

ASHLAND®		Page: 1
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Natrosol™ 250HHR CS
Hydroxyethylcellulose
™ Trademark, Ashland or its subsidiaries, registered in
various countries

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	Emergency telephone number 1-800-ASHLAND (1-800-274-5263) Regulatory Information Number 1-800-325-3751 Product Information 614-790-3333
--	---

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Combustible Dust :

GHS Label element

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : organic

Hazardous components

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

ASHLAND®		Page: 2
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
- Specific hazards during firefighting : Organic dusts at sufficient concentration can form explosive mixtures in air.
Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
- Specific extinguishing methods :
- Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.

ASHLAND		Page: 3
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.
for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
Avoid breathing dust.
Material can create slippery conditions.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid dust formation.
Ensure all equipment is electrically grounded and bonded before beginning transfer operations.
The material can accumulate static charge and can therefore cause electrical ignition of flammable atmospheres.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
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".
- Conditions for safe storage : No smoking.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.

ASHLAND®		Page: 4
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures : Provide appropriate exhaust ventilation at places where dust is formed.
General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, 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.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granules, powder

Physical state : solid

Colour : off-white

Odour : odourless

Odour Threshold : No data available

pH : 6.0 - 8.5, 2 %(as aqueous solution)

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : No data available

ASHLAND®		Page: 5
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1.38 g/cm3

Solubility(ies)

Water solubility : soluble, Limited by viscosity

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : 460 °C

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Dust may form explosive mixture in air.

Conditions to avoid : Keep away from heat, flame, sparks and other ignition sources.

UV light.
Exposure to sunlight.

Incompatible materials : Acids
Bases
Oxidizing agents

ASHLAND®		Page: 6
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury., Product dust may be irritating to eyes, skin and respiratory system.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ASHLAND		Page: 7
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

Product:

Biodegradability : Remarks: Slowly biodegradable.

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

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

U.S. DOT - ROAD

Not dangerous goods

SAFETY DATA SHEET

Revision Date: 05/21/2015

Print Date: 6/24/2015

SDS Number: R0702818

Version: 1.0

Natrosol™ 250HHR CS Hydroxyethylcellulose
 ™ Trademark, Ashland or its subsidiaries, registered
 in various countries
 420007

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

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

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.

SECTION 15. REGULATORY INFORMATION

ASHLAND		Page: 9
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

SARA 311/312 Hazards : Fire Hazard

US State Regulations

Pennsylvania Right To Know

CELLULOSE 254504001- 90.00 - 100.00
5906

The identity of one or more component(s) is being withheld under business confidentiality.

Inorganic Salts Not Assigned 5.00 - 10.00 %

New Jersey Right To Know

CELLULOSE 254504001- 90.00 - 100.00
5906

The identity of one or more component(s) is being withheld under business confidentiality.

Inorganic Salts Not Assigned 5.00 - 10.00 %

California Prop 65 Proposition 65 warnings are not required for this product based on the results of a risk assessment.

The components of this product are reported in the following inventories:

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL.
- AUSTR : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

ASHLAND		Page: 10
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 05/21/2015

NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table border="1"> <tr> <td>HEALTH</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td>1</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	1	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	1						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Not applicable

Full text of H-Statements referred to under sections 2 and 3.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

ASHLAND®		Page: 11
SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/24/2015
		SDS Number: R0702818
Natrosol™ 250HHR CS Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 420007		Version: 1.0

IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System