



Safety Data Sheet

1. Product and company identification

Product Name Zed Seal Epoxy Adhesive – Part A: Resin
Internal Code(s) 260161
Product Type Epoxy Resin
Product Use Civil Engineering Resin System
Manufacturer/Supplier RJ Watson, Inc. www.rjwatson.com
11035 Walden Ave. sales@rjwatson.com
Alden, NY 14004
U.S.A.
Revision Date 23-NOV-2015
Telephone **For 24-Hour Emergency Response Information**
Call ChemTel: (800) 255-3924 (U.S./Canada)
+1-813-248-0585 (International)
For Other Product or Technical Information
Call RJ Watson, Inc.: (716) 901-7020

2. Hazards identification

Product Form Viscous, off-white liquid
OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazard Category Classification:	Skin Corrosion / Irritation	2	Skin Irritation
	Serious Eye Damage / Eye Irritation	2A	Eye Irritation - Reversible effects on the eye.
	Skin Sensitization	1	Skin Sensitizer
	Specific Target Organ Toxicity (Single Exposure)	3	Transient target organ effects - Respiratory Tract Irritation via inhalation
	Specific Target Organ Toxicity (Repeated Exposure)	1	Potential to produce significant toxicity in humans following repeated exposure - Central Nervous System (CNS) via inhalation; Skin via skin contact

GHS Pictogram(s):



Signal Word: DANGER

Hazard Statement:	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H317	May cause an allergic skin reaction.
	H335	May cause respiratory irritation.
	H372	Causes damage to organs (central nervous system (CNS), skin) through prolonged or repeated exposure.

Precautionary Statements:

Prevention:	P264	Wash hands and exposed skin thoroughly after handling.
	P280	Wear protective (permeation-resistant rubber) gloves / protective clothing / eye protection / face protection.
	P260	Do not breathe vapors.

P272	Contaminated work clothing should not be allowed out of the workplace.
P271	Use only outdoors or in a well-ventilated area.
P270	Do not eat, drink, or smoke when using this product.

Response:

P314	Get medical advice / attention if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal:

P501	Dispose of contents / container to a disposal facility in accordance with all local / national / international regulations.
------	---

3. Composition/Information on ingredients

<u>Ingredient name</u>	<u>CAS number</u>	<u>WT %</u>
4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	25068-38-6	30.0 – 50.0%
Calcium Carbonate	1317-65-3	20.0 – 30.0%
Kaolin	1332-58-7	10.0 – 20.0%
9-Octadecenoic acid, 12-(2-oxiranylmethoxy)-, 1,2,3-propanetriyl ester, homopolymer	74398-71-3	5.0 – 12.0%
Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	68609-97-2	5.0 – 12.0%
Titanium Dioxide	13463-67-7	1.0 – 3.0%
Quartz	14808-60-7	0.02 – 0.3%

4. First aid measures

Eye contact Immediately rinse eyes with plenty of lukewarm water (also rinse under the eyelids) for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Skin contact Remove contaminated clothing and shoes. Rinse clothing with water first or wear gloves to prevent material contact with other parts of the body. Wash contacted skin thoroughly with soap and plenty of water. If skin irritation or rash develops, get medical attention. Wash contaminated clothing before reuse.

Inhalation Move to fresh air and keep comfortable for breathing. If breathing has stopped, is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Ingestion Rinse mouth with water. Remove dentures, if any. Do not induce vomiting. The victim should drink several glasses of water to dilute the ingested substance. Stop if the victim feels unwell. If vomiting occurs naturally, keep head low and airway clear. Get medical attention. Never give anything by mouth if the victim is rapidly losing consciousness, or is unconscious or convulsing.

Notes to physician Treat symptomatically. Contact a poison specialist if large quantities have been ingested.

Potential acute health effects

Inhalation May cause respiratory tract irritation.

Ingestion Irritating to the mouth, throat and stomach.

Skin Causes skin irritation. May cause an allergic skin reaction in certain individuals, with symptoms of reddening, itching, swelling, and rash.

Eyes Causes irritation with reddening, tearing, and stinging of the eyes.

Potential chronic health effects

Chronic effects Skin sensitization may occur in some individuals. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity This product contains Titanium Dioxide (CAS # 13463-67-7) which is classified as possibly carcinogenic to humans by IARC (IARC Group 2B) via inhalation.

