

MATERIAL SAFETY DATA SHEET

MSDS IDENTIFICATION NAME: V-Wrap 700S Adhesive-A **DATE:** 10/02/2014 **PAGE:** 1 OF 5

SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
STRUCTURAL TECHNOLOGIES, LLC
10150 Old Columbia Road
Columbia, MD 21046

EMERGENCY TELEPHONE NUMBER:
800-424-9300
INFORMATION TELEPHONE NUMBER:
1-410-859-6539

CHEMICAL FAMILY: Epoxy Adhesive

SECTION II: HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NUMBER	% BY WEIGHT	OSHA(PEL)	ACGIH(TLV)
Diglycidylether of Bisphenol A	001675-54-3	70-85	Not determined	Not determined
Proprietary diluents	T.S	0-15	Not determined	Not determined
Proprietary Toughening Resins		10-15	Not determined	Not determined

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200) in addition; other substances not Hazardous per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

SECTION III: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOR:

Straw colored liquid, faint epoxy odor.

STATEMENTS OF HAZARD:

CAUTION ! MAY CAUSE ALLERGIC SKIN REACTIONS AND IRRITATION

PRIMARY ROUTES OF EXPOSURE:

EYES--YES SKIN CONTACT--YES INHALATION--NO INGESTION--NO

HMIS RATING:

HEALTH--2 FLAMMABILITY--1 REACTIVITY--0 SPECIAL--NONE

POTENTIAL HEALTH EFFECTS:

EYES: Minor transient irritation. Possible minor temporary corneal injury.

SKIN: May cause moderate skin irritation. Sensitizer - may cause allergic skin reaction which can be severe in certain individuals. Not likely to be absorbed in toxic amounts.

INHALATION: Heating can generate vapors that could cause headaches, nausea, dizziness, and respiratory irritation if inhaled.

SECTION III: HAZARD IDENTIFICATION (CONTINUED)

INGESTION: Low acute oral toxicity; LD₅₀ (rat) greater than 5000 mg/kg.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting conditions such as asthma, allergies, eczema and other lung and skin disorders may be aggravated by exposure to the product.

CARCINOGENICITY: This product contains less than .1% of any substance, which is listed as a carcinogen by NTP, IARC, or OSHA.

SECTION IV: FIRST AID MEASURES

EYES: Flush eyes with plenty of water for 15 minutes and get medical attention.

SKIN CONTACT: Remove contaminated clothing and wipe excess from skin. Wash with soap and water immediately.

INHALATION: Remove to fresh air if effect occurs. Seek medical attention.

INGESTION: If Give more than two glasses of water and seek medical attention.

SECTION V: FIRE FIGHTING MEASURES

FLASH POINT/METHOD OF DETERMINATION: 410°F/210°C, PMCC

MEANS OF EXTINCTION: foam, CO₂, dry chemical

FLAMMABLE LIMITS L F L , U F L : Not determined

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self contained breathing apparatus.

FIRE AND EXPLOSION HAZARD: None

SPECIAL FIRE HAZARDS: Avoid exposure through use of a self-contained, positive-pressure breathing apparatus.

SECTION VI: ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE OF LEAKAGE: Soak up in absorbent material and collect in suitable containers. Residual may be removed using steam or hot soapy water. Wear protective gear during clean up.

SECTION VII: HANDLING AND STORAGE

This material may cause sensitization. Do not get in eyes, on skin or clothing. Do not allow contaminated clothing to contact skin. Avoid contact with vapors or fumes.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Avoid eye and skin contact. Wear chemical type goggles and a face shield.

SKIN PROTECTION: Protective clothing such as uniforms, coveralls or lab coats must be worn. Launder or dry-clean when soiled. Gloves, resistant to chemicals are required.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

RESPIRATORY PROTECTION: Not ordinarily required. If vapor or mist is generated, use a NIOSH approved organic vapor respirator. If sufficient dust is generated during machining of the cured product, use a NIOSH approved dust respirator.

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: For operations where contact can occur, wear impervious gloves (Neoprene).

RESPIRATORY PROTECTION: None normally necessary. An organic vapor respirator should be considered in areas where spray mist or heated vapors are present.

