

<b>ASHLAND</b> <sup>®</sup>	Page: 1
<b>SAFETY DATA SHEET</b>	Revision Date: 05/21/2015
	Print Date: 7/23/2015
	SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169	Version: 1.0

29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION****Product identifier**

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

**Recommended use of the chemical and restrictions on use**

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

Chemical nature : Defatter

<b>ASHLAND</b>		Page: 2
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version 1.0

#### Hazardous components

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

---

#### 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	: 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)
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	:

<b>ASHLAND</b>		Page: 3
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

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

---

## 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.

<b>ASHLAND</b>		Page: 4
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
SILICA COLLOIDAL	112926-00-8	REL	6 mg/m3	NIOSH/GUID E
		TWA	0.8 mg/m3	Z3
		TWA	6 mg/m3	TN OEL

**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)

<b>ASHLAND</b>		Page: 5
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

- 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
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- No data available
- Vapour pressure : No data available
- Relative vapour density : No data available
- Relative density : No data available
- Density : 1.38 g/cm<sup>3</sup>
- 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 : Dust may form explosive mixture in air.

<b>ASHLAND</b> <sup>®</sup>		Page: 6
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

reactions

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

UV light.  
Exposure to sunlight.

Incompatible materials : Acids  
Bases  
Hydrogen fluoride  
Oxidizing agents  
strong alkalis

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

<b>ASHLAND</b> <sup>®</sup>		Page: 7
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

**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.

**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.

<b>ASHLAND</b>		Page: 8
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

**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
---------------------

**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
---------------------



<b>ASHLAND</b>		Page: 9
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

\*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**

**SARA 311/312 Hazards** : Fire Hazard

**US State Regulations**

**Pennsylvania Right To Know**

CELLULOSE	254504001-5906	90.00 - 100.00
-----------	----------------	----------------

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

Inorganic Salts	Not Assigned	1.00 - 5.00 %
SILICA COLLOIDAL	112926-00-8	1.00 - 5.00 %

**New Jersey Right To Know**

CELLULOSE	254504001-5906	90.00 - 100.00
-----------	----------------	----------------

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

Inorganic Salts	Not Assigned	1.00 - 5.00 %
SILICA COLLOIDAL	112926-00-8	1.00 - 5.00 %

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

FORMALDEHYDE	50-00-0
--------------	---------

1,4-DIOXANE	123-91-1
-------------	----------

ACETALDEHYDE	75-07-0
--------------	---------

ETHYLENE OXIDE	75-21-8
----------------	---------

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive

<b>ASHLAND</b>		Page: 10
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

harm.  
 ETHYLENE OXIDE                      75-21-8

**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), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date: 05/21/2015

<p><b>NFPA:</b></p> <div style="text-align: center;"> <p>Flammability</p> <p>Health                      Instability</p> <p>Special hazard.</p> </div>	<p><b>HMIS III:</b></p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: #cccccc;"><b>HEALTH</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #cccccc;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #cccccc;"><b>PHYSICAL HAZARD</b></td> <td style="text-align: center;"><b>0</b></td> </tr> </table> <p>0 = not significant, 1 = Slight,                  2 = Moderate, 3 = High                  4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>1</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

**NFPA Flammable and Combustible Liquids Classification**  
 Not applicable

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

<b>ASHLAND</b>		Page: 11
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

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.  
 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

	Page: 12
<b>SAFETY DATA SHEET</b>	Revision Date: 05/21/2015
	Print Date: 7/23/2015
	SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169	Version: 1.0

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

<b>ASHLAND</b>		Page: 1
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version 1.0

29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**

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

**Recommended use of the chemical and restrictions on use**

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

**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

Chemical nature : Defatter

<b>ASHLAND</b>		Page: 2
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

**Hazardous components**

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

**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	: 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)
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	:

<b>ASHLAND</b>		Page: 3
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

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

**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.

<b>ASHLAND</b>		Page: 4
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
SILICA COLLOIDAL	112926-00-8	REL	6 mg/m3	NIOSH/GUID E
		TWA	0.8 mg/m3	Z3
		TWA	6 mg/m3	TN OEL

**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)



<b>ASHLAND</b>		Page: 5
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

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
Upper explosion limit	: No data available
Lower explosion limit	: No data available
	No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.38 g/cm <sup>3</sup>
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	: Dust may form explosive mixture in air.

---

<b>ASHLAND</b> <sup>®</sup>		Page: 6
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

reactions

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

UV light.  
Exposure to sunlight.

Incompatible materials : Acids  
Bases  
Hydrogen fluoride  
Oxidizing agents  
strong alkalis

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

<b>ASHLAND</b> <sup>®</sup>		Page: 7
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

**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.

**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.

		Page: 8
		Revision Date: 05/21/2015
<b>SAFETY DATA SHEET</b>		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

**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
---------------------

**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
---------------------

<b>ASHLAND</b>		Page: 9
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version 1.0

\*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**

**SARA 311/312 Hazards** : Fire Hazard

**US State Regulations**

**Pennsylvania Right To Know**

CELLULOSE	254504001-5906	90.00 - 100.00
-----------	----------------	----------------

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

Inorganic Salts	Not Assigned	1.00 - 5.00 %
SILICA COLLOIDAL	112926-00-8	1.00 - 5.00 %

**New Jersey Right To Know**

CELLULOSE	254504001-5906	90.00 - 100.00
-----------	----------------	----------------

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

Inorganic Salts	Not Assigned	1.00 - 5.00 %
SILICA COLLOIDAL	112926-00-8	1.00 - 5.00 %

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

FORMALDEHYDE	50-00-0
--------------	---------

1,4-DIOXANE	123-91-1
-------------	----------

ACETALDEHYDE	75-07-0
--------------	---------

ETHYLENE OXIDE	75-21-8
----------------	---------

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive

<b>ASHLAND</b>		Page: 10
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
		Version: 1.0
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		

harm.  
 ETHYLENE OXIDE                      75-21-8

**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), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date: 05/21/2015

<p><b>NFPA:</b></p> <div style="text-align: center;"> <p style="text-align: center;">Special hazard.</p> </div>	<p><b>HMIS III:</b></p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: #cccccc;"><b>HEALTH</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #cccccc;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td><b>PHYSICAL HAZARD</b></td> <td style="text-align: center;"><b>0</b></td> </tr> </table> <p>0 = not significant, 1 = Slight,                  2 = Moderate, 3 = High                  4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>1</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

**NFPA Flammable and Combustible Liquids Classification**  
 Not applicable

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

<b>ASHLAND</b>		Page: 11
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version 1.0

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.  
 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

<b>ASHLAND</b> <sup>®</sup>		Page: 12
<b>SAFETY DATA SHEET</b>		Revision Date: 05/21/2015
		Print Date: 7/23/2015
		SDS Number: R0702803
Natrosol™ 250HBR PA Hydroxyethylcellulose ™ Trademark, Ashland or its subsidiaries, registered in various countries 431169		Version: 1.0

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