SECTION 1: Identification of the substance/mixture

SECTION 1. IDENTIFICATION

Product name Clear Guard® First Seal™

Manufacturer or supplier's details
Company name of supplier Butterfield Color, Inc.
Address 625 W Illinois Ave
Aurora, IL 60506
Telephone (630) 906-1980
Emergency telephone CHEMTREC: (800) 424-9300 (USA)
CANUTEC (613-996-6666 (CANADA)

Recommended use of the chemical and restrictions on use
Recommended use Reactive penetrating sealer

SECTION 2: Hazards Identification

GHS Classification
Skin irritation Category 2
Eye irritation Category 2A

GHS Label element
Hazard pictograms

Signal Word Warning

Hazard Statements H315 Causes skin irritation. H319 Causes serious eye irritation.

Precautionary Statements
P261 Avoid breathing spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / protective clothing / face protection / eye protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Other hazards None known.
SECTION 3: Composition Information on Ingredients

Substance / Mixture: Mixture

Chemical nature: Silicone emulsion

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethoxyoctylsilane</td>
<td>2943-75-1</td>
<td>&gt;= 10 - &lt; 30</td>
</tr>
<tr>
<td>Ethoxylated lauryl alcohol</td>
<td>9002-92-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Water</td>
<td>NA</td>
<td>&gt;= 65</td>
</tr>
</tbody>
</table>

SECTION 4: First Aid Measures

General advice
In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

If inhaled
If inhaled, remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

If swallowed
If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed
Causes skin irritation. Causes serious eye irritation.

Protection of first-aiders
First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician
Treat symptomatically and supportively.

SECTION 5: Fire Fighting Measures

Suitable extinguishing media
- Water spray
- Alcohol-resistant foam
- Dry chemical
- Carbon dioxide (CO2)

Unsuitable extinguishing media
None known

Specific hazards during fire fighting
Exposure to combustion products may be a hazard to health.
Hazardous combustion products  
- Carbon oxides  
- Silicon oxides  
- Formaldehyde  

Specific extinguishing methods  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
- Use water spray to cool unopened containers.  
- Remove undamaged containers from fire area if it is safe to do so.  
- Evacuate area.  

Special protective equipment for fire-fighters  
In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.  

**SECTION 6: Accidental Release Measures**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.  

Environmental precautions  
Discharge into the environment must be avoided.  
- Prevent further leakage or spillage if safe to do so.  
- Prevent spreading over a wide area (e.g. by containment or oil barriers)  
- Retain and dispose of contaminated wash water.  
- Local authorities should be advised if significant spillages cannot be contained.  

Methods and materials for containment and cleaning up  
Soak up with inert absorbent material.  
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.  

**SECTION 7: Handling and Storage**

Technical measures  
See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.  

Local/Total ventilation  
Use only with adequate ventilation.  

Advice on safe handling  
Do not get on skin or clothing.  
Avoid inhalation of vapor or mist. Do not swallow.  
Do not get in eyes.  
Handle in accordance with good industrial hygiene and safety practice. Keep away from water. Protect from moisture.  
Take care to prevent spills, waste and minimize release to the environment.  

Conditions for safe storage  
Keep in properly labeled containers.  
Store in accordance with the particular national regulations.  

Materials to avoid  
Do not store with the following product types:  
- Strong oxidizing agents
SECTION 8: Exposure Control

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethoxyoctylsilane</td>
<td>2943-75-1</td>
</tr>
<tr>
<td>Ethoxylated lauryl alcohol</td>
<td>9002-92-0</td>
</tr>
</tbody>
</table>

Occupational exposure limits of decomposition products

<table>
<thead>
<tr>
<th>Ingredients</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>Ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,900 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>OSHAZ-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,900 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>STEL</td>
<td>1,000 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Engineering measures
Processing may form hazardous compounds (see SECTION 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection
General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection Material Impervious gloves

Remarks
Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection Wear the following personal protective equipment:
Safety goggles

Skin and body protection Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.).
## Hygiene measures

Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding the use of silicones/organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)).

### SECTION 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>alcoholic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>100° C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 100° C</td>
</tr>
<tr>
<td>Method: Seta closed cup</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.94</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient:</td>
<td></td>
</tr>
<tr>
<td>n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Clear Guard® First Seal™
Safety Data Sheet

Viscosity
  Viscosity, dynamic  480 mPa.s

Explosive properties  Not explosive

Oxidizing properties  The substance or mixture is not classified as oxidizing.

