

SPI Supplies Division

Structure Probe, Inc.

P.O. Box 656 West Chester, PA 19381-0656 USA

Phone: 1-(610)-436-5400 Fax: 1-(610)-436-5755

spi3spi@2spi.com

<http://www.2spi.com>

Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: April 27, 2016

02816-AB SPI-Chem™ Araldite 502 Epoxy Resin

Component of:

02649-AB SPI-Chem™ Araldite® 502 Embedding Resin Kit

02658-AA, 02658-AB SPI-Chem™ Araldite® 502/BDMA Embedding Resin Kit

Section 1.1: Identification

Chemical Name/Synonyms..... Araldite 502 Epoxy resin

Product or Trade Name..... Araldite 502 Epoxy Resin

CAS #'s..... 25068-38-6; 84-74-2

Chemical Formula..... Mixture

Section 1.2: Relevant Uses/Restrictions

Laboratory embedding resin

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritant, Hazard category 2

Eye irritant, Hazard category 2A
Skin sensitization, Hazard category 1
Reproductive, Hazard category 1B
Aquatic chronic, Hazard category 2

2.2 Label elements

Pictogram



Signal Word: Danger

Hazard statements:

- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H317: May cause an allergic skin reaction
- H360: May damage fertility or the unborn child
- H411: Toxic to aquatic life with long-lasting effects

Precautionary statements:

- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P261: Avoid breathing dust/fume/gas/mist/vapors/spray
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P264: Wash thoroughly after handling
- P272: Contaminated work clothing should not be allowed out of the workplace
- P363: Wash contaminated clothing before reuse
- P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
- P308+313: IF exposed or concerned: Get medical advice/attention
- P333+313: If skin irritation or a rash occurs: Get medical advice/attention
- P337+313: If eye irritation persists get medical advice/attention
- P302+352: IF ON SKIN: Wash with soap and water
- P405: Store locked up
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations

Hazardous Material Information System USA

Health..... 1
Fire Hazard..... 1
Reactivity..... 0
Personal Protection.....

NFPA Rating (estimated)

Health..... 1
Flammability..... 1
Reactivity..... 0

2.3 Other Hazards:

CAS# 84-74-2: RTECS Number: T10875000

Results of PBT and vPvB assessment:

PBT: Not applicable.

vpvB: Not applicable

Section 3: Composition

Chemical characterization: Mixture

Hazardous component	CAS#	EC No.	Percentage
Reaction product: Bisphenol-A-(epichlorohydrin) epoxy resin	25068-38-6	none	50-100
Dibutyl phthalate	84-74-2	201-557-4	10-25

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation

Supply fresh air and be sure to call for a doctor.

In case of unconsciousness, place patient stably in side position for transportation.

Skin Contact

Immediately wash with soap and water and rinse thoroughly.

Eye Contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Ingestion

If symptoms persist, consult a doctor..

Self-protection of the first aider: No additional information.

4.2 Most important symptoms and effects, both acute and delayed:

Primary routes of entry: Skin and eye contact, inhalation, ingestion.

Signs and symptoms of overexposure: not determined.

Eyes: Causes serious eye irritation.

Skin: Causes irritation to skin and mucous membranes. May cause an allergic skin reaction.

Sensitization possible.

Ingestion: not determined.

Inhalation: not determined.

Chronic exposure: not determined.

Chemical listed as Carcinogen or Potential Carcinogen: None listed.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5: Fire Fighting Measures

Flash Point: 188 °C

Flammability (solid, gaseous): Not flammable

Flammable Limits

Lower: 0.1 Vol %

Upper: 2.0 Vol %

Autoignition point: Product is not self-igniting.

Ignition temperature: 390 °C

5.1 Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture

Product does not present an explosion hazard.

Hazardous combustion products: not determined.

5.3 Advice for firefighters

Special protective equipment and precautions for firefighters: No special measures required.

Section 6: Accidental Release Measures

6.1 Personal precautions

Not required.

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Advice on general hygiene conditions

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes and the skin.
Wash hands before breaks and at end of the work.

