

MATERIAL SAFETY DATA SHEET

Section 1 - Identification

Manufacturer's name and address:

HENRY.

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 444 FRP Panel Adhesive**

Chemical Name : N/Ap

Chemical Family : Mixture.

Chemical Formula : N/Ap

Trade Name/Synonyms : Henry 444

Molecular Weight : N/Ap

Material Use : Filled, latex-based adhesive. Adhesive for the installation of fiberglass-reinforced plastic panels.

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious

Health: *1 *Flammability:* 1 *Reactivity:* 0

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: 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). WHMIS classification:
Class D2A (Materials Causing Other Toxic Effects, Very 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.
Caution! May be harmful if inhaled or swallowed. May cause respiratory irritation. May cause nausea, vomiting, headache and other central nervous system effects. May be an aspiration hazard. Prolonged or repeated skin contact may cause drying and irritation. Contains particles which may cause lung damage or cancer if inhaled in large quantities. Possible birth defect hazard - contains material that may cause birth defects, 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 : Direct skin contact may cause slight or mild, transient irritation.

Eyes : May cause mild transient irritation.

Ingestion : Ingestion of large amounts may cause stomach irritation. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system. 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

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin. If dusts are formed, prolonged inhalation may cause scarring of lung tissue, a disease called silicosis.

Carcinogenic status : Possible cancer hazard See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : May cause birth defects. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Limestone	1317-65-3	30.00 - 60.00
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5.00 - 10.00
Solvent naphtha (petroleum), light aliphatic	64742-89-8	1.00 - 3.00
Crystalline silica, quartz	14808-60-7	0.10 - 0.50
potassium hydroxide	1310-58-3	0.10 - 0.30
Urea	57-13-6	1.00 - 5.00
toluene	108-88-3	0.10 - 1.00

Note: This product does NOT contain asbestos.

SECTION 4 - FIRST AID MEASURES

- Inhalation** : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stopped, begin artificial respiration. If irritation or symptoms develop, seek medical attention.
- Skin contact** : Remove contaminated clothing. Wash off with soap and plenty of water. If irritation persists, seek prompt medical attention.
- Eye contact** : Immediately flush eyes with plenty of 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. Obtain medical attention immediately. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

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.

Flammability classification (OSHA 29 CFR 1910.1200)

- : Non-flammable.

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 water jet, as this may spread burning material.

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 monoxide, carbon dioxide, calcium oxides, nitrogen oxides and other toxic vapors and gases, that are common to thermal degradation of organic compounds.

NFPA Rating

- | | | | |
|------------------|------------------------|-----------------------|-------------------------------|
| 0 - Minimal | 1 - Slight | 2 - Moderate | 3 - Serious |
| <hr/> | | | |
| <i>Health:</i> 1 | <i>Flammability:</i> 1 | <i>Instability:</i> 0 | <i>Special Hazards:</i> None. |

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. Residual of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.
- Prohibited materials** : None known.
- 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): Not applicable.

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. Avoid and control operations which create high vapor or dust concentrations. 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. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Protect against physical damage.
- Incompatible materials** : Oxidizing agents; Acids; Alkalies.
- 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

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Limestone	N/Av	N/Av	15 mg/m ³ (total dust); 5 mg/m ³ (respirable)	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m ³ (inhalable) (As 'Oil mist, mineral')	N/Av	5 mg/m ³ (As 'Oil mist, mineral')	N/Av
Solvent naphtha (petroleum), light aliphatic	N/Av	N/Av	500 ppm	N/Av
Crystalline silica, quartz	0.025 mg/m ³ (respirable)	N/Av	0.1 mg/m ³ (final rule limit)	N/Av
potassium hydroxide	2 mg/m ³ (Ceiling)	N/Av	2 mg/m ³ (Ceiling) (final rule limit)	N/Av
Urea	10 mg/m ³ (AIHA WEEL)	N/Av	N/Av	N/Av
toluene	20 ppm	N/Av	200 ppm	300 ppm (Ceiling)

