MATERIAL SAFETY DATA SHEET

Section 1 - Identification

Manufacturer’s name and address: The W.W. Henry Company
400 Ardex Park Drive
Aliquippa, PA, U.S.A.
15001
Information Telephone No.: (724) 203-8499
Visit our Website: http://www.wwhenry.com
24 Hr. Emergency Tel #: CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)

Product Identifier: Henry 317 Multipurpose Construction Adhesive

Chemical Name: N/A
Chemical Family: Mixture.
Trade Name/Synonyms: Henry® 317
Material Use: Filled, water-based adhesive.

HMIS Rating:
Health: *2
Reactivity: 0
Flammability: 1

SECTION 2 - HAZARDS IDENTIFICATION

WHMIS classification: Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material); Class D2B (Materials Causing Other Toxic Effects, Toxic Material).
OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200). Hazardous classification: Acute Health Hazard; Chronic Health Hazard.

Emergency overview: Off white paste. Mild solvent odour.
Warning! May be harmful if inhaled or swallowed. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. May be an aspiration hazard. Aspiration may occur during swallowing or vomiting, resulting in lung injury. Causes eye irritation. May cause skin and respiratory irritation. Developmental hazard. Contains material which may adversely affect the developing fetus, based on animal data.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation: May cause irritation to the nose, throat and upper respiratory tract. Inhaling high concentrations may cause central nervous system depression, with effects ranging from dizziness and headache to unconsciousness.

Skin: May cause mild to moderate irritation. Product may be absorbed.

Eyes: May cause moderate to severe irritation.

Ingestion: May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

Carcinogenic status: See TOXICOLOGICAL INFORMATION, Section 11.
Additional health hazards: Developmental hazard. See TOXICOLOGICAL INFORMATION, Section 11.
Potential environmental effects: See ECOLOGICAL INFORMATION, Section 12.
**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>Wt.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>64742-89-8</td>
<td>1.00 - 5.00</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>0.50 - 1.50</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>30.00 - 60.00</td>
</tr>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>1.00 - 5.00</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>5.00 - 10.00</td>
</tr>
<tr>
<td>Nonyl phenol ethoxylate</td>
<td>9016-45-9</td>
<td>1.00 - 5.00</td>
</tr>
<tr>
<td>Ethanolamine</td>
<td>141-43-5</td>
<td>0.10 - 1.00</td>
</tr>
</tbody>
</table>

**SECTION 4 - FIRST AID MEASURES**

**Inhalation**: If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

**Skin contact**: Remove contaminated clothing. Wash off with soap and plenty of water. Get medical attention.

**Eye contact**: For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention.

**Ingestion**: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.

**Notes For Physician**: Treat symptomatically.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Fire hazards/conditions of flammability**: Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Vapours are heavier than air and collect in confined and low-lying areas. Vapour can travel considerable distance and flashback to a source of ignition. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Flammability classification (OSHA 29 CFR 1910.1200)**: Combustible Liquid Class III B.

**Oxidizing properties**: None.

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

**Suitable extinguishing media**: Dry chemical, foam, carbon dioxide and water fog. Do not use a solid water stream as it may scatter and spread fire.

**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.

**Hazardous combustion products**: Carbon oxides; Aldehydes; Hydrocarbons; other unidentified organic compounds.

**NFPA Rating**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

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

**Environmental precautions**: Do not allow product to enter waterways. Do not allow material to contaminate ground water system.
Spill response/cleanup: Ventilate area of release. Eliminate all ignition sources. Stop spill or leak at source if safely possible. Contain material, preventing it from entering sewer lines or waterways. Use inert, non-combustible absorbents to assist the pick up of material. Scrape up product and place it into a container for disposal. Refer to Section 13 for disposal of contaminated material. Residual of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.

Prohibited materials: Do not use combustible absorbents, such as sawdust.

Special spill response 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): Toluene (1000 lbs / 454 kg).

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures: Wear suitable protective equipment during handling. Use with adequate ventilation. Training the workers on the potential health hazards associated with product vapor, dust or fume is important. Secondary inhalation exposures could occur when cleaning equipment, or when removing or laundering the clothing. Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Keep away from oxidizing materials. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements: Store in a cool, dry, well-ventilated area. No smoking in the area. Do not store near any incompatible materials (see Section 10). Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Protect against physical damage. Recommended storage temperature: < 32.2°C (90°F).

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

Exposure Limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>20 ppm</td>
<td>N/Av</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limestone</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Urea</td>
<td>10 mg/m³ (AIHA WEEL)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>5 mg/m³ (As 'Oil mist, mineral')</td>
<td>N/Av</td>
</tr>
<tr>
<td>Nonyl phenol ethoxylate</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Ethanolamine</td>
<td>3 ppm</td>
<td>6 ppm</td>
</tr>
</tbody>
</table>

*Note: The OSHA PEL’s listed above for Solvent naphtha (petroleum), light aliphatic are final rule / vacated values, and are for ‘VM&P Naphtha’.

