SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: 
Product Name: V-81 Adhesive

1.2. Intended Use of the Product
Use of the substance/mixture: Sheet Flooring Adhesive

1.3. Name, Address, and Telephone of the Responsible Party
Mannington Mills, Inc.
P.O. Box 30
75 Mannington Mills Road
08079-0030 Salem, NJ USA
General Information: (856) 935-3000

1.4. Emergency Telephone Numbers:
Product/Medical Emergency Phone Number (24 Hours): (866) 359-5602
Transport Emergency:
Within the U.S. - CHEMTREC: (800) 424-9300
Outside the U.S. – CHEMTREC: +1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Eye Irrit. 2A
Causes serious eye irritation

Full text of H-phrases: see section 16

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US) : ⚠

Signal Word (GHS-US) : Danger
Hazard Statements (GHS-US) : H319 Causes serious eye irritation

Precautionary Statements (GHS-US) : P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264.2 Wash hands thoroughly after handling.
P280.8 Wear protective gloves/proective/clothing/eye/protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice attention
P337+P313 IF eye irritation persists: Get medical advice/attention.
P405 Store locked up.
P501.A.1 Dispose of contents/container in accordance with applicable regulations.

2.3. Other Hazards: This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it
does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a silica dust hazard).

2.4. Unknown Acute Toxicity (GHS-US) None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.A.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2. Mixture

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycidoxypropyltrimethoxysilane</td>
<td>CAS: 2530-83-8</td>
<td>1-5%</td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Silica Sand</td>
<td>CAS: 14808-60-7</td>
<td>0.1-1%</td>
<td>Carc. 1A, H350.A; STOT RE 1, H372A</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aid Measures General:
First-aid Measures After Inhalation:
First-aid Measures After Skin Contact: Immediately take off all contaminated clothing. Areas of the body that have - or are only even suspected of having come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath). Remove contaminated clothing immediately and dispose of safely. After contact with skin, wash immediately with soap and plenty of water.
First-aid Measures After Eye Contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Protect uninjured eye.
First aid Measures After Inhalation: Remove casualty to fresh air and keep warm and at rest.
First-aid Measures After Ingestion: Do not induce vomiting. Get medical attention, showing the SDS and the hazard label.

4.2. Most important symptoms/effects, acute and delayed
Symptoms/Injuries:
Symptoms/Injuries After Inhalation:
Symptoms/Injuries After Skin Contact:
Symptoms/Injuries After Eye Contact: Eye Irritation, Eye Damages
Symptoms/Injuries After Ingestion:

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Water, Carbon dioxide (CO2)
Unsuitable Extinguishing Media: None in particular

5.2. Special Hazards Arising From the Substance or Mixture
Do not inhale explosion and combustion gases. Burning produces heavy smoke.

5.3. Advice for Firefighters
Precautionary Measures Fire: Use suitable breathing apparatus.
Firefighting Instructions: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.
Protection During Firefighting:
Other Information:
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General measures:
- Wear personal protection equipment
- Remove persons to safety
- See Protective Measures under points 7 & 8

6.1.1. For Non-emergency Personnel
- Protective Equipment: N.A.
- Emergency Procedures: N.A.

6.1.2. For Emergency Responders
- Protective Equipment: N.A.
- Emergency Procedures: N.A.

6.2. Environmental Precautions

6.3. Methods and Material for Containment and Cleaning Up

Suitable material for taking up: absorbing material, organic sand. Wash with plenty of water.

Methods for Cleaning Up:

6.4. Reference to Other Sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
- Avoid contact with skin and eyes, inhalation of vapors and mists.
- Exercise the greatest care when handling or opening the container.
- Don’t use empty container before they have been cleaned.
- Before making transfer operations, assure that there aren’t any incompatible material residuals in the containers.
- Contaminated clothing should be changed before entering eating areas.
- Do not eat or drink while working.
- See also section 8 for recommended protective equipment.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: N.A.
Storage Conditions: N.A.
Incompatible Products: None in particular.
Storage Temperature: Adequately ventilated premises.

7.3. Specific End Use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

List of Components with OEL value:

<table>
<thead>
<tr>
<th>Component</th>
<th>OEL Type Country</th>
<th>Ceiling Long Term Mg/m$^3$</th>
<th>Long Term ppm</th>
<th>Short Term Long Term mg/m$^3$</th>
<th>Short Term ppm</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica Sand</td>
<td>ACGIH</td>
<td>0.025</td>
<td></td>
<td></td>
<td></td>
<td>A2- Suspected Human Carcinogen, lung cancer; pulmonary fibrosis</td>
</tr>
</tbody>
</table>

8.2. Exposure Controls

Appropriate Engineering Controls: N.A.

Hand Protection
- Use protective gloves that provide comprehensive protection, e.g. PVC, neoprene or rubber.

Eye Protection
- Use close fitting goggles, don’t use eye lens.

Skin and Body Protection
- Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Respiratory Protection: N.A.

