

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : **Henry® 444 FRP Panel Adhesive**
Product ID No. : 70010462
Trade Name/Synonyms : Henry 444
Material Use : Adhesive for installing fiberglass-reinforced plastic panels.
Restrictions on Use : For indoor use only. Use only as recommended on Technical Data Sheet.
Manufacturer's name and address:



ARDEX L.P.
400 Ardex Park Drive
Aliquippa, PA 15001 USA

Information Telephone No. : (724) 203-8000
Website Address : <http://www.ardexamericas> or <http://www.wwhenry.com>
24 Hr Emergency Telephone # : CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)

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, single exposure; Narcotic effects; Category 3
Reproductive toxicity; Category 2
Specific target organ toxicity, repeated exposure; Category 2

GHS Pictograms



Signal Word

Warning!

Hazard Statements

Causes skin irritation.
Causes eye irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause damage to organs <kidneys, lungs, liver, heart, central nervous system (CNS), eye, thyroid, and pituitary gland > through prolonged or repeated exposure.

Precautionary Statements

Do not handle until all safety precautions have been read and understood. Do not breathe dust/vapors. Use only outdoors or in a well-ventilated area. 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. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified

None

% With Unknown Acute Toxicity : 8% by weight of this product is comprised of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Limestone	1317-65-3	30 - 60
Solvent naphtha (petroleum), light aliphatic	64742-89-8	1 - 5
Sepiolite Clay	63800-37-3	1 - 5
Nonylphenol, poly(ethylene oxide)	9016-45-9	0.1 - 1.0
Toluene	108-88-3	0.1 - 1.0
Crystalline silica, quartz**	14808-60-7	0.1 - 1.0

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. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Seek immediate 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). Intentionally inhaling concentrated vapors can cause rapid heart beats, which can cause death.
- Skin* : May cause skin irritation. Symptoms may include redness and itching. Some ingredients may be absorbed through the skin, producing same symptoms as inhalation or ingestion.
- 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. Long-term exposure may damage the following: kidneys, lungs, liver, heart, central nervous system (CNS), eye, thyroid, and pituitary gland.

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, especially if vomiting occurs afterward.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Carbon dioxide, dry chemical powder, foam or water fog.
- Unsuitable extinguishing media** : water jet risks spreading the flame.

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.

Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)

: Not flammable

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 for 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): Toluene, 1000 lbs (454 kg).

Methods and materials for containment and cleaning up

: Ventilate area of release. Eliminate sources of ignition. 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 : Wear appropriate Personal Protection Equipment (PPE). (See Section 8.) Observe good hygiene standards. Use only with adequate ventilation. Wash hands and exposed skin 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 installation (i.e. during a renovation), wear safety goggles and respiratory protection from dust due to grinding, chipping, or shot blasting. 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.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Limestone	1317-65-3	TLV Withdrawn In 2007	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av
Solvent Naphtha (petroleum) light aliphatic	64742-89-8	300 ppm	N/Av	500 ppm	N/Av
Nonylphenol, poly(ethylene oxide)	9016-45-9	N/Av	N/Av	N/Av	N/Av
Sepiolite Clay	63800-37-3	10 mg/m ³ (total dust) 5 mg/m ³ (respirable)	N/Av	10 mg/m ³ (total dust) 5 mg/m ³ (respirable)	N/Av
Toluene	108-88-3	20 ppm	N/Av	200 ppm	300 ppm
Crystalline silica, quartz	14808-60-7	0.025 mg/m ³ (respirable fraction)	N/Av	0.05 mg/m ³ (respirable) (Final rule limit)	N/Av

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 : Safety glasses 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 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 paste
Odor	: Mild solvent odor	Odor threshold	: N/Av
pH	: 8.8 – 9.4	Specific gravity	: 1.35 – 1.45
Boiling point	: > 212°F (> 100°C)	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: Dispersible
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 wt, including water)	: 26.0 - 29.5%
Volatile Organic Compounds (VOCs)	: 49.5 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	: Setflash 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			
	: 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**
- Inhalation* : > 25 mg/L
- Oral* : > 5000 mg/kg
- Dermal* : > 2500 mg/kg
- Toxicological data** : See below for individual ingredient acute toxicity data.

Ingredients	LC50 (4 hr)	LD50	
	Inhalation, rat, mg/L	Oral, rat, mg/kg	Dermal, rabbit, mg/kg
Limestone	N/Av	6450	N/Av
Solvent Naphtha (petroleum) light aliphatic	13	> 8000	> 4000
Nonylphenol, poly(ethylene oxide)	N/Av	16000	4490
Sepiolite Clay	N/Av	N/Av	N/Av
Toluene	49	636	14000
Crystalline silica	N/Av	> 22500	N/Av

- Skin corrosion or irritation** : May cause 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** : This product contains trace amounts of Crystalline silica, quartz. Crystalline silica, quartz of respirable size (< 10 micron diameter) is classified as carcinogenic via inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). During normal usage of the product as recommended, airborne dusts will not be present. See Section 7 for more information. No other components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive toxicity** : Contains Toluene. Toluene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
- Specific Target Organ Toxicity, Single Exposure** : Exposure to high concentrations of vapor or ingestion of large amounts may cause Central Nervous System effects.
- Specific Target Organ Toxicity, Repeated Exposure** : Exposure to Solvent Naphtha (petroleum) light aliphatic has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans.
- Studies of workers indicate long-term exposure to toluene may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

- Aspiration hazard** : This product contains materials which, in their pure state, present an aspiration hazard. However, this product's viscosity is above the range where aspiration is likely. Albeit unlikely, do not induce vomiting in a person who has ingested this material. Consult a doctor if the person has vomited after ingesting this product.
- 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 in accordance with all applicable federal, state, provincial and local 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

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	This product is not regulated according to Canadian TDG regulations.	None	None	None
TDG Additional Information	None				
49 CFR/DOT	None	This product is not regulated according to US DOT regulations.	None	None	None
49 CFR/DOT Additional Information	None				

- IATA** : Not regulated for Air Transport
- IMDG** : Not regulated for Ocean Transport
- Marine Pollutant** : Not a marine pollutant

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 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): Toluene, 1000 lbs (454 kg).

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

- Skin corrosion/irritation; Category 2
- Serious eye damage/eye irritation; Category 2B
- Specific target organ toxicity, single exposure; Narcotic effects; Category 3
- Reproductive toxicity; Category 2
- Specific target organ toxicity, repeated exposure; Category 2

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The threshold for this product is 10,000 pounds.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is subject to SARA notification requirements. It contains: Toluene; CAS # 108-88-3.

U.S. State Right to Know Laws

California Proposition 65: See product label for information regarding Proposition 65.

Other State Right to Know Laws:

Ingredient on State RTK Law?	CAS #	CA	MA	MN	NJ	NY	PA	RI
Limestone	1317-65-3	No	YES	No	YES	No	YES	YES
Solvent naphtha (petroleum), light aliphatic	64742-89-8	No	No	No	No	No	No	No
Poly(oxy-1,2-ethanediyl), α-4-nonylphenol-ω-hydroxy-	9016-45-9	No	No	YES	No	No	No	No
Sepiolite clay	63800-37-3	No	No	No	No	No	No	No
Toluene	108-88-3	YES	YES	YES	YES	YES	YES	YES
Crystalline silica, quartz	14808-60-7	No	YES	YES	YES	No	YES	YES

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
 Health: *1 Flammability 1 Physical Hazard 0
 Recommended PPE: Gloves, safety glasses

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

WHMIS: Workplace Hazardous Materials Identification System

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.

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: 17-Mar-2022

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