1: Chemical Product and Company Identification

PRODUCT NAME: Guardian Fiberglass Loosewool Insulation Products: CWI 36; Loft Guard Universal; Loft Guard Universal Ld

FORMULA: Preparation/Mixture

PRODUCT USE: This product is intended for use primarily as thermal insulation; also as sound insulation and/or sound absorption material.

MANUFACTURER’S NAME: Knauf Insulation, LLC
979 Batesville Rd. Suite B
Greer, SC 29651

SAFETY DATA SHEET COMPETENT PERSON: Don.Adam@knaufinsulation.com

EMERGENCY TELEPHONE: Chemtrec 24/7, USA: 1-800-424-9300
Chemtrec International: 703-527-3887
Information: 517-630-2072

DATE PREPARED: July 15, 2013
REVISION DATE: September 22, 2014

2: Hazards Identification

Regulation (EC) No 1272/2008

GHS Hazard Class
Eye Irritation -- Category 2
Skin Irritation -- Category 2
Specific Target Organ Toxicity – Single Exposure -- Category 2

Signal word: Warning

Hazard Statement:
Causes serious eye irritation
Causes skin irritation
May cause damage to organs—respiratory system

Precautionary Statements: Prevention
Wear eye/face protection
Wash hands thoroughly after handling
Wear protective gloves
Do not breathe dust/fuel/gas/mist/vapors/spray
Do not eat, drink, or smoke when using this product

Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: wash with plenty of soap and water
If skin irritation occurs, get medical advice/attention
Take off contaminated clothing and wash before reuse
If exposed or concerned: Call a POISON Center or doctor
If eye irritation persists: Get medical advice/attention

Storage
Store locked up

Disposal
Dispose of contents/container: Follow the waste disposal requirements of your country, state, or local authorities

Hazard Classification:
Not Classified As Hazardous Based On Iata, Imo And Dot.

Fire And Explosion:
Not Considered Flammable Or Combustible.

Potential Health Effects:
<5 % Of Mixture Consists Of Ingredients Of Unknown Acute Toxicity

Ingestion:
May Be Harmful If Swallowed.

Inhalation:
May Be Harmful If Inhaled. Causes Respiratory Tract Irritation.

Skin Contact:
Causes Skin Irritation.

Eye Contact:
Causes Eye Irritation.

Other:
None

Chronic Effects Of Overexposure:
None

Appearance:
Vitreous bonded and unbonded mineral wool supplied as loose fibre in bags.
NFPA Rating:

<table>
<thead>
<tr>
<th>Component</th>
<th>Health (Blue)</th>
<th>Flammability (Red)</th>
<th>Reactivity (Yellow)</th>
<th>Special (White)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guardian Fiberglass Loosewool</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>Insulation Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3: Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>PRODUCT COMPOSITION</th>
<th>APPRX %</th>
<th>ACGIH TLV</th>
<th>OSHA* PEL</th>
<th>EH40 WEL (UK)</th>
<th>NIOSH REL</th>
<th>CAS NO.</th>
<th>EINECS/REACH</th>
<th>DANGER SYMBOL</th>
<th>RISK PHRASE</th>
<th>DSL CANADA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert Vitreous silicate mineral wool</td>
<td>90-100</td>
<td>10 mg/m3</td>
<td>15 mg/m3</td>
<td>5 mg/m3 Total; 1 fibre/millitre Special purpose fibres</td>
<td>----</td>
<td>65997-17-3</td>
<td>266-046-0</td>
<td>----</td>
<td>----</td>
<td>Y</td>
</tr>
<tr>
<td>Water repellent</td>
<td>&lt;4</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>TS</td>
<td>Y/N</td>
<td>----</td>
<td>----</td>
<td>Y</td>
</tr>
</tbody>
</table>

Trade Secret (TS): Some items on this SDS may be designated as trade secrets. Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13. The full text for all R-Phrases is shown in Section 16.

