

N-Hance™ 3205 Cationic Guar Derivatives  
™ Trademark, Ashland or its subsidiaries,  
registered in various countries 414965

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

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)
Product name	N-Hance™ 3205 Cationic Guar Derivatives ™ Trademark, Ashland or its subsidiaries, registered in various countries	
Product code	414965	
Product Use Description	No data	

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

Appearance: solid, yellow

WARNING! MAY FORM COMBUSTIBLE DUST-AIR MIXTURES. DUST MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

### 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**

May cause skin irritation. Symptoms may include redness, burning, and swelling of skin.

#### **Ingestion**

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

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### **Inhalation**

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), Kidney

### **Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), thirst, irritation (nose, throat, airways), Exposure to this product (or a component) may cause an allergic reaction (narrowing of the air passages of the lungs resulting in difficult breathing, tightness in the chest, coughing and wheezing) in some sensitive individuals. Other symptoms of an allergic reaction may include itchy and watery eyes, runny and stuffy nose, sweating, flushing, hives, rapid heart rate, and lowered blood pressure.

### **Target Organs**

Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, kidney damage

### **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**

Based on the available information, risk to the fetus from maternal exposure to this material cannot be assessed.

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
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CATIONIC GUAR GUM, MODIFIED	65497-29-2	>=80-<90%
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FUMARIC ACID	110-17-8	>=1.5-<5%
SODIUM CHLORIDE	7647-14-5	>=1.5-<5%

#### **4. FIRST AID MEASURES**

##### **Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

##### **Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

##### **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, Hydrocarbons, Sodium oxides, hydrogen chloride

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### **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.

## **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. This material is slippery when wet. 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**

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

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

### **Exposure Guidelines**

#### **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/m<sup>3</sup> inhalable fraction, 3 mg/m<sup>3</sup> respirable fraction. OSHA PEL - 15 mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction. Provide appropriate exhaust ventilation at places where dust is formed.

#### **Eye protection**

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

#### **Skin and body protection**

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use. 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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	solid
<b>Form</b>	granules, powder
<b>Colour</b>	yellow
<b>Odour</b>	odourless
<b>Boiling point/boiling range</b>	no data available
<b>Melting point/range</b>	no data available
<b>Sublimation point</b>	no data available
<b>pH</b>	6.0 - 7.0 @ 1 % (as aqueous solution)
<b>Flash point</b>	not applicable
<b>Ignition temperature</b>	no data available
<b>Evaporation rate</b>	no data available
<b>Lower explosion limit/Upper explosion limit</b>	no data available
<b>Particle size</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Relative vapour density</b>	no data available
<b>Density</b>	similar to water
<b>Bulk density</b>	No data
<b>Water solubility</b>	100 g/l 77 °F / 25 °C soluble, Limited by viscosity
<b>Solubility(ies)</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>log Pow</b>	no data available
<b>Autoignition temperature</b>	no data available
<b>Viscosity, dynamic</b>	no data available
<b>Viscosity, kinematic</b>	no data available
<b>Solids in Solution</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Burning number</b>	no data available
<b>Dust explosion constant</b>	no data available
<b>Minimum ignition energy</b>	no data available

**10. STABILITY AND REACTIVITY**

**Stability**  
Stable.

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**Conditions to avoid**

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

**Incompatible products**

Acids, Amines, Bases, Fluorine, Oxidizing agents, reducing agents

**Hazardous decomposition products**

carbon dioxide and carbon monoxide, Hydrocarbons, Sodium oxides, hydrogen chloride

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**Thermal decomposition**

No data

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Acute oral toxicity** : LD 50 Rat : > 2,000 mg/kg

**Acute inhalation toxicity**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : LC 50 Rat: > 42 g/m<sup>3</sup>; 1 h

**Acute dermal toxicity**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : LD 50 Rabbit: > 20,000 mg/kg

SODIUM CHLORIDE : LD 50 Rabbit: > 10 g/kg

<b>12. ECOLOGICAL INFORMATION</b>
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**Elimination information (persistence and degradability)**

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Biodegradability : Slowly biodegradable

**Bioaccumulation**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : no data available

**Ecotoxicity effects**

**Toxicity to fish**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : 48 h static test LC 50 Danio rerio (zebra fish): 245.00 mg/l

SODIUM CHLORIDE : 96 h static test LC 50 Fathead minnow (Pimephales promelas): 6,020.00 - 7,070.00 mg/l  
96 h flow-through test LC 50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 6,112.00 - 9,108.00 mg/l

**Toxicity to daphnia and other aquatic invertebrates.**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : 48 h static test EC 50 Water flea (Daphnia magna): 204.00 - 220.00 mg/l Method: Static Intoxication

SODIUM CHLORIDE : 48 h static test EC 50 Water flea (Daphnia magna): 340.70 - 469.20 mg/l

**Toxicity to algae**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : 72 h EC 50 Desmodesmus subspicatus (green algae): 41.00 mg/l

SODIUM CHLORIDE : no data available



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**Toxicity to bacteria**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : no data available

**Biochemical Oxygen Demand (BOD)**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : no data available

**Chemical Oxygen Demand (COD)**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : no data available

**Additional ecological information**

CATIONIC GUAR GUM, MODIFIED : no data available

FUMARIC ACID : no data available

SODIUM CHLORIDE : no data available

<b>13. DISPOSAL CONSIDERATIONS</b>
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**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.

<b>14. TRANSPORT INFORMATION</b>
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**REGULATION**

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

Not dangerous goods
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**U.S. DOT - RAIL**

Not dangerous goods
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**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods
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**TRANSPORT CANADA - ROAD**

Not dangerous goods
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**TRANSPORT CANADA - RAIL**

Not dangerous goods
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**TRANSPORT CANADA - INLAND WATERWAYS**

Not dangerous goods
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**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods
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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods
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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods
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**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

Not dangerous goods
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\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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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**

Acute Health Hazard  
Fire Hazard

**New Jersey RTK Label Information**

CATIONIC GUAR GUM, MODIFIED	65497-29-2
WATER	7732-18-5
FUMARIC ACID	110-17-8
ORGANIC SALT	254504001-5471
SODIUM CHLORIDE	7647-14-5

**Pennsylvania RTK Label Information**

CATIONIC GUAR GUM, MODIFIED	65497-29-2
WATER	7732-18-5
FUMARIC ACID	110-17-8

**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) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive 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)

**Reportable quantity - Product**

US. EPA CERCLA Hazardous Substances (40 CFR 302)	217391 lbs
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**Reportable quantity-Components**

FUMARIC ACID

110-17-8

5000 lbs

	<b>HMIS</b>	<b>NFPA</b>
Health	2	2
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).