VENTILATION: Local exhaust ventilation recommended sufficient to control the vapor, mist or dust being generated. If exhaust ventilation is not available or is inadequate, use MSHA or NIOSH approved respirator, as appropriate.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, coveralls, apron, and rubber foot coverings are recommended. A safety eye wash facility should be available.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. Remove any contaminated clothing and launder before reuse. Properly dispose of shoes and clothing that are extremely contaminated. Use vacuum equipment to remove cured product dust from clothing and work areas. Compressed air is not recommended.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Straw colored liquid, faint epoxy odor
BOILING POINT (°F/°C):	>392 °F, 200 °C
MELTING POINT (°F/°C):	Not determined
SPECIFIC GRAVITY (WATER = 1):	1.20
pH OF UNDILUTED PRODUCT:	Not determined
VAPOR PRESSURE (mm Hg.):	1 mm Hg at 180 °C
VAPOR DENSITY (AIR-1):	Not determined
VISCOSITY:	Not determined
PERCENT (%) VOC:	0.0%: Tested per ASTM D2369-95 Part A and Part B mixed together.
SOLUBILITY IN WATER:	Insoluble

SECTION X: STABILITY AND REACTIVITY

STABILITY: Avoid excess heat over long periods of time, it degrades resin.

INCOMPATIBLE MATERIALS: Avoid contact with strong Lewis acid, strong Lewis base, primary and secondary amines.

PRODUCTS EVOLVED FROM HEAT OF COMBUSTION OR DECOMPOSITION: The by products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

HAZARDOUS POLYMERIZATION: Will not occur by itself, but masses more than 1 pound of product plus aliphatic amine will cause irreversible polymerization with considerable heat buildup.

SECTION XI: TOXICOLOGICAL INFORMATION

MATERIAL OR COMPONENT TOXICITY DATA:

MEDIAN LETHAL DOSE (SPECIES):

ORAL (LD ₅₀)	>5,000 mg/kg (Rat)
INHALATION (LC ₅₀)	> 1,000, 4 hours
DERMAL (LD ₅₀)	>2,000 mg/kg (Rabbit)

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES):

SKIN	Irritant to Skin and mucous membrane
EYES	Irritation
SENSITIZATION	Sensitization possible through skin contact and prolonged inhalation exposure

SECTION XII: ECOLOGICAL INFORMATION

Material is toxic to aquatic organisms and fish.

Fish Toxicity: Rainbow trout (96 hrs): LC₅₀ 1.5 mg/L

Invertebrate Toxicity: Daphnia (24 hr): EC₅₀ 3.6 mg/L

SECTION XIII: DISPOSAL CONSIDERATIONS

ACTION TO TAKE FOR SPILLS/LEAKS: Soak up in absorbent material and collect in suitable containers. Residual may be removed using steam or hot soapy water. Wear protective gear during clean up.

WASTE DISPOSAL METHODS: It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the US Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

SECTION XIV: TRANSPORTATION INFORMATION

DOT AND IATA:

PROPER SHIPPING NAME	Not regulated
HAZARD CLASS	Not regulated
IDENTIFICATION NUMBER	Not regulated
PACKING GROUP	Not regulated
LABEL REQUIRED:	None

SECTION XV: REGULATORY INFORMATION

FEDERAL EPA

SARA Title III:

Section 302/304 Extremely Hazardous Substance: No components are listed

Section 313 Toxic Chemical List: No components are listed

TSCA- Inventory status: Chemical components are all listed on TSCA inventory

RCRA: Not a hazardous waste under RCRA (40 CFR 261)

SECTION XVI: OTHER INFORMATION

SPECIAL PRECAUTIONS: Empty containers will retain some of the product residue. When handling or disposing of them, follow all label warnings, other instructions and waste disposal procedures.