This product contains Quartz (CAS # 14808-60-7) which is classified as carcinogenic to humans by IARC (IARC Group 1; Monograph 68) via inhalation.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Target organs Respiratory Tract, Skin, Central Nervous System (CNS)

Over-exposure signs/symptoms

Inhalation Respiratory irritation; coughing.

Ingestion No specific symptoms known.

Skin Irritation. Reddening of the skin with itching, swelling, &/or rash. Allergic skin reaction.

Eyes Pain, irritation, redness, watering eyes.

Medical conditions aggravated by over-exposure Pre-existing eye, skin, or respiratory conditions.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Flammability properties of the product **Flash Point:** >150°C (>302°F)
Flash Point Method Used: Pensky-Martens Closed Cup (ASTM D-93)
Flammable Limits in Air (Lower - % by volume): Not determined
Flammable Limits in Air (Upper - % by volume): Not determined

Extinguishing media

Suitable Low Pressure Water Spray, Foam, Carbon Dioxide, Dry Chemical

Not suitable High-Pressure Water Spray (may spread burning material).

Special exposure hazards Wear self-contained breathing apparatus (SCBA) to protect from hazardous combustion products.

Hazardous combustion products Carbon Monoxide, Carbon Dioxide.

Unusual Fire and Explosion Hazards Sealed, fire-exposed containers may build up dangerous pressure, potentially resulting in explosive rupture. Keep sealed fire-exposed containers cool with water spray.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment including self-contained breathing apparatus (SCBA)

6. Accidental release measures

Personal precautions No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see section 8).

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spill Response Clean up large spills with vacuum truck. Soak up small spills with absorbent material and place in labeled containers for recovery or disposal.

7. Handling and storage

Handling Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Avoid tasting or swallowing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Storage Keep in the original container or an approved alternative made from a compatible material, kept tightly sealed when not in use. Take measures to prevent the introduction of water or atmospheric moisture. Store at room temperature in a dry place away from heat and direct sunlight. Store in accordance with all local and government regulations. Recommended storage temperature: 59 - 95°F (15 - 35°C).

8. Exposure controls/personal protection

CAS Number	Chemical Identity	Exposure Limits				
		ACGIH		OSHA		NIOSH
		TWA	STEL	PEL	STEL	REL
25068-38-6	4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer	N.E.	N.E.	N.E.	N.E.	N.E.
1317-65-3	Calcium Carbonate (limits as total dust) (limits as respirable dust)	N.E.	N.E.	15 mg/m ³	N.E.	10 mg/m ³
		N.E.	N.E.	5 mg/m ³	N.E.	5 mg/m ³
1332-58-7	Kaolin (limits as total dust) (limits as respirable dust)	N.E.	N.E.	15 mg/m ³	N.E.	10 mg/m ³
		2 mg/m ³	N.E.	5 mg/m ³	N.E.	5 mg/m ³
74398-71-3	9-Octadecenoic acid, 12-(2-oxiranylmethoxy)-, 1,2,3-propanetriyl ester, homopolymer	N.E.	N.E.	N.E.	N.E.	N.E.
68609-97-2	Oxirane, Mono[(C12-14-alkyloxy)methyl] Derivs.	N.E.	N.E.	N.E.	N.E.	N.E.
13463-67-7	Titanium Dioxide (limits as total dust)	10 mg/m ³	N.E.	15 mg/m ³	N.E.	N.E.
14808-60-7	Quartz (limits as respirable dust)	0.025 mg/m ³	N.E.	0.1 mg/m ³	N.E.	N.E.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are located in the work area.

Respiratory Use a properly fitted, air-purifying or air-supplied respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator use is required when this product is applied by spraying. Respirator selection

must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eyes Chemical splash goggles are required. Wear face shield if splashing hazard exists.

Skin Impervious gloves made of Neoprene, Butyl Rubber or Nitrile Rubber should be used. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. Physical and chemical properties

Form	Viscous Liquid
Color	Off-White
pH	Not determined
Boiling point	>150°C (>302°F)
Freezing Point	<2°C (<36°F)
Specific gravity	1.46
Vapor pressure	Not determined
Odor threshold	Slight, sweet odor
Solubility in water	Negligible
Evaporation rate	Not Determined
Vapor density	Not Determined

10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Extremes of temperature and direct sunlight.
Materials to avoid	Reactive or incompatible with the following materials: Strong oxidizing agents, strong acids, strong alkalis.
Other hazards	Reacts with considerable heat release with some curing agents.
Hazardous decomposition products	Decomposition products may include the following materials: Carbon monoxide and/or carbon dioxide.

