

## SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

## Safety Data Sheet

Date Effective: January 30, 2019

SPI Catalog # 04982-AB

SPI-Tac Liquid Adhesive Mountant

### Section 1.1: Identification

Product or Trade Name ..... SPI-Tac Liquid Adhesive Mountant

CAS #'s ..... 67-64-1; 141-78-6; 108-05-4; proprietary resins

Chemical Formula..... mixture

### Section 1.2: Relevant Uses/Restrictions

Liquid adhesive mountant.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

### 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)

Flammable liquid (category 2)

Skin irritation (category 2)

Eye irritant (category 2A)  
STOT-Single Exposure (category 3, Central Nervous System)

## 2.2 Label elements

### Pictogram



**Signal Word:** Danger

### Hazard statements:

- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

### Precautionary statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.  
No smoking.
- P233 Keep container tightly closed.
- P273 Avoid release to the environment.
- P241 Use explosion-proof electrical/ ventilating/ light equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash thoroughly after handling.
- P280 Wear protective gloves, protective clothing/ eye protection/ face protection.
- P361 Remove/ Take off immediately all contaminated clothing.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P303 + P361 + P 353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P312 Call a POISON CENTER/ doctor if you feel unwell.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P337 + P313 If eye irritation persists get medical advice/ attention.
- P370 + P378 In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
- P403 + P325 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

### 2.3 Other Hazards:

**Hazards not otherwise classified (HNOC):** none/ none.

**Hazardous Material Information System USA (estimated)**

Health ..... 1  
Fire Hazard ..... 3  
Reactivity ..... 0  
Personal Protection .....

**NFPA Rating (estimated)**

Health ..... 1  
Flammability..... 3  
Reactivity ..... 0

**Section 3: Composition**

**3.1 Substances:** Product is a mixture

**3.2 Mixture:**

Component	CAS #	EU #	Percentage
Acetone	67-64-1	200-662-2	~91%
Ethyl acetate	141-78-6	205-500-4	2.72-5.45%
Vinyl acetate	108-05-4	203-545-4	0.09-0.45%
Proprietary resins	n/a	n/a	3.18-6.27%

**Section 4: First Aid Measures**

**4.1 Description of first aid measures:**

**General Information:**

If exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**Inhalation:**

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

**Eye Contact:**

In case of contact with eyes, flush immediately with plenty of flowing water for 10 to 15 minutes, holding eyelids apart, and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:**

If accidentally swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

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

See Section 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

No data available.

#### **4.5 Information to physician:**

Treat symptomatically and supportively.

### ***Section 5: Fire Fighting Measures***

#### **5.1 Extinguishing media:**

Foam, dry chemical, or carbon dioxide.

#### **5.2 Special hazards arising from the substance or mixture:**

Carbon monoxide (CO) and/or Carbon dioxide (CO<sub>2</sub>) may be liberated in case of fire.

#### **5.3 Hazardous combustion products:** Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>).

#### **5.4 Advice for firefighters:**

Firefighter should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

#### **Additional Information:**

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.

Use water spray/stream to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

### ***Section 6: Accidental Release Measures***

#### **6.1 Personal precautions:**

In case of major fire and large quantities: Remove persons to safety.

#### **6.2 Environmental precautions:**

Prevent further leakage or spillage if safe to do so.

Discharge into the environment must be avoided.

Do not allow product to enter sewer or waterways.

#### **6.3 Methods and material for containment and cleaning up:**

Keep unnecessary personnel away.

Ensure adequate ventilation.

Avoid all sources of ignition.

Wear appropriate protective equipment and clothing during clean-up.

Absorb spill with an absorbent, non-combustible material such as earth, sand, or vermiculite.

Collect in closed and suitable containers for disposal.

Spilled product must never be returned to the original container for recycling.

#### **6.4 Reference to other sections:**

For personal protection information see Section 8.

For disposal information, see Section 13.

### ***Section 7: Handling and Storage***

#### **7.1 Precautions for safe handling:**

Avoid inhalation.

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Keep away from open flame, heat, or sources of ignition.  
No smoking.  
Take precautionary measures against static discharges.

### 7.2 Conditions for safe storage, including any incompatibilities:

Keep in a cool, well ventilated area away from heat, sparks and open flame.  
Keep container tightly closed and in a well-ventilated place.  
Keep/store away from combustible materials.

