SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer’s name and address: The W.W. Henry Company
400 Ardex Park Drive
Aliquippa, PA 15001 USA

Supplier’s name and address: Refer to Manufacturer

Information Telephone No.: (724) 203-8000
Website Address: http://www.wwhenry.com
24 Hr Emergency Telephone #: CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)
Product Identifier: Henry® 422 Fortify™ Premium Vinyl-Backed Flooring Adhesive

Product ID No.: 70115032
Trade Name/Synonyms: Henry 422 F
Material Use: Adhesive for installing vinyl tile and plank flooring.
Uses Advised Against: No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)
Skin corrosion/irritation; Category 2
Serious eye damage/eye irritation; Category 2B
Specific target organ toxicity, repeated exposure; Category 2

GHS Pictograms

Signal Word
Warning.

Hazard Statements
Causes skin irritation.
Causes eye irritation.
May cause damage to organs <Blood, kidney, liver, thyroid, nervous system, respiratory tract> through prolonged or repeated exposure.

Precautionary Statements
Do not breathe dust/vapors. Wear protective gloves/protective clothing/eye protection. Wash hands and exposed skin thoroughly after handling. Take off contaminated clothing and wash before reuse. Do not subject to grinding. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

During normal usage of the product as recommended, airborne dusts and mists will not be present. See Section 7 (Handling and Storage) for further details.

Hazards Not Otherwise Classified
None
% With Unknown Acute Toxicity: Less than 1% by weight of this product is comprised of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>% (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>122-99-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>0.1 - 1.0</td>
</tr>
</tbody>
</table>

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

**Note: Crystalline Silica (quartz) is not intentionally added to this product, but is a naturally occurring component in Limestone.

SECTION 4 – FIRST AID MEASURES

General : Call a Poison Center or doctor if you feel unwell.
Inhalation : Remove person to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: call a doctor/physician.
Skin contact : Remove/Take off immediately all contaminated clothing. Rinse affected skin with soap and water. In case of skin irritation or rash, seek medical attention/advice.
Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
Ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
Notes for Physician : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

_Inhalation_ : May cause minor, temporary irritation to respiratory tract. Symptoms may include coughing and shortness of breath. Inhaling large amounts of vapor may cause central nervous system depression (dizziness, incoordination, nausea, headache, vomiting, or unconsciousness).

_Skin_ : May cause skin irritation. Symptoms may include redness and itching.

_Eyes_ : Causes irritation to eyes. Symptoms may include redness, itching, blurred vision or pain.

_Ingestion_ : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur. Ingestion of large amounts may cause central nervous system depression.

Effects of long-term (chronic) exposure

: Prolonged inhalation may cause adverse lung effects with symptoms including coughing and shortness of breath. May cause effects in blood, kidney, liver, thyroid, nervous system, and respiratory tract.

Indication of need for immediate medical attention or special treatment

: Difficulty breathing persists after removing the person to fresh air.
  Any exposure to the eye which causes irritation.
  Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide, dry chemical powder, appropriate foam or water fog.
Unsuitable extinguishing media : water jet
Hazardous combustion products : Carbon monoxide, carbon dioxide, and other toxic vapors and gases that are common to thermal degradation of organic compounds.
Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment
exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

Environmental precautions: Do not allow material to enter drains or contaminate ground water system.

Fire hazards/conditions of flammability: Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.


SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.

Protective equipment: Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Emergency Procedures: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). US CERCLA Reportable quantity (RQ): None reported.

Methods and materials for containment and cleaning up: Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal. (See Section 13.) Residual of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.

Prohibited materials: Avoid strong oxidizing agents.

Environmental precautions: Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.

Reference to other sections: See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

Safe handling procedures: Observe good hygiene standards. Use only with adequate ventilation. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Avoid repeated or prolonged skin contact. Do not breathe vapors or mists of this product. Sanding and grinding dusts may be harmful if inhaled. When removing this product from existing flooring (i.e. during a renovation), wear safety goggles and respiratory protection from dust due to blasting, chipping, or mechanically pulverizing. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse. Keep container tightly closed.

Storage requirements: Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.

Incompatible materials: See Section 10.