*Particulates Not Otherwise Regulated (PNOR): All inert or nuisance dusts, whether mineral, inorganic or organic, not listed specifically by substance name are covered by this limit.

4: First Aid Measures

Special Instructions: Mechanical Irritation Of The Upper Respiratory Tract Or A Skin Irritation And Rash May Occur In Dusty Conditions. Seek Medical Advice If Irritation Persists.

Inhalation: Remove To Fresh Air. If Not Breathing, Provide Cpr (Cardio Pulmonary Resuscitation). Get Immediate Medical Attention.

Skin Contact: Flush Skin With Plenty Of Soap And Water. Remove Contaminated Clothing.

Eye Contact: Immediately Flush Eyes With Plenty Of Water For At Least 15 Minutes. Get Immediate Medical Attention.

Ingestion: If swallowed do not induce vomiting, give large quantities of water to drink. Never give anything to an unconscious person. Get immediate medical attention.

5: Fire-Fighting Measures

Flash Point: Not applicable

Flammable Limits In Air (% by vol): Not applicable

Extinguishing Media: Use water spray, foam, dry chemical or carbon dioxide

Special Fire-fighting Procedure: Fiberglass insulation is non-flammable but the plastic wrapping may decompose, smolder or burn in a fire or when heated above 300°C and may release toxic chemicals.

Unusual Fire And Explosion Hazards: Combustion will release carbon dioxide, carbon monoxide, hydrogen chloride and low levels of cyanides.

6: Accidental Release Measures

Action To Be Taken If Material Is Released Or Spilled:

Wear proper protective equipment as specified in Section 8: Exposure Controls/Personal Protection

Sweep up waste material and place material into a chemical waste container.

Avoid dust-generating means of clean up.

Small granules or dust should be collected using vacuum cleaning or by dampening with water prior to sweeping up.

Disposal Method: disposal should be collected using vacuum cleaning or by dampening with water prior to sweeping up.

7: Handling And Storage

Precautions To Be Taken In Handling And Storage:

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Store in original packaging away from sources of ignition.

Keep material dry and protect against moisture.

Use water spray to dampen area prior to sweeping or use vacuum cleaning.

Wear proper protective equipment and avoid contact with skin, eyes, or clothing.

Wash hands after handling this material.
Follow all applicable local regulations for handling and storage. Utilize chemical segregation.

Information On Emptied Container: N/A

Specific Uses: This product is intended for use as blowing wool fiberglass insulation. Used primarily as thermal insulation; also as sound insulation and/or sound absorption material.

8: Exposure Controls/Personal Protection

Exposure Limits: Reference Section 2
Ventilation: Use In Areas Of Adequate Ventilation.
Special Ventilation Controls: Special Ventilation Precautions Not Required
Respiratory Protection: Follow The Osha Respirator Regulations Found In 29 Cfr 1910.134 Or The Cen European Standards (Eu). Use A Niosh/Msha Or European Standard (En) Approved Respirator If Exposure Limits Are Exceeded Or If Irritation Or Other Symptoms Are Experienced. Recommend The Use Of A Niosh Approved Dust Mask Or Particulate Mask Respirator.
Protective Gloves: Recommend Use Of Gloves.
Eye Protection: Safety Glasses Or Goggles,
Protective Clothing: Wear Suitable Protective Clothing To Prevent Skin Contact.
Other Equipment: Make Eyewash Hand Washing Equipment Available In The Work Area.

9: Physical and Chemical Properties

Appearance - Color: Vitreous Bonded And Unbonded Mineral Wool Supplied As Loose Fibre In Bags.
Physical State: Solid
Odor: No Odor

<table>
<thead>
<tr>
<th>Product Criteria</th>
<th>Product Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor Threshold</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>PH</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Lower Explosive Limit, Upper Explosive Limit</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not available for product</td>
</tr>
<tr>
<td>Specific Gravity (@25°C):</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available for product</td>
</tr>
<tr>
<td>% Volatile by Volume</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Auto Ignition Temperature</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable for product</td>
</tr>
<tr>
<td>Melting Point</td>
<td>&gt;704° C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available for product</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>Not available for product</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Material is practically insoluble in water and generally chemically inert</td>
</tr>
<tr>
<td>Water solubility in the solvent</td>
<td>Not available for product</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available for product</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available for product</td>
</tr>
<tr>
<td>VOC content</td>
<td>Not available for product</td>
</tr>
</tbody>
</table>

