

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)
Product name	Natrosol® 250HHR CS Hydroxyethylcellulose ® Registered Trademark, Ashland or its subsidiaries	
Product code	420007	
Product Use Description	No data	

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: solid, off-white

WARNING! MAY FORM COMBUSTIBLE DUST-AIR MIXTURES.

Potential Health Effects

Exposure routes

Inhalation, Skin contact, Eye Contact, Ingestion

Eye contact

Dust can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact

Unlikely to cause skin irritation or injury.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

This material is a dust or may produce dust. Prolonged or repeated breathing of this material may result in chronic bronchitis (inflammation of the airways of the lungs). Symptoms include coughing and shortness of breath. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

4. FIRST AID MEASURES

Eyes

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: No information available.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide

Precautions for fire-fighting

Organic dusts at sufficient concentration can form explosive mixtures in air. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Avoid breathing dust. Material can create slippery conditions.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Pick up and arrange disposal without creating dust.

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Avoid dust formation. The material can accumulate static charge and can therefore cause electrical ignition of flammable atmospheres. Ensure all equipment is electrically grounded and bonded before beginning transfer operations. Maintain good housekeeping. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards. For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for the Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids".

Storage

Store in a cool, dry, ventilated area. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Avoid breathing dust.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects. For exposures to dust, utilize the exposure limits for Particulates (insoluble) Not Otherwise Classified (PNOC). ACGIH TWA - 10 mg/m³ inhalable fraction, 3 mg/m³ respirable fraction. OSHA PEL - 15 mg/m³ total dust, 5 mg/m³ respirable fraction.

Eye protection

Wear safety glasses or chemical splash goggles when dust exposure is possible.

Skin and body protection

Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid
Form	granules, powder
Colour	off-white
Odour	odourless
Boiling point/boiling range	no data available
Melting point/range	no data available
Sublimation point	no data available

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

pH	6.0 - 8.5 @ 2 % (as aqueous solution)
Flash point	not applicable
Ignition temperature	460.00 °C
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	1.38 g/cm ³
Bulk density	no data available
Water solubility	soluble, Limited by viscosity
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Keep away from heat, flame, sparks and other ignition sources. Exposure to sunlight., UV light.

Incompatible products

Acids, Bases, Oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

Hazardous reactions

Product will not undergo hazardous polymerization.

Thermal decomposition

No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

Acute inhalation toxicity

Acute dermal toxicity

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : Slowly biodegradable

Bioaccumulation

Ecotoxicity effects

Toxicity to fish : 96 h static test LC 50 *Lepomis macrochirus* (Bluegill sunfish): > 100.00 mg/L
: 96 h static test LC 50 *Oncorhynchus mykiss* (rainbow trout): > 100.00 mg/L

Toxicity to daphnia and other aquatic invertebrates.

Toxicity to algae

Toxicity to bacteria

Biochemical Oxygen Demand (BOD)

Chemical Oxygen Demand (COD)

Additional ecological information

13. DISPOSAL CONSIDERATIONS

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

Waste disposal methods

For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
-----------	----------------------	---------------	--------------------	---------------	------------------------------

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

SARA Hazard Classification

Fire Hazard

New Jersey RTK Label Information

CELLULOSE

254504001-5906

NITRATE SALTS

Pennsylvania RTK Label Information

CELLULOSE

254504001-5906

NITRATE SALTS

Notification status

US. Toxic Substances Control Act

y (positive listing)

Canada. Canadian Environmental Protection Act (CEPA).

y (positive listing)

Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)

Australia. Industrial Chemical (Notification and Assessment)

y (positive listing)

Act

New Zealand. Inventory of Chemicals (NZIoC), as published
by ERMA New Zealand

n (Negative listing)

Japan. Kashin-Hou Law List

y (positive listing)

Korea. Toxic Chemical Control Law (TCCL) List

y (positive listing)

Philippines. The Toxic Substances and Hazardous and Nuclear
Waste Control Act

y (positive listing)

China. Inventory of Existing Chemical Substances

y (positive listing)

Natrosol® 250HHR CS Hydroxyethylcellulose
® Registered Trademark, Ashland or its
subsidiaries
420007

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).