1. Identification

1.1. Product Identifier

Product Name: HDCA

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Adhesives.
Uses advised against: No information available

1.3. Details of the supplier of the safety data sheet

Responsible Party:
Bostik Inc.
11320 W. Watertown Plank Road
Wauwatosa, Wisconsin 53226 USA
Phone: +1 (800) 843-0844 (Domestic Toll Free)
Phone: +1 (414) 774-2250 (International)
Fax: +1 (414) 774-8075

E-mail: msds@bostik.com

1.4. Emergency telephone number

Telephone: 1-800-227-0332
(Outside U.S.) 1-703-527-3887

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

2.2. Label Elements

**WARNING**

**Hazard statements**
May cause an allergic skin reaction
Suspected of causing cancer
Flammable liquid and vapor
Safety Data Sheet

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Use explosion-proof electrical/ ventilating/ lighting/ equipment

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see first aid measures on this label)
If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF ON SKIN (or hair):
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use CO2, dry chemical, or foam to extinguish.

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)
Not applicable

Unknown acute toxicity
71 % of the mixture consists of ingredient(s) of unknown toxicity

2.3. Other Information
No information available.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Mixture

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Naphtha, petroleum, hydrotreated heavy, &lt;0.1% Benzene</td>
<td>64742-48-9</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate</td>
<td>88917-22-0</td>
<td>1 - 5</td>
</tr>
<tr>
<td>N-(trichloromethylthio)phthalimide</td>
<td>133-07-3</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES
4.1. Description of first aid measures

General advice
Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation
Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion
Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician or poison control center immediately. Drink plenty of water.

Self-protection of the first aider
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians
May cause sensitization by skin contact. Treat symptomatically.

4.4. Reference to Other Sections

Reference to other sections
Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 11: TOXICOLOGY INFORMATION

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media
Dry chemical, CO2, water spray or regular foam. Use water spray or fog; do not use straight streams. Water spray, fog or regular foam.

Unsuitable extinguishing media
CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical
Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Runoff to sewer may create fire or explosion hazard. Product is or contains a sensitizer. May cause sensitization by skin contact. Flammable.

Explosion Data
- Sensitivity to mechanical impact: None.
- Sensitivity to static discharge: May be ignited by friction, heat, sparks or flames.

5.3. Advice for firefighters

Protective equipment and precautions for firefighters
Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Remove all sources of ignition.

Other information Water spray may reduce vapor; but may not prevent ignition in closed spaces.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of spill for later disposal.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material.

6.4. Reference to other sections

Reference to other sections Section 7: HANDLING AND STORAGE
Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 13: DISPOSAL CONSIDERATIONS

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials None known based on information supplied.

7.3. Specific end use(s)

Specific Use(s) Adhesives.

Other information No information available.

7.4. References to Other Sections

Reference to other sections Section 13: DISPOSAL CONSIDERATIONS
Section 10: STABILITY AND REACTIVITY

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters

Exposure Guidelines

This product contains substances which in their raw state are powder form, however in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>NIOSH IDLH</th>
<th>OSHA PEL</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz 14808-60-7</td>
<td>TWA: 0.025 mg/m³</td>
<td>TWA: 0.05 mg/m³ respirable dust</td>
<td>TWA: 50 µg/m³ TWA: 50 µg/m³ excludes</td>
<td>TWA: 0.1 mg/m³</td>
</tr>
</tbody>
</table>
|                        |                             | TWA: 50 mg/m³ respirable dust            | construction work, agricultural operations, and exposures that result from the processing of sorptive clays : 
|                        |                             |                                          | (250)/(%SiO2 + 5) mppcf                  |
|                        |                             |                                          | TWA respirable fraction                  |
|                        |                             |                                          | (10)/(%SiO2 + 2) mg/m³                  |
|                        |                             |                                          | TWA respirable fraction                  |
| Limestone 1317-65-3    | -                           | TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust |
|                        |                             | TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable dust |
|                        |                             |                                          | TWA: 10 mg/m³ STEL: 20 mg/m³            |
| N-(trichloromethylthio)phthalimide 133-07-3 | TWA: 1 mg/m³ inhalable particulate matter | -                                       | -               |

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Argentina</th>
<th>Brazil</th>
<th>Chile</th>
<th>Venezuela</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz 14808-60-7</td>
<td>TWA: 0.05 mg/m³</td>
<td>-</td>
<td>TWA: 0.08 mg/m³</td>
<td>TWA: 0.025 mg/m³</td>
</tr>
<tr>
<td>Limestone 1317-65-3</td>
<td>TWA: 10 mg/m³</td>
<td>-</td>
<td>TWA: 7 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Personal protective equipment [PPE]

Eye/face protection
Tight sealing safety goggles.

Skin and body protection
Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Paste</td>
</tr>
<tr>
<td>Color</td>
<td>Green</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks. Protect from moisture.

10.5. Incompatible materials

None known based on information supplied.