Environmental Protection

Consumer Protection

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State: Liquid
Appearance: Paste beige
Odor: N.A.
Odor Threshold: N.A.
Mannington V-81 Adhesive
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**SECTION 10: STABILITY AND REACTIVITY**

10.1. **Reactivity:** Stable under normal conditions

10.2. **Chemical Stability:** Data Not Available

10.3. **Possibility of Hazardous Reactions:** None

10.4. **Conditions to Avoid:** Stable under normal conditions

10.5. **Incompatible Materials:** None in particular

10.6. **Hazardous Decomposition Products:** None
SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Toxicological Information of the mixture: There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute Toxicity</th>
<th>LD50 Oral Rat</th>
<th>LD50 Skin Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthenic oil</td>
<td>a) LC50 Inhalation Rat = 2,18000 mg/l 4h</td>
<td>&gt; 500,000,000 mg/kg</td>
<td>&gt; 2000,000,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral Rat</td>
<td>&gt; 500 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Silica Sand</td>
<td>a) LD50 Skin Rabbit &gt; 2000,000,000 mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

Toxicological information on main components of the mixture:

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- i) STOT-repeated exposure
- j) aspiration hazard

Substance(s) listed on the IARC Monographs:
- Silica Sand - Group 1

Substance(s) listed on the OSHA Carcinogen(s):
- Silica Sand

Substance(s) listed on the NIOSH Carcinogen(s):
- Silica Sand

Substance(s) listed on the NTP report on Carcinogen(s):
- Silica Sand

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Ecotoxicological information:

List of components with eco-toxicological properties:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Component</th>
<th>Ident. Numbr</th>
<th>Ecotox Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1-1%</td>
<td>Silica Sand</td>
<td>CAS: 14808-60-7</td>
<td>LC50 a) Aquatic acute toxicity carp &gt; 10000,00000 mg/L 72h</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability: N.A.

12.3. Bioaccumulative Potential: N.A.

12.4. Mobility in Soil: N.A.

12.5. Other Adverse Effects: N.A.

Other Information:

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations:

Waste Disposal Recommendations: Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.

Additional Information:
SECTION 14: TRANSPORT INFORMATION

14. TRANSPORT INFORMATION

UN number
ADR-UN number: N/A
DOT-UN Number: N/A
IATA-Un number: N/A
IMDG-Un number: N/A

UN proper shipping name
ADR-Shipping Name: N/A
DOT-Propor Shipping Name: N/A
IATA-Technical name: N/A
IMDG-Technical name: N/A

Transport hazard class(es)
ADR-Class: N/A
DOT-Hazard Class: N/A
IATA-Class: N/A
IMDG-Class: N/A

Packing group
ADR-Packing Group: N/A
DOT-Packing group: N/A
IATA-Packing group: N/A
IMDG-Packing group: N/A

Environmental hazards
Marine pollutant: No
Environmental Pollutant: N.A.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: N.A.

Special precautions
Department of Transportation (DOT):
DOT-Special Provision(s): N/A
DOT-Label(s): N/A
DOT-Symbol: N/A
DOT-Cargo Aircraft: N/A
DOT-Passenger Aircraft: N/A
DOT-Bulk: N/A
DOT-Non-Bulk: N/A

Road and Rail (ADR-RID):
ADR-Label: N/A
ADR-Hazard identification number: N/A
ADR-Tunnel Restriction Code: N/A

Air (IATA):
IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subrisk: N/A
IATA-Erg: N/A
IATA-Special Provisions: N/A

Sea (IMDG):
IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subrisk: N/A
IMDG-Special Provisions: N/A
Mannington V-81 Adhesive
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations
TSCA – Toxic Substances Control Act
TSCA Inventory: All components are listed on the TSCA inventory.

TSCA Listed substances:

- Glycidoxypropyltrimethoxysilane is listed in TSCA Section 8b
- Silica Sand is listed in TSCA Section 8b

SARA - Superfund Amendments and Reauthorization Act
Section 302 – Extremely Hazardous Substances: No substances listed
Section 304 - Hazardous Substances: No substances listed
Section 313: Toxic chemical list: No substances listed

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
Substances listed under CERCLA: No substances listed

CAA – Clean Air Act
CAA listed substances: No substances listed

CWA – Clean Water Act
CWA listed substances: No substances listed

USA – State specific regulations
California Proposition 65
Substance(s) listed under California Proposition 65: Silica Sand Listed as carcinogen

Massachussets Right to know
Substance(s) listed under Massachusetts Right to know: Silica Sand

Pennsylvania Right to know
Substance(s) listed under Pennsylvania Right to know: Silica Sand

New Jersey Right to know
Substance(s) listed under New Jersey Right to know: Silica Sand
Mannington V-81 Adhesive
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 3/29/16
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Code
H318
H319
H350.A

Description
Causes serious eye damage
Causes serious eye irritation
May cause cancer if inhaled

Safety Data Sheet dated 4/10/2015 – version 1
Product code: 2205
Additional classification information

HMIS Health: 1 = Slight
HMIS Health – Is health hazard chronic? : Yes
HMIS Flammability: 1 = Combustible if heated
HMIS Reactivity: 0 = Minimal
HMIS P.P.E.: Safety glasses, gloves
NFPA Health: 1 = Slight
NFPA Flammability: 1 = Combustible if heated
NFPA Reactivity: 0 = Minimal
NFPA Special Risk: N.A.

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer’s responsibility to ensure that its activities comply with Federal, State or provincial and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended. This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:
Mannington V-81 Adhesive
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

ADR: European Agreement concerning the International Carriage of Dangerous Goods by road.
RID: Regulation concerning the International Transport of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the International Air Transport Association (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the International Civil Aviation Organization (ICAO).
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
CLP: Classification. Labeling. Packaging.
EINECS: European Inventory of Existing Commercial Chemical Substances.
INCI: International Nomenclature of Cosmetic Ingredients.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
GefStofVVO: Ordinance on Hazardous Substances, Germany.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Timed Weighed Average 8 hour day. (ACGIH Standard).
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
WGK: German Water Hazard Class.
KSt: Explosion Coefficient.

GHS Full Text Phrases:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)