

MATERIAL SAFETY DATA SHEET

TAP Poly-Weld Resin

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NOTE: This MSDS is valid for three years from the date of issue. Use, dispose of material, or request new MSDS when three years have expired.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: **TAP Poly-Weld Resin** **FOR LOT NUMBERS GREATER THAN 500000**
General Use: The following information applies to the resin component of the two-part kit. Handle freshly-mixed resin and hardener as recommended for the hardener. After curing, the product is not hazardous.
Chemical Family: Epoxy Resin

MANUFACTURER

Advanced Adhesion Inc.
8004 California Avenue
Fair Oaks, CA 95628

EMERGENCY INFORMATION

Emergency telephone number
(Chemtrec): (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS CONSTITUENTS

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Crystalline Silica		14808607	<1	0.05mg/m ³	10/(%Q+2)mg	0.10mg/m ³ (Canada)
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	40-70	n/e	n/e	n/e
Butylated bisphenol A epoxy resin		71033084	5-15	n/e	n/e	n/e
Dinonylphenol	DNP	84962083	10-20	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance, form, odor: viscous grey liquid with odor.

WARNING! Eye and skin irritant. Potential skin sensitizer.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: Moderate irritant. Contact at elevated temperatures can cause thermal burns which may result in permanent damage. May cause skin sensitization (itching, redness, rashes, hives, burning, swelling).

Eyes: Moderate irritant (stinging, burning sensation, tearing, redness, swelling). Contact at elevated temperatures can cause thermal burns which may result in permanent damage or blindness.

Inhalation:

The low vapor pressure of the resin makes inhalation unlikely in normal use. In applications where vapors (caused by high temperature) or mists (caused by mixing) are created, breathing may cause irritation (a mild burning sensation in the nose and throat), headache, nausea and drowsiness.

Ingestion:

Acute oral toxicity is low. May cause gastric distress (nausea, abdominal discomfort, vomiting, diarrhea).

Effects of chronic overexposure:

Prolonged or repeated skin contact may cause skin sensitization, with itching, swelling, or rashes on later exposure.

Carcinogenicity – OSHA regulated: No ACGIH: No National Toxicology Program: No
International Agency for Research on Cancer: No Cancer-suspect constituent(s): Crystalline Silica

Medical conditions which may be aggravated by exposure:

Preexisting eye and skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

Other effects:

See section 11.

4. FIRST AID MEASURES

First aid for eyes:

Flush eye with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.

First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water for at least 15 minutes. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

First aid for ingestion:

Do NOT induce vomiting. Administer 3-4 glasses of milk or water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media:				
<input type="checkbox"/> Water	<input checked="" type="checkbox"/> Carbon dioxide	<input checked="" type="checkbox"/> Dry chemical	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> Alcohol foam

Flash Point (°F): >300 **Method:** estimation

Explosive limits in air (percent) – Lower: n/d

Upper: n/d

Special firefighting procedures:

Material will not burn unless preheated. Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

Unusual fire and explosion hazards:

Heating above 300°F in the presence of air may cause slow oxidative decomposition and above 500°F may cause polymerization. Personnel in vicinity and downwind should be evacuated.

Hazardous products of combustion:

When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity.

6. ACCIDENTAL RELEASE MEASURES

Spill control:

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Collect run-off water and transfer to drums or tanks for later disposal. Notify local health authorities and other appropriate agencies if such contamination occurs.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Laundry contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

Storage:

Store in a cool, dry area away from high temperatures and flames. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation:

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits (or to the lowest feasible levels when limits have not been established). Although good general mechanical ventilation is usually adequate for most industrial applications, local exhaust ventilation is preferred (see ACGIH – Industrial Ventilation). Local exhaust may be required for confined areas (see OSHA 1910.146)

Other engineering controls:

Have emergency shower and eye wash stations available.

Personal protective equipment

Eye and face protection:

Chemical goggles if liquid contact is likely, or Safety glasses with side shields.

Skin protection:

Chemical-resistant gloves and other gear as required to prevent skin contact.

Respiratory protection:

None needed in normal use with proper ventilation. In poorly ventilated areas use NIOSH approved organic vapor cartridge respirator for uncured resin, dust/particle respirator during grinding/sanding operations for cured resin, or fresh airline respirator as exposure levels dictate (see OSHA 1910.134).

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	n/d	Boiling point (°F):	>500
Melting point (°F):	n/d	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	<1mm Hg at 68°F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	0	Solubility in water	Negligible
Percent volatile by volume:	0	PH (5% solution or slurry in water):	neutral
Percent solids by weight:	100		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid:

Open flame and extreme heat.

Incompatible materials:

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

Hazardous products of decomposition:

Oxides of carbon; aldehydes, ketones, acids and other organic substances may be formed during combustion or elevated temperature (>500°F) degradation.

Conditions under which hazardous polymerization may occur:

Heat is generated when resin is mixed with curing agents. Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): not available

Acute dermal effects: LD50 (rabbit): not available

Component: Extreme skin sensitizer.

Acute inhalation effects: LC50 (rat): Not determined.

Exposure: 8 hours

Eye irritation:

Not available.

Subchronic effects:

Not available

Carcinogenicity, teratogenicity, and mutagenicity:

1) **MUTAGENICITY:** Liquid resins based on diglycidyl ether or Bisphenol A (DGEBA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. 2) **CARCINOGENICITY:** Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEBA yielded no

evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEBPA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate.

Other chronic effects:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to cause allergic contact dermatitis.

Toxicological information on chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Crystalline Silica	n/d	n/d	n/d
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20ml/kg	no deaths
Butylated bisphenol A epoxy resin	>2000 mg/kg	n/d	n/d
Dinonylphenol	>10 g/kg	>8 g/kg	n/d

"n/d" = "not determined"

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Not available.

Mobility and persistence:

Not available.

Environmental fate:

Not available.

13. DISPOSAL CONSIDERATIONS Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this resin becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations. Incineration is the preferred method of disposal.

14. TRANSPORT INFORMATION

Proper shipping name:	Non-regulated
Technical name:	N/A
Hazard class:	N/A
UN number:	N/A
Packing group:	N/A
Emergency Response Guide No.:	N/A
IMDG page number:	N/A
Other:	N/A

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

none

Regulatory status of chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Crystalline Silica	No	No	0.0	Not required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required
Butylated bisphenol A epoxy resin	No	No	0.0	Required
Dinonylphenol	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

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**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard – Delayed health hazard –

Canadian regulations

WHMIS hazard class(es): D2A, D2B

All components of this product are on the Domestic Substances List or the Non-Domestic Substances list.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) Ratings:	Health	Flammability	Reactivity
	2*	1	1

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.