Molecular weight  No data available

SECTION 10: Stability and Reactivity

Reactivity  Not classified as a reactivity hazard.

Chemical stability  Stable under normal conditions.

Possibility of hazardous reactions  Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid  Exposure to moisture.

Incompatible materials  Oxidizing agents
  Water

Hazardous decomposition products
  Contact with water or humid air  Ethanol
  Thermal decomposition  Formaldehyde

SECTION 11: Toxicological Information

Information on likely routes of exposure
  Inhalation
  Skin contact
  Ingestion
  Eye contact

Acute toxicity  Not classified based on available information.

Product:
  Acute oral toxicity  Acute toxicity estimate: > 5,000 mg/kg
  Method: Calculation method
**Ingredients:**

**Triethoxyoctylsilane:**
- **Acute oral toxicity:** LD50 (Rat): > 5,110 mg/kg
  - Assessment: The substance or mixture has no acute oral toxicity
- **Acute dermal toxicity:** LD50 (Rat): 6,730 mg/kg
  - Assessment: The substance or mixture has no acute dermal toxicity
  - Remarks: Based on test data

**Ethoxylated lauryl alcohol:**
- **Acute oral toxicity:** LD50 (Rat): > 2,000 mg/kg
  - Remarks: Based on data from similar materials
- **Acute inhalation toxicity:** LD50 (Rat): > 1.6 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Remarks: Based on data from similar materials
- **Acute dermal toxicity:** LOSO (Rat): > 2,000 mg/kg
  - Remarks: Based on data from similar materials

**Skin corrosion/irritation**
Causes skin irritation.

**Ingredients:**

**Triethoxyoctylsilane:**
- **Species:** Rabbit
- **Result:** Skin irritation
- **Remarks:** Based on test data

**Ethoxylated lauryl alcohol:**
- **Result:** No skin irritation
- **Remarks:** Based on data from similar materials

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

**Ingredients:**

**Triethoxyoctylsilane:**
- **Species:** Rabbit
- **Result:** No eye irritation
- **Remarks:** Based on test data

**Ethoxylated lauryl alcohol:**
- **Result:** Irreversible effects on the eye
- **Remarks:** Based on data from similar materials

**Respiratory or skin sensitization**
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.
Ingredients:

Ethoxylated lauryl alcohol:
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity
Not classified based on available information.

Ingredients:

Triethoxyoctylsilane:
Genotoxicity in vitro
Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Result: negative
Remarks: Based on test data

Ethoxylated lauryl alcohol:
Genotoxicity in vitro
Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity
Not classified based on available information.

IARC
No ingredient 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 ingredient 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 ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

Ingredients:

Triethoxyoctylsilane:
Effects on fertility
Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fertility
Remarks: Based on test data

Effects on fetal development
Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fetal development
Remarks: Based on test data
Reproductive toxicity

Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:**

**Triethoxyoctylsilane:**
Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Repeated dose toxicity**

**Ingredients:**

**Triethoxyoctylsilane:**
Species: Rat
Application Route: Ingestion
Remarks: Based on test data

**Ethoxylated lauryl alcohol:**
Species: Rat
NOAEL: >= 100 mg/kg
Application Route: Ingestion Exposure time: 90 d
Method: OECD Test Guideline 408
Remarks: Based on data from similar materials

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Ingredients:**

**Triethoxyoctylsilane:**
Remarks: Findings from a combined repeated-dose toxicity study with reproductive/developmental screening endpoints on n-octyltriethoxysilane have shown neurological effects in rats at high doses (1000 mg/kg). Paralysis and paresis of the limbs, and demyelination of the brain, spinal cord, sciatic and tibial nerves was noted in some animals.
## SECTION 12: Ecological Information

### Ecotoxicity

#### Ingredients:

**Triethoxyoctylsilane:**
- **Toxicity to daphnia and other aquatic invertebrates**
  - EC50 (Daphnia sp.): > 0.049 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202
  - Remarks: No toxicity at the limit of solubility

**Toxicity to algae**
- ErC50 (Pseudokirchneriella subcapitata (green algae)):
  - > 0.13 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - Remarks: No toxicity at the limit of solubility