EXPLANATION AND DISCLAIMER: Wherever such words or phrases as “hazardous,” “toxic,” carcinogen,” appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. **ANY EXPOSURE CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, WHICH INCLUDES SUCH FACTORS AS THE SUBSTANCE’S CHARACTERISTICS AS DEFINED IN THE MSDS, AMOUNT AND DURATION OF EXPOSURE, OTHER CHEMICALS PRESENT AND PREEXISTING INDIVIDUAL DIFFERENCES IN RESPONSE TO THE EXPOSURE.**

The data provided is based on the information received from our raw material suppliers and other sources believed to be reliable. **THIS DATA DOES NOT CONSTITUTE A GUARANTEE (EXPRESSED OR IMPLIED), WARRANTY (INCLUDING WARRANTY WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY US WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED OR IT’S USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO US. WE DISCLAIM LIABILITY FOR DAMAGE OR INJURY INCURRING DIRECTLY OR INDIRECTLY FROM THE USE OF THIS PRODUCT.**

STRUCTURAL TECHNOLOGIES LLC urges suppliers and users of this product to evaluate its suitability and compliance with local regulations, as STRUCTURAL TECHNOLOGIES LLC cannot foresee the nature of the final application nor final location of usage.

MATERIAL SAFETY DATA SHEET

MSDS IDENTIFICATION NAME: V-Wrap 700S Adhesive-B **DATE:** 10/02/2014 **PAGE:** 1 OF 5

SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
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10150 Old Columbia Road
Columbia, MD 21046

EMERGENCY TELEPHONE NUMBER:
800-424-9300
INFORMATION TELEPHONE NUMBER:
1-410-859-6539

CHEMICAL FAMILY: Epoxy Adhesive

SECTION II: HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NUMBER	% BY WEIGHT	OSHA(PEL)	ACGIH(TLV)
Cycloaliphatic Amine	2855-13-2	35-45	Not determined	Not determined
Proprietary Urethane Toughener	Trade Secret	35-45	Not determined	Not determined
Benzol Alcohol	100-51-6	0-20	Not determined	Not determined

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SECTION III: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOR:

Colorless to pale yellow, faint amine

STATEMENTS OF HAZARD:

CAUTION!: CORROSIVE - CAUSES EYE AND SKIN BURNS, HARMFUL OR FATAL IF SWALLOWED,

HARMFUL IF ABSORBED THROUGH SKIN, MAY CAUSE RESPIRATORY TRACT IRRITATION, MAY CAUSE

LUNG INJURY IF SWALLOWED AND ASPIRATED

PRIMARY ROUTES OF EXPOSURE:

EYES--YES SKIN CONTACT--YES INHALATION--NO INGESTION--NO

HMIS RATING:

HEALTH--3 FLAMMABILITY--1 REACTIVITY--0 SPECIAL--NONE

POTENTIAL HEALTH EFFECTS:

EYES: Vapor especially when heated can cause irritation, redness, tearing, blurred vision; liquid can cause severe or permanent eye damage.

SKIN: Causes severe irritation and burns. May cause allergic skin reaction. Prolonged or widespread skin contact may result in absorption of potentially harmful amount of material.

SECTION III: HAZARD IDENTIFICATION (CONTINUED)

INHALATION: Heating can generate vapors that could cause irritation of respiratory tract. Prolonged overexposure may result in lung damage.

INGESTION: Moderate oral acute toxicity. Causes burning of mouth, throat, and stomach with abdominal and chest pain, nausea, vomiting, diarrhea, and thirst. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting conditions such as asthma, allergies, eczema and other lung and skin disorders may be aggravated by exposure to the product.

CARCINOGENICITY: This product contains less than .1% of any substance which is listed as a carcinogen by NTP, IARC, or OSHA.

SECTION IV: FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes, lifting upper and lower lids occasionally. Get medical attention immediately. If physician is not immediately available, continue flushing with water. Do not use chemical antidote.

SKIN CONTACT: Immediately flush skin with large amounts of running water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

INHALATION: Remove to fresh air if effect occurs. If burning sensation develops in throat or chest, or shortness of breath occurs, get immediate medical attention.

INGESTION: If patient is conscious and can swallow, give two glasses of water (16 oz.). Do not induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.

SECTION V: FIRE FIGHTING MEASURES

FLASH POINT/METHOD OF DETERMINATION: >200°F/93°C, PMCC

MEANS OF EXTINCTION: foam, CO₂, dry chemical.

FLAMMABLE LIMITS L F L , U F L : No data

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus.

FIRE AND EXPLOSION HAZARD: None

SPECIAL FIRE HAZARDS: Avoid exposure through use of a self-contained, positive-pressure breathing apparatus.

SECTION VI: ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE OF LEAKAGE: Soak up in absorbent material and collect in suitable containers. Residual may be removed using steam or hot soapy water. Wear protective gear during clean up.