10: Stability And Reactivity

Stability: Stable
Conditions To Avoid: None
11: Toxicological Information

<table>
<thead>
<tr>
<th>GHS Required Criteria</th>
<th>Toxicity Criteria</th>
<th>Toxicity Information</th>
<th>Comments</th>
<th>Chemical Constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
<td>No information is available.</td>
<td>NTP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 3: Not classifiable as to carcinogenicity to humans.</td>
<td>IARC</td>
<td></td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td></td>
<td>No information is available.</td>
<td>OSHA</td>
<td></td>
</tr>
<tr>
<td>STOST -- Single Exposure</td>
<td>Inhalation may cause respiratory irritation</td>
<td></td>
<td></td>
<td>Wool</td>
</tr>
<tr>
<td>STOST – Repeated Exposure</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td></td>
<td>No information is available.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STOST = Specific Target Organ Systemic Toxicity

Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

12: Ecological Information

<table>
<thead>
<tr>
<th></th>
<th>Toxicity Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradation:</td>
<td>No Information Is Available</td>
</tr>
<tr>
<td>Bioaccumulation:</td>
<td>No Information Is Available</td>
</tr>
<tr>
<td>Eco Toxicity:</td>
<td>No Information Is Available</td>
</tr>
<tr>
<td>Mobility:</td>
<td>No Information Is Available</td>
</tr>
</tbody>
</table>

Note: Not all of the ingredients have been tested for Ecotoxicity.

13: Disposal Considerations

Contaminated Packaging: Contaminated Packaging Material Should Be Disposed Of As Stated Above For Residues And Unused Product.

14: Transport Information

Dot Transport:
Dot Proper Shipping Name: Not Regulated
ADR = International Carriage Of Dangerous Goods By Road: Not Regulated
Rail Transport: Not Regulated
Sea Transport: Not Regulated
Air Transport: Not Regulated
IATA/ICAO Class:

15: Regulatory Information

Directive 67/548/EEC

LABEL FOR SUPPLY:
RISK PHRASES:  
- R-Phrase: R36 Irritating to Eyes
- R38 Irritating to Skin
- S-Phrase: S24 Avoid contact with Skin
- S25 Avoid contact with Eyes
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:
This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA Inventory.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:
This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS that are copied and distributed for the material. The Section 313 toxic chemicals contained in this product are: None

CALIFORNIA PROPOSITION 65:
This regulation requires a warning for California Proposition 65 chemical(s) under the statute. The California proposition 65 chemical(s) contained in this product are: None

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:
Florida Toxic Substance(s): Not listed
Massachusetts's hazardous substance(s): Not listed
Pennsylvania hazardous substance code(s): Not listed
New Jersey Not listed
Illinois Not listed
Michigan Not listed

CANADA:
This MSDS/SDS will be non-compliant 3 years after the issue date. This SDS contains all of the information required by the Controlled Products Regulations (CPR).

WHMIS-INFORMATION:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), SOR/88-66, current to February 20, 2012. The classes of controlled products listed in the CPR, Section 32, Part IV, have been reviewed and based on Professional Judgment this product has been determined not to be WHMIS controlled.

EUROPEAN UNION:
This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Directive 67/548/EEC, Regulation (EC) No 1272/2008 on classification, labeling and packaging (CLP) of substances and mixtures.

16: Other Information

European Community Hazards Identification:
R: None
S: None
Danger Symbol(s): None
Revision Comments: Initial version July 19, 2013
Revision Number: 0
Information Sources: RTECS, REACH, OSHA 29CFR 1910.1200

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Revised October 2014