**Ethoxylated lauryl alcohol:**
- **Toxicity to fish**
  - LC50 (Danio rerio (zebra fish)): > 1 - 10 mg/l
  - Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**
- EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials

**Toxicity to algae**
- EC50 (Pseudokirchneriella subcapitata (green algae)):
  - > 0.1 - 1 mg/l
  - Exposure time: 72 h
  - Remarks: Based on data from similar materials

- NOEC (Pseudokirchneriella subcapitata (green algae)):
  - > 0.1 - 1 mg/l
  - Exposure time: 72 h
  - Remarks: Based on data from similar materials

**M-Factor (Acute aquatic toxicity)**
- 1

**Toxicity to fish (Chronic toxicity)**
- NOEC (Lepomis macrochirus (Bluegill sunfish)): > 0.1 - 1 mg/l
  - Exposure time: 30 d
  - Remarks: Based on data from similar materials

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
- NO50 (Daphnia magna (Water flea)): > 0.1 - 1 mg/l
  - Exposure time: 21 d
  - Remarks: Based on data from similar materials

### Persistence and degradability

#### Ingredients:

**Triethoxyoctylsilane:**
- **Biodegradability**
  - Result: Not readily biodegradable.
  - Biodegradation: 31.5 %
  - Method: OECD Test Guideline 301D
  - Remarks: Based on test data

**Ethoxylated lauryl alcohol:**
- **Biodegradability**
  - Result: Rapidly degradable
  - Remarks: Based on data from similar materials
Bioaccumulative potential

**Ingredients:**

**Triethoxyoctylsilane:**
Partition coefficient: log Pow: 6.41
n-octanol/water Method: OECD Test Guideline 117

**Ethoxylated lauryl alcohol:**
Bioaccumulation Bioconcentration factor (BCF): < 500
Remarks: Based on data from similar materials

Mobility in soil
No data available

Other adverse effects
No data available

**SECTION 13: Disposal Considerations**

**Disposal methods**

Resource Conservation and Recovery Act (RCRA)
This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form

Waste from residues Dispose of in accordance with local regulations

Contaminated packaging Dispose of as unused product
Empty containers should be taken to an approved waste handling site for recycling or disposal

**SECTION 14: Transportation Information**

**International Regulation**

**UNRTDG**
Not regulated as a dangerous good

**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.

**Domestic regulation**

**49 CFR**
Not regulated as a dangerous good
SECTION 15: Regulatory Information

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper nitrate</td>
<td>3251-23-8</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*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

Acute Health Hazard

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 Minim is) reporting levels established by SARA Title III, Section 313

US State Regulations

Pennsylvania Right To Know

Water 7732-18-5 85 %
Triethoxyoctylsilane 2943-75-1 6 – 10 %
n-Octyl silsesquioxane ethoxy- and hydroxy- terminated 1096587-78-8 1 – 5 %

New Jersey Right To Know

Water 7732-18-5 85 %
Triethoxyoctylsilane 2943-75-1 6 – 10 %
n-Octyl silsesquioxane ethoxy- and hydroxy- terminated 1096587-78-8 1 – 5 %
Ethoxylated lauryl alcohol 9002-92-0 1 – 5 %
Polyethylene oxide lauryl ether 64-17-5 0.1 – 1 %
Ethanol

California Prop 65

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

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

KECI All ingredients listed, exempt or notified.

REACH All ingredients (pre-)registered or exempt.

TSCA All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

ENCS/ISHL All components are listed on ENCS/ISHL or exempted from inventory listing.
Clear Guard® First Seal™
Safety Data Sheet

PICCS
All ingredients listed or exempt.

DSL
This product contains one or more substances which are not on the Canadian Domestic Substances List (DSL). Import of this product into Canada has volume limitations.

NZIoC
All ingredients listed or exempt.

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

SECTION 16: Other Information

Further information

NFPA: Health Flammability Instability

HMIS III:

Full text of other abbreviations
ACGIH USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL USA. NIOSH Recommended Exposure Limits
OSHA Z-1 USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / STEL Short-term exposure limit
NIOSH REL / TWA Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA Z-1 / TWA 8-hour time weighted average

Sources of key data used to compile the Safety Data Sheet

Issue Date
6/14/2017

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.