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: This material may cause sensitization. Do not get in eyes, on skin or clothing. Do not allow contaminated clothing to contact skin. Avoid contact with vapors or fumes.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: For operations where contact can occur, wear impervious gloves (Neoprene).

RESPIRATORY PROTECTION: None normally necessary. An organic vapor respirator should be considered in areas where spray mist or heated vapors are present.

VENTILATION: Local exhaust ventilation recommended if generating vapor, mist, or dust. If ventilation is not available, use MSHA or NIOSH approved respirator.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, coveralls, apron, and rubber foot coverings are recommended. A safety eye wash facility should be available.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. Remove any contaminated clothing and laundry before reuse. Properly dispose of shoes and clothing that are extremely contaminated. Use vacuum equipment to remove cured product dust from clothing and work areas. Compressed air is not recommended.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Colorless to pale yellow, faint amine
BOILING POINT (°F/°C):	>392 °F, 200 °C
MELTING POINT (°F/°C):	Not determined
SPECIFIC GRAVITY (WATER = 1):	0.96
pH OF UNDILUTED PRODUCT:	Not determined
VAPOR PRESSURE (mm Hg.):	0.011 mm Hg at 25 C
VAPOR DENSITY (AIR-1):	5.9
VISCOSITY:	Not determined
PERCENT (%) VOC:	0.0%: Tested per ASTM D2369-95 Part A and Part B mixed together.
SOLUBILITY IN WATER:	Partial

SECTION X: STABILITY AND REACTIVITY

STABILITY: Stable at normal temperatures and storage conditions.

INCOMPATIBLE MATERIALS: Incompatible with strong oxidants and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

HAZARDOUS POLYMERIZATION: Will not occur by itself.

SECTION XI: TOXICOLOGICAL INFORMATION

MATERIAL OR COMPONENT TOXICITY DATA:

MEDIAN LETHAL DOSE (SPECIES):

ORAL (LD ₅₀)	10,30 mg/kg (Rat)
INHALATION (LC ₅₀)	4.6 mg/kg, 4 hours
DERMAL (LD ₅₀)	1,800 mg/kg (Rabbit)

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES):

SKIN	Proprietary epoxy resin	Moderate irritation
EYES	Proprietary epoxy resin	Slight irritation
SENSITIZATION	Proprietary epoxy resin	Possible sensitization

OTHER: Isophorone Diamine (IPDA) is a strong skin irritant, an eye corrosive, and a skin sensitizer in guinea pigs in >10% concentrations.

Single inhalation exposures in rats with IPDA caused lung noise, irregular respiration, nasal discharge, hair and weight loss, and weakness.

SECTION XII: ECOLOGICAL INFORMATION

Material is toxic to aquatic organisms and fish.

Golden Orfe: LC₅₀ 110 mg/L

Daphnia (24 hr): EC₅₀ 42 mg/L

SECTION XIII: DISPOSAL CONSIDERATIONS

ACTION TO TAKE FOR SPILLS/LEAKS: Ventilate area. Avoid breathing vapor. Use self-contained breathing apparatus for large spills or confined areas. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes, or clothing.

WASTE DISPOSAL METHODS: It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the US Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

SECTION XIV: TRANSPORTATION INFORMATION

DOT AND IATA:

PROPER SHIPPING NAME	Corrosive Liquid, NOS (Alky Polyamine)
HAZARD CLASS	Corrosive Material, 8
IDENTIFICATION NUMBER	UN 1760, PG III
PACKING GROUP	Not regulated
LABEL REQUIRED	Corrosive

SECTION XV: REGULATORY INFORMATION**FEDERAL EPA****SARA Title III:**

Section 302/304 Extremely Hazardous Substance: No components are listed

Section 313 Toxic Chemical List: No components are listed

Section 311,312: Acute and Chronic hazards

TSCA- Inventory status: Chemical components are all listed on TSCA inventory

RCRA: Not a hazardous waste under RCRA (40 CFR 261).

SECTION XVI: OTHER INFORMATION

SPECIAL PRECAUTIONS: Empty containers will retain some of the product residue. When handling or disposing of them, follow all label warnings, other instructions and waste disposal procedures.

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