Special packaging materials: Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits: No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>ACGIH TLV TWA</th>
<th>STEL</th>
<th>OSHA PEL PEL</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>TLV</td>
<td>N/Av</td>
<td>15 mg/m³</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>ACGIH TLV TWA</th>
<th>STEL</th>
<th>OSHA PEL PEL</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>TLV</td>
<td>N/Av</td>
<td>15 mg/m³</td>
<td>N/Av</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>CAS Number</td>
<td>Withdrawn In 2007</td>
<td>PEL (Total dust); 5 mg/m³ (respirable)</td>
<td>Final rule limit</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------</td>
<td>-------------------</td>
<td>---------------------------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>122-99-6</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
<td></td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td>0.05 mg/m³ (respirable)</td>
<td>N/Av</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Controls**: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor generated from the handling of this product.

**Personal Protection Equipment**

**Eye / face protection**: Chemical goggles must be worn when using this product. Additionally, a face shield is recommended if splashing is possible.

**Skin protection**: Wear chemical resistant protective clothing and impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended.

**Body protection**: Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

**Respiratory protection**: If work process generates excessive quantities of vapor, or exposures in excess of any PEL, wear an appropriate organic vapor respirator. For exposure to dust, wear a N-95 or better NIOSH approved dust mask.

**Site safety equipment**: An eyewash station and safety shower should be made available in the immediate working area.

**General hygiene considerations**: Avoid contact with eyes, skin and clothing. Do not breathe vapors/dust. Clean all equipment and clothing at end of each work shift.

### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state**: Paste  
  - **Appearance**: Off-white to beige paste

- **Odor**: Mild odor  
  - **Odor threshold**: N/Av

- **pH**: 8 – 9  
  - **Specific gravity**: 1.35

- **Boiling point**: > 212°F (> 100°C)  
  - **Coefficient of water/oil distribution**: N/Av

- **Melting/Freezing point**: N/Av  
  - **Solubility in water**: Miscible

- **Vapor pressure (mm Hg @ 20°C / 68°F)**: N/Av  
  - **Evaporation rate (n-Butyl acetate = 1)**: N/Av

- **Vapor density (Air = 1)**: N/Av  
  - **Volatiles (% by weight)**: 28 – 30 (includes water)

- **Volatile Organic Compounds (VOCs)**: 83 g/L SCAQMD Rule 1168

- **Particle size**: N/Av  
  - **Flammability classification**: Not flammable

- **Flash point**: >200°F (93.3°C)  
  - **Lower flammable limit (% by vol)**: Not available

- **Flash point method**: Setaflash closed  
  - **Upper flammable limit (% by vol)**: Not available

- **Auto-ignition temperature**: N/Av  
  - **Decomposition temperature**: Not available

- **Viscosity**: Not available  
  - **Oxidizing properties**: Not available

**Explosion data**: Sensitivity to mechanical impact / static discharge  
- **Sensitivity to mechanical impact or static discharge**: Not expected to be sensitive to mechanical impact or static discharge.

### SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- **Reactivity**: Does not react.

- **Stability**: Stable under the recommended storage and handling conditions prescribed.

- **Hazardous reactions**: Hazardous polymerization does not occur.

- **Conditions to avoid**: High temperatures.

- **Materials to avoid and incompatibility**: Oxidizing agents.

- **Hazardous decomposition products**: None known, refer to hazardous combustion products in Section 5.
SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of exposure
: Inhalation: YES  Skin Absorption: YES  Skin and Eyes: Yes  Ingestion: YES

Symptoms of exposure
: See Section 4.

Calculated Acute Toxicity Estimates for the Product

<table>
<thead>
<tr>
<th>Route</th>
<th>LC50 (4 hr) Inhalation, rat, mg/L</th>
<th>LD50 Oral, rat, mg/kg</th>
<th>LD50 Dermal, rabbit, mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>N/Av</td>
<td>6450</td>
<td>N/Av</td>
</tr>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>&gt; 1*</td>
<td>1260</td>
<td>5000</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

*No deaths occurred after 6 hours inhalation exposure to 1 mg/L aerosol of Ethylene glycol monophenyl ether.

Toxicological data
: There are no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Skin corrosion or irritation
: May cause slight irritation to skin.

Serious eye damage / eye irritation
: May cause irritation to eyes.

Respiratory or skin sensitization
: None known.