7.2 Conditions for safe storage, including any incompatibilities

No special requirements.

Storage class: not determined

7.3 Specific end uses

Laboratory embedding resin

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits

Components with limit values that require monitoring at the workplace:

Dibutyl phthalate CAS# 84-74-2

PEL(permissible exposure limit) / long-term value: 5 mg/m³

REL(recommended exposure limit) / long-term value: 5 mg/m³

TLV(threshold limit value) / long-term value: 5 mg/m³

Biological limit values: No information found.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ventilation required. Use with good ventilation.

8.2.2 Individual protection measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment: In case of brief exposure or low pollution, use respiratory filter device.

In the case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protective gloves: Wear protective gloves.

Skin protection: Wear protective clothing.

Eye protection: Wear tightly-sealed goggles.

Additional clothing and/or equipment: Not determined.

8.2.3 Environmental exposure controls

No additional information found.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Liquid, light colored

Odor: Characteristic

Odor threshold: Not determined
pH: Not determined
Melting point/Freezing point: Not determined
Boiling point/Boiling point range: 340 °C (644 °F)
Flash Point: 188 °C (370 °F)
Evaporation rate: Not determined
Flammability (solid, gas): Not flammable
Upper/lower flammability or explosive limits:
 Lower: 0.1 Vol %
 Upper: 2.0 Vol %
Vapor Pressure: Not determined
Vapor density: Not determined
Relative density: Not determined
Solubility/Miscibility with water: Not miscible or difficult to mix
Partition coefficient (n-octanol/water): Not determined
auto-ignition temperature: Product is not self-igniting
Decomposition temperature: Not determined
Viscosity: Not determined
Explosive properties: Does not present an explosion hazard
Oxidizing properties: Not determined

9.2 Other information: No further relevant information available.

Section 10: Stability and Reactivity

- 10.1 Reactivity: No further relevant information available.
10.2 Chemical Stability: Stable.
10.3 Possibility of Hazardous Reactions: No dangerous reactions known.
10.4 Conditions to avoid: No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

Section 11: Toxicological Information

Information on the likely routes of exposure

- 11.1 Information on toxicological effects
 a. acute toxicity
 CAS# 84-74-2 Dibutyl phthalate

LD50 Oral, rat 8000 mg/kg
LD50 Dermal, rabbit 20,000 mg/kg

b. skin corrosion/irritation
On the skin: Irritant to skin and mucous membranes
On the eye: Irritating effect.

c. serious eye damage/irritation
Causes serious eye irritation.

d. respiratory of skin sensitization
Sensitization possible through skin contact.

e. germ cell mutagenicity:
CAS# 84-74-2 Dibutyl Phthalate

DNA damage / human, lymphocyte 354 mmol/L
DNA damage / human, other cell types 354 mmol/L

f. carcinogenicity
IARC (International Agency for Research on Cancer): None of the ingredients is listed.
NTP (National Toxicology Program): None of the ingredients is listed.
OSHA: This product does not contain any compounds regulated by OSHA as a carcinogen.

g. reproductive toxicity:
CAS# 84-74-2 Dibutyl Phthalate

Oral, rat	TDLo 24 g/kg	20D	male
Oral, rat	TDLo 6750 mg/kg	0-8D	preg
Oral, rat	TDLo 2250 mg/kg	7-9D	preg

h. STOT-single exposure: No data.

i. STOT-repeated exposure: No data.

j. aspiration hazard: No data.

Section 12: Ecological Information

12.1 Toxicity

Exotoxic effects: Toxic for fish

Additional ecological information: Water hazard class 2 (Self-assessment): Hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms.

12.2 Persistence and degradability: No further relevant information.

12.3 Bioaccumulative potential: No further relevant information.

12.4 Mobility in soil: No further relevant information.

12.5 Results of PBT and vPvB assessment: No further relevant information.

12.6 Other adverse effects: No further relevant information.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal of product and uncleaned packaging must be made according to Local, State, Federal, and International regulations.