Ventilation and engineering measures: Use with adequate ventilation. Provide adequate cross air circulation. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection: Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended.

Skin protection: Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye / face protection: Safety goggles or glasses as appropriate for the job.
Other protective equipment: Wear sufficient clothing to prevent skin contact. 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. Avoid breathing vapors, fumes or dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| Physical state | paste |
|Odour| Mild solvent odour.|
|pH| 9.45|
|Boiling point| 100°C (212°F)|
|Melting/Freezing point| N/Av|
|Vapour pressure (mmHg @ 20° C / 68° F)| N/Av|
|Vapour density (Air = 1)| > 1|
|Volatile organic Compounds (VOC’s)| 47 - 61 g/L (calculated at 21°C / 70°F, SCAQMD)|
|Particle size| N/Av|
|Flash point| > 93.3°C (200°F)|
|Flash point Method| Setaflash Closed Tester|
|Evaporation rate (n-Butyl acetate = 1)| < 1|
|Vapour density (Air = 1)| N/Av|
|Flame Projection Length| Not applicable.|

SECTION 10 - REACTIVITY AND STABILITY DATA

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

Hazardous polymerization: Hazardous polymerisation does not occur.

Conditions to avoid: Extreme heat. Temperatures above: 32.2°C (90°F).

Materials To Avoid And Incompatibility: Oxidizing agents.

Hazardous decomposition products: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs: Eyes, skin, respiratory system, central nervous system, liver and kidneys.

Routes of exposure: Inhalation: YES Skin Absorption: YES Skin & Eyes: YES Ingestion: YES

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

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>LC50(4hr)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>inh, rat</td>
<td>oral</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Toluene</td>
<td>7585 ppm</td>
<td>5580 mg/kg (rat)</td>
</tr>
<tr>
<td>Limestone</td>
<td>N/Av</td>
<td>6450 mg/kg (rat)</td>
</tr>
<tr>
<td>Urea</td>
<td>N/Av</td>
<td>8471 mg/kg (rat)</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>2.18 mg/L (mist)</td>
<td>&gt; 5000 mg/kg (rat)</td>
</tr>
</tbody>
</table>
Nonyl phenol ethoxylate | N/Av | 1310 mg/kg (rat) | 2 mL/kg (rabbit)  
Ethanolamine | N/Av | 1720 mg/kg (rat) | 1000 mg/kg (rabbit)  

Carcinogenic status: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects: None known.

Teratogenicity: Contains Toluene. Toluene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.

Mutagenicity: None known.

Epidemiology: Not available.

Sensitization to material: Not expected to be a skin or respiratory sensitizer.

Synergistic materials: N/Av

Irritancy: Mild to moderate skin irritant. Moderate to severe eye irritant.

Other important hazards: See Section 2 for additional information.

Conditions aggravated by overexposure: Pre-existing skin, eye and respiratory disorders.

**SECTION 12 - ECOLOGICAL INFORMATION**

Ecotoxicity: No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Mobility: No data is available on the product itself.

Persistence: No data is available on the product itself.

Bioaccumulation potential: None known.

Other Adverse Environmental effects: None known.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

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

Methods of Disposal: Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

RCRA: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. 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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</thead>
<tbody>
<tr>
<td>TDG</td>
<td>None</td>
<td>Not regulated</td>
<td>not regulated</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>TDG Additional information</td>
<td>None.</td>
<td></td>
<td></td>
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<tr>
<td>49CFR/DOT</td>
<td>None</td>
<td>Not regulated</td>
<td>not regulated</td>
<td>none</td>
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<tr>
<td>49CFR/DOT Additional information</td>
<td>None.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 15 - REGULATORY INFORMATION**

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).
Canadian WHMIS Classification: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

US Federal Information:

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

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Toluene (1000 lbs / 454 kg).

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations. Contains: Toluene.

US State Right to Know Laws:

California Proposition 65: This product contains a chemical known to the State of California to cause developmental harm. Contains: Toluene.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: Toluene (CA, MA, MN, NJ, PA, RI); Ethanolamine (CA, MA, MN, NJ, PA, RI); Urea (MN); Limestone powder (MA, MN, NJ, PA, RI).

SECTION 16 - OTHER INFORMATION

Legend:

ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
COC: Cleveland Open Cup
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
IARC: International Agency for Research on Cancer
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References:

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2009.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2009 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - October 2006 version.
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. This Material Safety Data Sheet is valid for three (3) years.

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(M)SDS sections updated:
  2. HAZARDS IDENTIFICATION;
  3. COMPOSITION/INFORMATION ON INGREDIENTS;
  5. FIRE-FIGHTING MEASURES;
  8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
  9. PHYSICAL AND CHEMICAL PROPERTIES;
 11. TOXICOLOGICAL INFORMATION;
 12. ECOLOGICAL INFORMATION;
 15. REGULATORY INFORMATION.

END OF DOCUMENT