Germ cell mutagenicity
: None known.

Carcinogenic status
: Not considered to be a hazard. During normal usage of the product as recommended, airborne dusts will not be present. Do not sand off excess material, following initial application. When removing adhesive from existing flooring (i.e. during a renovation), do not mechanically remove under dry conditions (e.g. blasting, chipping, mechanically pulverizing).

Reproductive toxicity
: None known.

Specific Target Organ Toxicity, Single Exposure
: Exposure to very high concentrations of vapor or ingestion of large amounts may cause Central Nervous System effects.

Specific Target Organ Toxicity, Repeated Exposure
: In animal studies, Ethylene glycol monophenyl ether is reported to have caused toxic effects in blood, kidney, liver, thyroid, nervous system, and respiratory tract.

Aspiration hazard
: None known.

Additional information
: N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects
: The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicity
: No data available.

Biodegradability
: No data available.

Bioaccumulative potential
: No data available.

Mobility in soil
: No data available.

PBT and vPvB assessment
: No data available.

Other adverse effects
: No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal
: Handle waste according to recommendations in Section 7.

Methods of disposal
: Dispose of this product according to applicable federal, state, and local regulations. Contact your local, provincial or federal environmental agency for specific regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
Packaging: Handle contaminated packaging in the same manner as the product.

RCRA: For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN Number</th>
<th>Shipping Name</th>
<th>Class</th>
<th>Packing Group</th>
<th>Label</th>
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<tbody>
<tr>
<td>TDG</td>
<td>None</td>
<td>This product is not regulated according to Canadian TDG regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>TDG Additional Information</td>
<td>None</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49 CFR/DOT</td>
<td>None</td>
<td>This product is not regulated according to US DOT regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<tr>
<td>49 CFR/DOT Additional Information</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IATA: Not regulated for Air Transport

IMDG: Not regulated for Ocean Transport

SECTION 15 – REGULATORY INFORMATION

Canadian Information:
This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.
Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:
TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Immediate (Acute) Health Hazard
Chronic Health Hazard.
Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is subject to SARA notification requirements. It contains: Ethylene glycol monophenyl ether; CAS # 122-99-6.

U.S. State Right To Know Laws
California Proposition 65: WARNING: This product can expose you to chemicals including Ethyl acrylate, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Other State Right to Know Laws:

<table>
<thead>
<tr>
<th>Ingredient on State RTK Law?</th>
<th>CAS #</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>NY</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethylene glycol monophenyl ether</td>
<td>122-99-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
SECTION 16 – OTHER INFORMATION

HMIS Rating

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Recommended PPE: Gloves, safety glasses

Legend

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH:</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS:</td>
<td>Chemical Abstract Services</td>
</tr>
<tr>
<td>CERCLA:</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</td>
</tr>
<tr>
<td>CFR:</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>DOT:</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>DSL:</td>
<td>Domestic Substances List</td>
</tr>
<tr>
<td>EPA:</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>GHS:</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>HPR:</td>
<td>Hazardous Products Regulations</td>
</tr>
<tr>
<td>IARC:</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>Inh:</td>
<td>Inhalation</td>
</tr>
<tr>
<td>N/Av:</td>
<td>Not Available</td>
</tr>
<tr>
<td>N/Ap:</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>NIOSH:</td>
<td>National Institute of Occupational Safety and Health</td>
</tr>
<tr>
<td>NTP:</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA:</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL:</td>
<td>Permissible exposure limit</td>
</tr>
<tr>
<td>RCRA:</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SARA:</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>STEL:</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>TDG:</td>
<td>Canadian Transportation of Dangerous Goods Act &amp; Regulations</td>
</tr>
<tr>
<td>TLV:</td>
<td>Threshold Limit Values</td>
</tr>
<tr>
<td>TSCA:</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>TWA:</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>WHMIS:</td>
<td>Workplace Hazardous Materials Identification System</td>
</tr>
</tbody>
</table>

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

No warranty of any kind is given or implied. The W.W. Henry Company will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

Prepared By:
The W.W. Henry Company
400 Ardex Park Drive
Aliquippa, PA, U.S.A.
15001

(724) 203-8000
Visit our Website: http://www.wwhenry.com

Revision date: 12-Jan-2018

End of Document