



Safety Data Sheet

prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** Product: 511-PRO-A
Product Name: 511-PRO EPOXY BINDER/COATING PART-A
Revision Date: 05/23/2018
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Base component of 2 components coating - Industrial use.
- 1.3 Details of the supplier of the safety data sheet**
- Manufacturer:** Key Resin Company / Flowcrete
Tel: (513) 943-4225
Fax: (513) 943-4255
- Datasheet Produced by:** CHEMTREC 1-800-424-9300 (Inside US)
- 1.4 Emergency telephone number:** CHEMTREC +1 703-527-3887 (Outside US)

2. Hazard Identification

- 2.1 Classification of the substance or mixture**
- Hazardous to the aquatic environment, Chronic, category 2
Serious Eye Damage, category 1
Skin Irritation, category 2
Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

cashew nutshell oil, Trimethylolpropane triacrylate, Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700), Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

HAZARD STATEMENTS

Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Serious Eye Damage, category 1	H318	Causes serious eye damage.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.

PRECAUTION PHRASES

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	75-95
68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	2.5-10
8007-24-7	cashew nutshell oil	2.5-10
15625-89-5	Trimethylolpropane triacrylate	1.0-2.5
64742-47-8	Distillates (petroleum), hydrotreated light	0.1-1.0
108-83-8	2,6-dimethylheptan-4-one	0.1-1.0
108-88-3	Toluene	<0.1

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
25068-38-6	GHS07-GHS09	H315-317-319-411	0
68609-97-2	GHS07	H315-317	0

8007-24-7	GHS05-GHS07	H302-312-315-317-318	0
15625-89-5	GHS07	H315-317-319	0
64742-47-8	GHS07-GHS08-GHS09	H304-336-411	0
108-83-8	GHS02-GHS07	H226-332-335-336	0
108-88-3	GHS02-GHS07-GHS08	H225-304-315-336-361-373	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

AFTER INHALATION: Move to fresh air. Consult a physician after significant exposure.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to skin. May cause sensitization by skin contact. Prolonged or repeated exposure increases the risk. Harmful to aquatic organisms.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. High volume water jet. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Contains epoxy constituents. See information supplied by the manufacturer.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. May cause long-term adverse effects in the aquatic environment.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING: Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment.

PROTECTION AND HYGIENE MEASURES: Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Extremes of temperature and direct sunlight.

STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

<u>Name</u>	<u>CAS-No.</u>	<u>OSHAPEL</u>	<u>ACGIH TLV</u>
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	25068-38-6		
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	68609-97-2		
cashew nutshell oil	8007-24-7		
Trimethylolpropane triacrylate	15625-89-5		
Distillates (petroleum), hydrotreated light	64742-47-8	500.0 PPM	100.0 PPM
2,6-dimethylheptan-4-one	108-83-8	50.0 PPM	25.0 PPM
Toluene	108-88-3	100.0 PPM	50.0 PPM

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required.

EYE PROTECTION: Safety glasses.

HAND PROTECTION: Impervious gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Transparent resin

Physical State: Liquid

Odor	Weak epoxy
Odor threshold	Not determined
pH	Non-aqueous
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	111 - N.D.
Flash Point, (°F / °C)	>200 F
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	999 - 0
Vapour Pressure	Not determined
Vapour density	1.16 g/cm ³
Relative density	Not determined
Solubility in / Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	N/A
Oxidising properties	N/A
9.2 Other information	
VOC Content g/l:	20
Density (lbs./gal)	9.08

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed. Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents. Acids and bases.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Alcohols. Exothermic reaction. Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: No information

Inhalation LC50: No information

Irritation: Irritating to eyes, skin, mouth and pharynx.

Corrosivity: No information available.

Sensitization: Prolonged or repeated skin contact may result in allergic eczema.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	>2000 mg/kg, rat, oral	>2000 mg/kg, rat	
68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	17100 mg/kg, oral, rat		
15625-89-5	Trimethylolpropane triacrylate	5000 mg/kg, oral, rat		
108-83-8	2,6-dimethylheptan-4-one	3200 mg/kg, oral, rat		1979 ppm / 6 hrs, rat, inhalation
108-88-3	Toluene	5000 mg/kg rat oral, 14000 mg/kg rabbit dermal		8000 ppm/4 hrs, rat, inhalation

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): No information

IC50 72hr (Algae): No information

LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	No information	No information	
68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No information	No information	
8007-24-7	cashew nutshell oil	No information	No information	
15625-89-5	Trimethylolpropane triacrylate	No information	No information	
64742-47-8	Distillates (petroleum), hydrotreated light	No information	No information	
108-83-8	2,6-dimethylheptan-4-one	No information	No information	
108-88-3	Toluene	No information	No information	

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number	UN3082
14.2 UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S.
Technical name	(Epoxy Resin)
14.3 Transport hazard class(es)	9
Subsidiary shipping hazard	N/A
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	Not applicable
EmS-No.:	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation for the substance or mixture:

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Skin Corrosion or Irritation, Respiratory or Skin Sensitization, Serious eye damage or eye irritation

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the U.S. Superfund Amendment and Reauthorization Act (SARA) of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylene	1330-20-7
Ethylbenzene	100-41-4
Cumene	98-82-8
Toluene	108-88-3

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:	Floor Coatings
EPA VOC Content Limit (g/l):	400
Product VOC Content (g/l)	<20
Thinning Recommendations:	None
Application Recommendations:	For professional use only.

* As per the federal EPA definition for coating categories in 40 CFR 59.401.

** Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
No NJ Right-To-Know components exist in this product.	

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

California Proposition 65:

WARNING: Cancer - www.P65Warnings.ca.gov

International Regulations: As follows -*** Canadian DSL:**

All chemical ingredients included on inventory or exempt.

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification

This is a new Safety Data Sheet (SDS).

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;
European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;

European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);
EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m ³	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative

EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container
RTI	Respiratory Tract Irritation
NE	Narcotic Effects

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.