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** : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators.
- Skin protection** : Where contact is likely, impervious gloves are recommended. Advice should be sought from glove suppliers.
- Eye / face protection** : Safety glasses with side shields should be used with this product.
- 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	Appearance	: Off white
Odour	: Mild solvent odour.	Odour threshold	: N/Av
pH	: 8.8 - 9.4	Specific gravity	: 1.4
Boiling point	: N/Av	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: dispersible
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Vapour density (Air = 1)	: N/Av	Volatiles (% by weight)	: 26.0 - 29.5%
Volatile organic Compounds (VOC's)	: 50 g/L (calculated at 21°C / 70°F, SCAQMD)	General Info.	: Weight / Gallon: 11.54 lb. (water = 8.3)
Particle size	: N/Av	Auto-ignition temperature	: N/Av
Flash point	: > 93.3°C (> 200°F)	Upper flammable limit (% by vol.)	: Not available.
Flash point Method	: Setaflash Closed Tester	Flashback observed	: N/Av
Lower flammable limit (% by vol.)	: Not available.		
Flame Projection Length	: N/Av		

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. Do not use in areas without adequate ventilation.
- Materials To Avoid And Incompatibility** : Strong oxidizing agents, acids and bases.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

- Target organs** : Eyes, skin, respiratory system and digestive system.
- Routes of exposure** : *Inhalation*: YES *Skin Absorption*: NO *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.

Ingredients	LC₅₀(4hr) inh, rat	LD₅₀	
		oral	dermal
Limestone	N/Av	6450 mg/kg	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	> 4 mg/L	> 5000 mg/kg	> 2000 mg/kg

Solvent naphtha (petroleum), light aliphatic	N/Av	> 8000 mg/kg	3000 mg/kg
Crystalline silica, quartz	N/Av	N/Av	N/Av
potassium hydroxide	N/Av	205 mg/kg	> 1260 mg/kg
Urea	N/Av	8471 mg/kg	> 21,000 mg/kg
toluene	7585 ppm	5580 mg/kg	12,125 mg/kg

- Carcinogenic status** : This product contains Crystalline silica - Quartz. Crystalline silica - Quartz is classified as carcinogenic by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen).
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : Contains Toluene. Toluene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : N/Av
- Irritancy** : May be mildly irritating to eyes and skin.
- other important hazards** : See Section 3 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** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

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

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None	Not regulated.	Not regulated	none	
49CFR/DOT Additional information	None.				

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: 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): Not applicable.

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.

US State Right to Know Laws:

California Proposition 65: This product contains chemicals known to the State of California to cause cancer and/or reproductive harm. Contains: Crystalline silica, quartz; Toluene. This product may contain trace levels of the following ingredients: Naphthalene; Ethylbenzene; Ethyl acrylate .

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

SECTION 16 - OTHER INFORMATION**Legend**

: ACGIH: American Conference of Governmental Industrial Hygienists
 AIHA: American Industrial Hygiene Association
 CA: California
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CFR: Code of Federal Regulations
 DOT: Department of Transportation
 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
 TWA: Time Weighted Average
 WEEL: Workplace Environmental Exposure Level
 WHMIS: Workplace Hazardous Materials Identification System

- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2011.
 2. International Agency for Research on Cancer Monographs, searched 2011.
 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2011 (Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.
 5. US EPA Title III List of Lists October 2006 version.
 6. California Proposition 65 List April 15, 2011 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.

Prepared By:

The W.W. Henry Company

400 Ardex Park Drive
Aliquippa, PA, U.S.A.
15001

(724) 203-8499

Visit our Website: <http://www.wwhenry.com>

MSDS Preparation Date (dd/mm/yyyy)

: 20/02/2007

MSDS Reviewed Date (dd/mm/yyyy)

: 27/04/2011

Revision No.

: 2

Revision Information

- : Sections 2 and 3, switched.
(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