SAFETY DATA SHEET

Revision Date: 11/08/2016
Print Date: 6/22/2017
SDS Number: R0703328

N-Hance™ CCG 45 CONDITIONING AGENT
™ Trademark, Ashland or its subsidiaries, registered in various countries
432734

Version: 1.3


SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name : N-Hance™ CCG 45
™ CONDITIONING AGENT
™ 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)
614-790-3333

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 :

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.
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**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATIONIC GUAR GUM, MODIFIED</td>
<td>65497-29-2</td>
<td>Eye Irrit. 2A; H319</td>
<td>92.1336</td>
</tr>
</tbody>
</table>

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:
  - 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

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.

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 : 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 : 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.
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.

Conditions for safe storage : Containers which are opened must be carefully resealed and kept upright to prevent leakage.
No smoking.

Materials to avoid : No materials to be especially mentioned.

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 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 resistant gloves (consult your safety equipment supplier). Wear as appropriate:

Safety shoes

**Hygiene measures**

Avoid breathing dust.

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance**
  
  granules, powder

- **Physical state**
  
  solid

- **Colour**
  
  off-white

- **Odour**
  
  slight, mild

- **Odour Threshold**
  
  No data available

- **pH**
  
  9 - 11
  
  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) : No data available
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 : 0.6 g/cm³
Bulk density : ca. 610 kg/m³
Solubility(ies)
  Water solubility : 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.
### SAFETY DATA SHEET

**Revision Date:** 11/08/2016  
**Print Date:** 6/22/2017  
**SDS Number:** R0703328  
**Version:** 1.3

**N-Hance™ CCG 45 CONDITIONING AGENT**  
Trademark, Ashland or its subsidiaries, registered in various countries  
432734

| 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  

### 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.

**Components:**  
- CATIONIC GUAR GUM, MODIFIED:  
  Result: No skin irritation

#### Serious eye damage/eye irritation  
Causes serious eye irritation.

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

**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.

### 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**

**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
   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.

**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.
### SECTION 14. TRANSPORT INFORMATION

International transport regulations

<table>
<thead>
<tr>
<th>REGULATION</th>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
<th>MARINE POLLUTANT / LTD. QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. DOT - ROAD</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFR_RAIL_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. DOT - INLAND WATERWAYS</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_ROAD_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_RAIL_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_INWT_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL MARITIME DANGEROUS GOODS</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MX_DG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYDROXIDE</td>
<td>1310-73-2</td>
<td>1000</td>
<td>217391</td>
</tr>
</tbody>
</table>

**SARA 304 Extremely Hazardous Substances Reportable Quantity**
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**
- Fire Hazard
- Acute Health Hazard

**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

**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
Revision Date: 11/08/2016

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>HMIS III:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>HEALTH 2</td>
</tr>
<tr>
<td>Health 2</td>
<td>FLAMMABILITY 0</td>
</tr>
<tr>
<td>0</td>
<td>PHYSICAL HAZARD 0</td>
</tr>
</tbody>
</table>

NFPA Flammable and Combustible Liquids Classification
Not applicable

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).

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
SAFETY DATA SHEET

Revision Date: 11/08/2016
Print Date: 6/22/2017
SDS Number: R0703328

N-Hance™ CCG 45 CONDITIONING AGENT
™ Trademark, Ashland or its subsidiaries, registered in various countries
432734

Version: 1.3

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