

**SAFETY DATA SHEET**

Revision Date: 06/07/2018

Print Date: 8/21/2018

SDS Number: R0703476

Version: 1.6

N-Hance™ 3196 Cationic Guar Derivatives
™ Trademark, Ashland or its subsidiaries, registered
in various countries
431188

29 CFR 1910.1200 (OSHA HazCom 2012)

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

Trade name : N-Hance™ 3196
Cationic Guar Derivatives
™ Trademark, Ashland or its subsidiaries, registered in
various countries

Relevant identified uses of the substance or mixture and uses advised against**Details of the supplier of the safety data sheet**

Ashland
P.O. Box 2219
Columbus, OH 43216
United States of America (USA)
+1-614-790-3333

EHSPProductSafety@ashland.com

Emergency telephone number

1-800-ASHLAND (1-800-274-5263)

Regulatory Information Number

1-800-325-3751

Product Information

+1-614-790-3333

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Combustible Dust :

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.
Causes serious eye irritation.

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Precautionary Statements**: Prevention:**

Wash skin thoroughly after handling.
Wear eye protection/ face protection.
Keep dust/air mixtures away from ignition sources.

Response:

IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue
rinsing.
If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : organic

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
CATIONIC GUAR GUM, MODIFIED	65497-29-2	Comb Dust Eye Irrit. 2A; H319	92.4935

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

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 : Immediately flush eye(s) with plenty of water.



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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:
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)
 Causes serious eye irritation.

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

Unsuitable extinguishing media : High volume water jet

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
 Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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



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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 product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : 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 : 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".
- Avoid dust formation.
 Do not breathe vapours/dust.
 Do not smoke.
 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.
 Container hazardous when empty.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national regulations.
 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.

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Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
No smoking.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
CATIONIC GUAR GUM, MODIFIED	65497-29-2

Engineering measures : 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.
Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter within the capabilities of the respirator/filter combination.
Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.

Hand protection

Material : butyl-rubber
Break through time : 480 min
Glove thickness : > 0.5 mm

Remarks : The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses

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- Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes
Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : Avoid breathing dust.
Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : granules, powder
- Physical state : solid
- Colour : light yellow
- Odour : mild
- Odour Threshold : No data available
- pH : 9.5 - 11.0
Concentration: 1 %
(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) : Combustible Dust
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : No data available
- Relative vapour density : No data available



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Relative density	: No data available
Density	: No data available
Solubility(ies)	
Water solubility	: slightly soluble, Limited by viscosity
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
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. excessive heat UV light. Exposure to sunlight.
Incompatible materials	: Acids Oxidizing agents
Hazardous decomposition products	carbon dioxide and carbon monoxide Hydrocarbons

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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.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

CATIONIC GUAR GUM, MODIFIED:

Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result: Irritating to eyes.

Remarks: Product dust may be irritating to eyes, skin and respiratory system., Causes serious eye irritation.

Components:

CATIONIC GUAR GUM, MODIFIED:

Result: Irritating to eyes.

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.

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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 on OSHA's list of regulated carcinogens.

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****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

Components:

CATIONIC GUAR GUM, MODIFIED:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 54 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : NOEC (Blue-green algae (Anabaena flos-aquae)): > 100 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201



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GLP: yes

Persistence and degradability

Components:

CATIONIC GUAR GUM, MODIFIED:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 95 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D
 GLP: yes
 Remarks: Information given is based on data obtained from
 similar substances.

No data available

Bioaccumulative potential

Components:

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of
 unprofessional handling or disposal., Harmful to aquatic life.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

The product should not be allowed to enter drains, water
 courses or the soil.

Do not contaminate ponds, waterways or ditches with
 chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste
 handling site for recycling or disposal.
 Do not re-use empty containers.

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SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

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

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

TDG_INWT_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - ROAD

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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**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM HYDROXIDE	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Combustible Dust
Serious eye damage or eye irritation

SARA 302 : This material does not contain any components with a section
302 EHS TPQ.

SARA 313 This material does not contain any chemical components with
known CAS numbers that exceed the threshold (De Minimis)
reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know

CATIONIC GUAR GUM, MODIFIED	65497-29-2
WATER	7732-18-5

New Jersey Right To Know

CATIONIC GUAR GUM, MODIFIED	65497-29-2
WATER	7732-18-5



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California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : 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

TSCA : On TSCA Inventory

Inventories

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

SECTION 16. OTHER INFORMATION

Further information

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

NFPA Flammable and Combustible Liquids Classification

Not applicable

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Full text of H-Statements

H319 Causes serious eye irritation.

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).

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety

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and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative