combustion, the following substances may be formed: carbon monoxide, carbon dioxide, aldehydes, carboxylic acids and smoke

6 ACCIDENTAL RELEASE MEASURES

Ventilate area. Avoid dust formation. Clean up spills immediately. If product is not contaminated, scoop into clean containers for use. If product is contaminated, scoop into containers, and dispose appropriately. In case of accidental spill or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices.

7 HANDLING & STORAGE

GENERAL MEASURES

Ground all equipment.

Blanket vessel with inert gas when emptying bags where flammable vapors may be present.

Ground operator and pour material slowly into conductive, grounded chute.

For large bags (1000 lbs or greater) a ground cable MUST be attached to the bag ground connection.

Store in a cool, dry place: approximately 20° C (68° F).

Keep container closed when not in use.

MATERIALS OR CONDITIONS TO AVOID

Avoid conditions that generate dust; product may form flammable dust-air mixtures.

Avoid emptying package in or near flammable vapors; static charges may cause flash fire.

Keep away from heat, flame, sparks and other ignition sources.

Do not store in direct sunlight or expose to UV radiation.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

WORK PRACTICES & ENGINEERING CONTROLS

Eyewash fountains and safety showers should be easily accessible.

Provide adequate ventilation.

If upper respiratory tract irritation occurs, use an approved dust/mist respirator to minimize exposure.

Keep floors clean and dry. Clean up spills immediately.

GENERAL HYGIENIC PRACTICES

Avoid contact with eyes, skin, and clothing.

Avoid breathing dust.

Handle in areas with adequate ventilation.

Avoid contamination of food, beverages, or smoking materials.

Wash thoroughly after handling, and before eating, drinking or smoking.

Remove contaminated clothing promptly and clean thoroughly before reuse.

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RECOMMENDED EXPOSURE LIMITS

No exposure limit has been established. This product may irritate the upper respiratory tract if used under conditions that create dust or mist particulates.

PERSONAL PROTECTIVE EQUIPMENT

Safety glasses
Impervious gloves
Appropriate protective clothing
Wear approved dust/mist respirator if user operations create dust/mist that causes irritation.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE

Eliminate ignition sources and prevent build-up of static electrical charges.
Completely isolate and thoroughly clean all equipment, piping, or vessels before beginning maintenance or repairs.
Keep area clean.

9 PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE:	powder
COLOR:	white to light tan
ODOR:	characteristic of cellulose ethers
Specific Gravity	0.6
Solubility In Water	limited by viscosity
pH Value	6.0 - 8.5 (of 1% solution)

10 STABILITY & REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS

None known.

HAZARDOUS POLYMERIZATION

Not anticipated under normal or recommended handling and storage conditions.

GENERAL STABILITY CONSIDERATIONS

Stable under recommended handling and storage conditions.

INCOMPATIBLE MATERIALS

None known

11 TOXICOLOGICAL INFORMATION

CARCINOGENICITY INFORMATION

Not listed as a carcinogen by NTP. Not regulated as a carcinogen by OSHA. Not evaluated by IARC.

REPORTED HUMAN EFFECTS

Not a skin irritant or skin sensitizer based on human patch tests. Due to the physical nature of this material, may cause eye, skin and respiratory irritation.

REPORTED ANIMAL EFFECTS

Acute oral (rat): > 5.0 g/kg. Oral administration of large doses in corn oil resulted in diarrhea. Minimal to moderate rabbit eye irritant. The No Observed Effect Level (NOEL) in 90-day and 2-year feeding studies was 1.0% (0.41 g/kg/day in the 2-year feeding study).

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MUTAGENICITY/GENOTOXICITY INFORMATION

No mutagenicity studies have been carried out with this product.

12 ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No ecological studies have been carried out on this product.

BIODEGRADABILITY

This product is biodegradable.

13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Landfilling in a permitted solid or hazardous waste facility is recommended. Handling, transportation, and disposal of material should be conducted in a manner to prevent a nuisance dust hazard. Fully containerize the material before handling, and protect from exposure to the outdoors. Ensure there are no restrictions on disposing of bulk or semi-bulk quantities of waste material. Disposal should be in accordance with all Federal, State and local regulations.

14 TRANSPORT INFORMATION

GENERAL

This product is not subject to DOT regulations.

For specific information regarding transportation of this product, please call the Hercules representative at (905) 279-3338.

15 REGULATORY INFORMATION

CHEMICAL INVENTORIES

U.S. TSCA: The components of this product are included on the TSCA Inventory.

SARA TITLE III - SECTIONS 302/304

This product is not an Extremely Hazardous Substance subject to reporting under 40CFR355.

SARA TITLE III - SECTION 311 AND 312

NHH: Not a health hazard

HC-3: Fire hazard

SARA TITLE III - SECTION 313

This product does not contain any chemicals subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40CFR372.

CERCLA

This product does not contain any chemicals subject to reporting as a CERCLA Hazardous Substance under 40CFR302.4.

RCRA

This product is not a hazardous waste as listed in 40CFR261.33. It does not exhibit any of the hazardous characteristics listed in 40CFR261, Subpart C.

16 OTHER INFORMATION

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HMIS RATINGS:

Health 1 Slight Hazard
Flammability 1 Slight Hazard
Reactivity 0 Minimal Hazard

LIST OF ACRONYMS

ACGIH: American Conferences of Governmental Industrial Hygienists
AIHA WEEL: American Industrial Hygienists Association-Workplace Environmental Exposure Level
ANSI: American National Standards Institute
CASRN: Chemical Abstracts Service Registry Number
CEPA: Canadian Environmental Protection Act
CERCLA: Comprehensive Emergency Response, Compensation and Liability Act
DSL: Domestic Substances List (Canadian)
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
NDSL: Non-Domestic Substances List (Canadian)
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit (OSHA)
RCRA: Resource Conservation and Recovery Act
RQ: Reportable Quantity
SARA: Superfund Amendment Reauthorization Act
STEL: Short-Term Exposure Limit
TLV: Threshold Limit Values (registered trademark of ACGIH)
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average

DISCLAIMER

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

MSDS STATUS

Effective Date	MSDS Revision(s)	Supersedes Date
10/06/2003	Sections 2, 6 and 8	02/08/2002

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