11. Toxicological information

Acute toxicity	LD50 Oral	Rat	>5000 mg/kg (Acute Toxicity Estimate)
	LD50 Dermal	Rabbit	>2000 mg/kg (Acute Toxicity Estimate)

Skin Irritation Moderate skin irritation.

Eye Irritation Moderate, reversible eye irritation.

Sensitization May cause sensitization by skin contact.

Mutagenicity No data available.

Reproductive Toxicity No data available.

Carcinogenicity Classification

Titanium Dioxide; (CAS # 13463-67-7)	IARC	Group 2B (Possibly carcinogenic to humans)
	NTP	Not listed
	OSHA	Not regulated as a carcinogen
	EU	Not classified

Quartz; (CAS # 14808-60-7)	IARC	Monograph 68; Group 1 (Carcinogenic to humans)
	NTP	Known Human Carcinogen
	OSHA	Potential Carcinogen
	EU	May cause cancer if inhaled

12. Ecological information

Environmental effects

Fish

(calculated estimate based on mixture data)

LC50: > 100 mg/l

Exposure time: 96 h

Species: *Oncorhynchus mykiss* (rainbow trout)

Aquatic invertebrates

(calculated estimate based on mixture data)

EC50: > 100 mg/l

Exposure time: 48 h

Species: *Daphnia magna* (Water flea)

Algae

(calculated estimate based on mixture data)

ErC50: >100 mg/l

Exposure time: 72 h

Biodegradability Not readily biodegradable.

Additional Information Bioaccumulation is not anticipated.

13. Disposal considerations

Waste disposal The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

The data provided in this section is for information only and may not be specific to each package size or mode of transport. Apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory information	UN/NA number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR	N/A	Not dangerous goods	N/A	N/A.
TDG	N/A	Not dangerous goods	N/A	N/A.
IMO/IMDG	N/A	Not dangerous goods	N/A	N/A.
IATA	N/A	Not dangerous goods	N/A	N/A.

*PG : Packing group

15. Regulatory information

US regulations

HCS Classification When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

U.S. Federal regulations

SARA Title III, Section 311/312 Classification

Acute (Immediate) Health Hazard

Delayed (Chronic) Health Hazard

SARA Title III, Section 313 - Supplier Notification

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

No chemicals present above the *de minimus* limit.

SARA Section 302 Extremely Hazardous Substances

None required.

State regulations

Massachusetts RTK Substances

None

New Jersey RTK Hazardous Substances

Calcium Carbonate (CAS # 1317-65-3)

Kaolin (CAS # 1332-58-7)

Titanium Dioxide (CAS # 13463-67-7)

Quartz (CAS # 14808-60-7)

Pennsylvania RTK Hazardous Substances

Calcium Carbonate (CAS # 1317-65-3)

Kaolin (CAS # 1332-58-7)

Titanium Dioxide (CAS # 13463-67-7)

Quartz (CAS # 14808-60-7)

California Prop. 65: WARNING: This product contains the following chemical(s) known to the State of California to cause cancer:

Epichlorohydrin (CAS # 106-89-8); <0.05%

Phenyl Glycidyl Ether (CAS # 122-60-1); 0.5 - 3 ppm

California Prop. 65: WARNING: This product contains the following chemical(s) known to the State of California to be a reproductive toxin:

Epichlorohydrin (CAS # 106-89-8); <0.05%; Male

International regulations

Chemical inventories

United States inventory (TSCA 8b) - All components are listed or exempted.

16. Other information

Hazardous Material Information System III (U.S.A.)

Health: 2
Flammability: 1
Physical hazards: 0
Personal Protection: X

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program.

Date of issue November 23, 2015

Date of printing November 23, 2015

Notice to reader

The information provided herein was believed to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied are subject to current terms and conditions of sale. NO WARRANTY, EXPRESSED OR IMPLIED, IS PROVIDED CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION, except that the product shall conform to specifications. Nothing contained herein constitutes an offer for the sale of any product.