Section 14: Transport Information

DOT

UN-Number: UN3082

UN proper shipping name: Environmentally hazardous substances, liquid, n.o.s.
(reaction product: bisphenol-A-(epichlorhydrin) epoxy resin
(number average molecular weight \leq 700), dibutyl phthalate)

Hazard Class: 9 Miscellaneous dangerous substances and articles

Packing Group: III

IATA

UN-Number: UN 3082

UN proper shipping name: ENVIRONMENTALL HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(reaction product: bisphenol-A-(epichlorhydrin) epoxy resin
(number average molecular weight \leq 700), dibutyl phthalate)

Hazard class: 9

Packing Group: III

IMDG

UN-Number: UN 3082

UN proper shipping name: ENVIRONMENTALL HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(reaction product: bisphenol-A-(epichlorhydrin) epoxy resin
(number average molecular weight \leq 700), dibutyl phthalate)

Hazard class: 9

Packing Group: III

Environmental hazards

Product contains environmentally hazardous substances: dibutyl phthalate, reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700).

Marine pollutant: Yes

Special precautions for user:

Warning: Miscellaneous dangerous substances and articles.

Danger code (Kemler): 90

EMS Number: F-A,S-F

Trade Name: Araldite 502

Section 15: Regulatory Information

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

TSCA (Toxic Substances Control Act): All ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

CAS# 84-74-2 Dibutyl phthalate is listed.

California Proposition 65 :

Chemicals known to cause cancer - None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females: CAS# 84-74-2 Dibutyl phthalate.

Chemicals known to cause reproductive toxicity for males: CAS# 84-74-2 Dibutyl phthalate.

Chemicals known to cause developmental toxicity: CAS# 84-74-2 Dibutyl phthalate.

Carcinogenic categories:**EPA (Environmental Protection Agency)**

CAS# 84-74-2 Dibutyl phthalate: D

TLV (Threshold Limit Value established by ACGIH): None of the ingredients is listed.

NIOSH-CA (National Institute for Occupational Safety and Health): None of the ingredients is listed.

OHSH PEL: CAS# 84-74-2 Dibutyl Phthalate: 8H TWA: 5 mg/m³

ACGIH TLV-TWA: CAS# 84-74-2: 5 mg/m³

OTHER: CAS# 84-74-2 Dibutyl Phthalate:

OEL- Australia: TWA 5 mg/m³ -July2008

OEL- Austria: MAK-TMW 5 mg/m³ ·2007

OEL-Belgium: TWA 5 mg/m³ -Mar2002

OEL-Denmark: TWA 3 mg/m³ -May2011

OEL-France: VME 5 mg/m³ -Feb2006

OEL-Germany: MAK 0.05 ppm (0.58 mg/m³) -2011

OEL-India: TWA 5 mg/m³ -Jan1993

OEL-Iceland: TWA 3 mg/m³ -Nov2011

OEL-Japan: OEL 5 mg/m³, s2 sen, -May2012

OEL-Korea: TWA 5 mg/m³ ·2006

OEL-Mexico: TWA 5 mg/m³ ; STEL 10 mg/m³ -2004

OEL-New Zealand: TWA 5 mg/m³ -Jan2002

OEL-Norway: TWA 3 mg/m³ -Jan1999

OEL-Peru: TWA 5 mg/m³ -Jul2005

OEL-The Philippines: TWA 5 mg/m³ -Jan1993

OEL-Poland: MAC(TWA): 5 mg/m³, MAC(STEL) 10 mg.m³ -Jan1999

OEL-Russia: TWA 0.5 mg/m³, STEL 1.5 mg/m³ .Jun2003

OEL-Sweden: TWA 3 mg/m³ ;STEL 5 mg/m^e -Jun2005

OEL- Switzerland: MAK-W 0.05 ppm (0.58 mg/m³), KZG-W 0.1ppm (1.16 mg/m³) inhalation -Jan2011

OEL-United Kingdom: TWA 5 mg/m³; STEL 10 mg/m³ ·Oct2007

OEL – Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam: check ACGIH TLV.

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has not been carried out.

Date of preparation: April 27, 2016.

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxicological
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit

Section 16: Other Information

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