10.6. Hazardous decomposition products

None under normal use conditions.
None known based on information supplied.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Product information

- Inhalation: No data available
- Eye contact: No data available
- Skin contact: May cause sensitization by skin contact
- Ingestion: No data available

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>&gt;20000 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Limestone</td>
<td>&gt;5000 mg/kg (rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Naphtha, petroleum, hydrotreated heavy, &lt;0.1% Benzene 64742-49-9</td>
<td>&gt; 6000 mg/kg (Rat)</td>
<td>&gt; 3160 mg/kg (Rabbit)</td>
<td>LC50 Vapour (4h) &gt;5020 mg/m$^3$ (Rat)</td>
</tr>
<tr>
<td>Propanol, 1(or 2)-(2-methoxymethylethoxy)-acetate 88917-22-0</td>
<td>=1750 mg/Kg (Rat)</td>
<td>&gt;2000 mg/Kg (Rat)</td>
<td>-</td>
</tr>
<tr>
<td>N-(trichlororethylthio)phthalimide 133-07-3</td>
<td>= 2636 mg/kg (Rat)</td>
<td>&gt; 22600 mg/kg (Rabbit) &gt; 5000 mg/kg (Rat)</td>
<td>&gt; 0.48 g/m$^3$ (Rat) 4 h &gt; 5 g/m$^3$ (Rat) 2 h</td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Symptoms
- No information available.
- Skin corrosion/irritation
- No information available.
- Serious eye damage/eye irritation
- No information available.
- Irritation
- No information available.
- Corrosivity
- No information available.
- Sensitization
- May cause sensitization by skin contact.
- Germ Cell Mutagenicity
- No information available.
- Reproductive Toxicity
- No information available.
- Developmental Toxicity
- No information available.
- Teratogenicity
- No information available.
- STOT - single exposure
- No information available.
- STOT - repeated exposure
- No information available.
- Chronic Toxicity
- No information available.
- Target Organ Effects
- Central nervous system, Eyes, Kidney, Lungs, Respiratory system, Skin.
- Aspiration hazard
- No information available.
- Carcinogenicity
- The table below indicates whether each agency has listed any ingredient as a carcinogen. As Quartz (14808-60-7) is inextricably bound in the polymer matrix, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal condition of uses.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>N-(trichlororethylthio)phthalimide 133-07-3</td>
<td>A3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Confirmed animal carcinogen with unknown relevance to humans
IARC (International Agency for Research on Cancer)
Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone 1317-65-3</td>
<td>CE50 (72h) &gt;200mg/L Algae (Desmondesmus subspicatus)</td>
<td>CL50 (96h)&gt;10000mg/L Fish (Oncothrychnus mykiss)</td>
<td>CE50 (48h) &gt;1000 mg/L Daphnia Magna</td>
<td></td>
</tr>
<tr>
<td>Naphtha, petroleum, hydrotreated heavy, &lt;0.1% Benzene 64742-48-9</td>
<td>EL50 (72h) &gt; 1000 mg/l (Pseudokirchneriella subcapitata) OECD 201</td>
<td>LC50: =2200mg/L (96h, Pimephales promelas)</td>
<td>LL50 (48h) &gt; 1000 mg/l (Daphnia magna) OECD 202</td>
<td></td>
</tr>
<tr>
<td>Propanol, 1(or 2)-(2-methoxymethylethoxy)- acetate 88917-22-0</td>
<td>LC50 (72h)&gt;100 mg/L Green algae (Pseudokirchneriella subcapitata)</td>
<td>LC50 (96h) &gt;100 mg/L Fish (Pimephales promelas)</td>
<td>LC50 (48h)&gt;100 mg/L (Daphnia magna)</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No information available.

12.3. Bioaccumulative potential
No information available.

12.4. Mobility in soil
No information available.

Other adverse effects
No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of Wastes
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Contaminated packaging
Dispose of in accordance with federal, state and local regulations.

Section 14: TRANSPORT INFORMATION

Note:
The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition).
The information shown here, may not always agree with the bill of lading shipping description for the material.
49 CFR 173.150(f)(2) "The requirements in this subchapter do not apply to a material classed as a combustible liquid in a non-bulk packaging unless the combustible liquid is a hazardous substance, a hazardous waste, or a marine pollutant."

**DOT**

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>NA1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Combustible liquid, n.o.s.</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Special Provisions</td>
<td>IB3, T1, TP1, 148</td>
</tr>
<tr>
<td>Description</td>
<td>NA1993, Combustible liquid, n.o.s. (Naphtha, petroleum, hydrotreated heavy, &lt;0.1% Benzene), Combustible liquid, III</td>
</tr>
</tbody>
</table>

**IATA**

<table>
<thead>
<tr>
<th>UN Number</th>
<th>UN1133</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Adhesives</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>ERG Code</td>
<td>3L</td>
</tr>
<tr>
<td>Special Provisions</td>
<td>A3</td>
</tr>
<tr>
<td>Description</td>
<td>UN1133, Adhesives, 3, III</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th>UN Number</th>
<th>UN1133</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Adhesives</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>EmS-No.</td>
<td>F-E, S-D</td>
</tr>
<tr>
<td>Special Provisions</td>
<td>223, 955</td>
</tr>
<tr>
<td>Description</td>
<td>UN1133, Adhesives, 3, III, (57°C c.c.)</td>
</tr>
</tbody>
</table>

### Section 15: REGULATORY INFORMATION

#### Global Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL</td>
<td>Listed</td>
</tr>
</tbody>
</table>

**Legend:**

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL** - Canadian Domestic Substances List
- **Listed** - The components of this product are either listed or exempt from listing on inventory.
- **Not Listed** - One or more components of this product are not listed on inventory.

**United States of America**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Fire hazard</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
Europe

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU
This product does not contain Lead (7439-92-1), Cadmium (7440-43-9), Mercury (7439-97-6), Hexavalent chromium (7440-47-3), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE) above the regulated limit mentioned in this regulation

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet
No information available

Key Literature References and Sources for Data
No information available

Prepared By | Product Safety & Regulatory Affairs
Revision Date | 12-Dec-2018
Revision note | SDS sections updated, 1, 3, 5, 8, 11, 12, 14, 15, 16.
Training Advice | No information available
Further information | No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet