SECTION 1. IDENTIFICATION

Product name: CLOISITE®-Na+

Manufacturer or supplier’s details
Company: BYK USA Inc.
524 South Cherry Street
Wallingford CT 06492
Telephone: (203) 265-2086
Visit our web site: www.byk.com
E-mail address: BRIEF.BYK.NAFTA@allana.com
Emergency telephone number: 203-265-2086; CHEMTREC 1-800-424-9300 / +1 703-527-3887

Recommended use of the chemical and restrictions on use
Recommended use: Polymer Additive
Restrictions on use: Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Carcinogenicity: Category 1A

GHS label elements
Hazard pictograms:

Signal word: Danger
Hazard statements: H350 May cause cancer.
Precautionary statements:
Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P281 Use personal protective equipment as required.
Response: P308 + P313 IF exposed or concerned: Get medical advice/attention.
Storage: P405 Store locked up.
Disposal: P501 Dispose of contents/container to an approved waste disposal plant.
SAFETY DATA SHEET

CLOISITE®-Na+

Version 1  Revision Date 12/14/2016  Print Date 02/08/2017

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : Natural phyllosilicate

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica (quartz)</td>
<td>14808-60-7</td>
<td>&gt;= 0 - &lt; 1</td>
</tr>
</tbody>
</table>

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 unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Remove contaminated clothing. Wash thoroughly with soap and water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : No information available.

SECTION 5. FIREFIGHTING MEASURES
<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable extinguishing media</td>
<td>Dry chemical Alcohol-resistant foam Carbon dioxide (CO2)</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific hazards during firefighting</td>
<td>None known.</td>
</tr>
<tr>
<td>Hazardous combustion products</td>
<td>No hazardous combustion products are known</td>
</tr>
<tr>
<td>Further information</td>
<td>Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</td>
</tr>
<tr>
<td>Special protective equipment for firefighters</td>
<td>Wear self-contained breathing apparatus for firefighting if necessary.</td>
</tr>
</tbody>
</table>

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal precautions, protective equipment and emergency procedures</td>
<td>Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Only qualified personnel equipped with suitable protective equipment may intervene.</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>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.</td>
</tr>
<tr>
<td>Methods and materials for containment and cleaning up</td>
<td>Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).</td>
</tr>
</tbody>
</table>

**SECTION 7. HANDLING AND STORAGE**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice on safe handling</td>
<td>Avoid formation of respirable particles. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

CLOISITE®-Na+

Version 1

Revision Date 12/14/2016

Print Date 02/08/2017

Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Observe label precautions.
- Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
- No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica (quartz)</td>
<td>14808-60-7</td>
<td>TWA (total dust)</td>
<td>30 mg/m³ / %SiO₂+2</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>10 mg/m³ / %SiO₂+2</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>250 mppcf / %SiO₂+5</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable dust fraction)</td>
<td>0.1 mg/m³</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>0.025 mg/m³ (Silica)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m³ (Silica)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

OSHA has established an action limit of 0.025 mg/m³ (8-hr TWA) and a permissible exposure limit of 0.05 mg/m³ (8-hour TWA) for respirable crystalline silica.

Further occupational exposure limits

<table>
<thead>
<tr>
<th>Description</th>
<th>Value type</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert or nuisance dust</td>
<td>TWA</td>
<td>50 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>total dust</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>15 mg/m³ total dust</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³ respirable fraction</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>15 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
</tbody>
</table>
## SAFETY DATA SHEET

**CLOISITE®-Na+**

**Version 1**  
**Revision Date 12/14/2016**  
**Print Date 02/08/2017**

<table>
<thead>
<tr>
<th>Engineering measures</th>
<th>respirable fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering and/or work practice controls should be implemented to maintain exposure to respirable crystalline silica below the permissible exposure limit.</td>
<td></td>
</tr>
</tbody>
</table>

### Personal protective equipment

**Respiratory protection**

- Unless air monitoring demonstrates vapor/mist/dust levels are below the PEL/TLV wear a properly fitted respirator (NIOSH approved) or dust mask during exposure.

**Hand protection**

- **Material**: Neoprene gloves

**Remarks**

- The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**

- Eye wash bottle with pure water  
  Tightly fitting safety goggles

**Skin and body protection**

- Dust impervious protective suit  
  Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

- When using do not eat or drink.  
  When using do not smoke.  
  Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: powder
- **Colour**: off-white
- **Odour**: odourless
- **Odour Threshold**: Not applicable
- **pH**: 9.0 - 11.0, Concentration: 20 g/l (as aqueous solution)
- **Melting point/range**: Not applicable
- **Boiling point/boiling range**: Not applicable
- **Vapour pressure**: Not applicable
- **Flash point**: Not applicable
### CLOISITE®-Na+

**Version 1**  
**Revision Date 12/14/2016**  
**Print Date 02/08/2017**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Does not sustain combustion.</td>
</tr>
<tr>
<td>Minimum Explosible Concentration</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density/Specific Gravity</td>
<td>2.80</td>
</tr>
<tr>
<td>Density</td>
<td>2.6 g/cm³ (68 °F (20 °C))</td>
</tr>
<tr>
<td>Bulk density</td>
<td>500 - 1,100 kg/m³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Not classified as a reactivity hazard.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable; polymerization will not occur</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No data available</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizing agents</td>
</tr>
</tbody>
</table>
SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Acute toxicity

Product:
Acute oral toxicity : Remarks: No data available

Skin corrosion/irritation

Product:
Remarks: No data available

Serious eye damage/eye irritation

Product:
Remarks: No data available

Respiratory or skin sensitisation

Product:
Remarks: No data available

Carcinogenicity

IARC
Group 1: Carcinogenic to humans
Crystalline silica (quartz) 14808-60-7

ACGIH
Suspected human carcinogen
Crystalline silica (quartz) 14808-60-7

OSHA
OSHA specifically regulated carcinogen
Crystalline silica (quartz) 14808-60-7

NTP
Known to be human carcinogen
Crystalline silica (quartz) 14808-60-7

Repeated dose toxicity

Product:
Remarks: Long term inhalation of crystalline silica dusts may cause lung disease (silicosis). Crystalline silica has been classified as a probable human carcinogen by IARC. Epidemiological studies suggest that respirable crystalline silica has caused both immune system and kidney effects. The mechanisms causing these effects are unclear and a dose-response relationship has not been determined.

Experience with human exposure

**Product:**
Skin contact:
Symptoms: Contact may cause irritation.

Eye contact:
Symptoms: Contact may cause irritation.

Ingestion:
Symptoms: Ingestion will probably cause irritation of the digestive tract.

Further information

**Product:**
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**
Toxicity to fish: Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates: Remarks: No data available

**Persistence and degradability**

**Product:**
Biodegradability: Remarks: No data available

**Bioaccumulative potential**

**Product:**
Bioaccumulation: Remarks: No data available
SAFETY DATA SHEET

CLOISITE®-Na+

Version 1 Revision Date 12/14/2016 Print Date 02/08/2017

Mobility in soil
No data available

Other adverse effects

Product:
Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Regulation
40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
EPA Hazardous Waste Code(s)
Not applicable.

Waste from residues
Do not dispose of waste into sewer.
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.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations
SAFETY DATA SHEET

CLOISITE®-Na+

Version 1  Revision Date 12/14/2016  Print Date 02/08/2017

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
US. EPA CERCLA Hazardous Substances (40 CFR 302)
This material does not contain any components with a CERCLA RQ.

SARA 304 - Emergency Release Notification
This material does not contain any components with a section 304 EHS RQ.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)
This material does not contain any components with a SARA 302 RQ.

SARA 311/312 Hazards: Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

Non-volatile (Wt): No data available

US State Regulations
Massachusetts Right To Know
Crystalline silica (quartz) 14808-60-7

Pennsylvania Right To Know
SAFETY DATA SHEET

CLOISITE®-Na+

Version 1

Revision Date 12/14/2016

Print Date 02/08/2017

Natural phyllosilicate

New Jersey Right To Know

Natural phyllosilicate

Crystalline silica (quartz) 14808-60-7

New Jersey Trade Secret: 800963-1007

Registry Number for the product (NJ TSRN)

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

Crystalline silica (quartz) 14808-60-7

CONEG Heavy Metal: We confirm that we use packaging and/or packaging components in which the sum of the incidental concentration levels of lead, mercury, cadmium and hexavalent chromium do not exceed 100 parts per million by weight.

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

TSCA: We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b): Not applicable

Section 5: Not applicable

DSL: We certify that all of the components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

Revision Date: 12/14/2016

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.