### 7.3 Specific end uses:

Liquid adhesive mountant.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

## **Section 8: Exposure Controls and Personal Protection**

### 8.1 Control parameter and Personal Protection:

#### Workplace exposure limits:

Acetone CAS # 67-64-1  
NIOSH LTV: 290 mg/m<sup>3</sup> / 250 ppm  
OSHA LTV: 2400 mg/m<sup>3</sup> / 1000 ppm  
ACGIH TWA 500 ppm; STEL 750 ppm

Ethyl acetate CAS # 141-78-6  
ACGIH TWA: 400 ppm  
OSHA PEL: 400 ppm (1,400 mg/m<sup>3</sup>)

Vinyl acetate CAS # 108-05-4  
ACGIH TWA: 10 ppm TWA  
ACGIH STEL: 15 ppm

**Biological limit values:** No data available.

### 8.2 Exposure controls:

#### 8.2.1 Appropriate engineering controls:

An eyewash facility and a safety shower should be available.  
Use adequate ventilation to keep airborne concentrations below the permissible exposure limits (i.e. concentrations below one half of the PEL and other relevant standards).

#### 8.2.2 Individual protection measures:

Wear suitable protective clothing.  
When handling with chemical substances, protective clothing must be worn.  
Eye/Face Protection: Safety goggles or safety glasses with side shields.  
Skin Protection: Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.  
For short-term hand contact: Nitrile rubber/ 0.425 mm thick, 10 minutes max wearing time.  
For long-term hand contact: Butyl rubber/ 0.50 mm, >480 minutes max wearing time.  
Respiratory Protection: Necessary at aerosol or mist formation. If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Observe OSHA regulations for respirator use (29 CFR 1910.134).

#### Additional information:

Wash hands before breaks and after work.  
Avoid contact with skin and eyes.  
When using, do not eat, drink, or smoke.  
Provide eye shower and label its location conspicuously.

### 8.2.3 Environmental exposure controls:

Do not allow product to enter sewer or water ways.

## **Section 9: Physical and Chemical Properties**

### 9.1 Information on basic physical and chemical properties: (based on CAS # 67-64-1)

**Appearance:** Colorless liquid

**Odor:** Characteristic, pungent

**Odor threshold:** No data available

**pH:** 5-6 (400 g/l; H<sub>2</sub>O; 20 °C)

**Melting point/Freezing point:** -95.4 °C

**Boiling point/Boiling point range:** 56.2 °C (1013 hPa)

**Flash Point:** <-20 °C (-4 °F) (closed cup)

**Evaporation rate:** No data available

**Flammability (solid, gas):** Highly flammable liquid and vapor.

**Upper/lower flammability or explosive limits:**

Lower explosion limit: 2.6 % (v/v)

Upper explosion limit: 12.8 % (v/v)

**Vapor Pressure:** 233 hPa (20 °C)

**Vapor density:** 2.01 (20 °C)

**Relative density:** 0.792 g/cm<sup>3</sup> (20 °C)

**Solubility in water:** Soluble (20 °C)

**Partition coefficient (n-octanol/water):** -0.24 (20 °C)

**Auto-ignition temperature:** 465 °C (869 °F) (DIN 51794)

**Decomposition temperature:** No data available.

**Viscosity:**

Kinematic viscosity: No data available

Dynamic viscosity: 0.32 mPa·s (20 °C)

**Explosive properties:** Not applicable

**Oxidizing Properties:** Not applicable

### 9.2 Other information:

No additional relevant information.

## **Section 10: Stability and Reactivity**

### 10.1 Reactivity:

Vapors are heavier than air, spread along floors, and form explosive mixtures with air.

**10.2 Chemical Stability:**

The product is chemically stable under standard ambient conditions (room temperature).

**10.3 Possibility of Hazardous Reactions:**

Formation of explosive mixtures with:

Oxidizing agent, strong  
 Reducing agent, strong  
 Nitric acid  
 Trichloromethane  
 Peroxide

Violent reaction with:

Alkali (lye)  
 Oxidizing agent  
 Reducing agent

Exothermic reactions with:

Bromine  
 Chlorine

**10.4 Conditions to avoid:**

UV-radiation / sunlight  
 High temperatures

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition, such as static electricity, pilot lights, or mechanical/electrical equipment.

**10.5 Incompatible materials:**

Rubber articles  
 Plastic articles  
 Nitrates  
 Oxidizers  
 Strong acids  
 Alkalis

**10.6 Hazardous decomposition products:**

Carbon dioxide, Carbon monoxide, irritating and toxic fumes and gases.

**10.7 Additional information:**

No data available.

<b>Section 11: Toxicological Information</b>
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**Information on the likely routes of exposure:****11.1 Information on toxicological effects:****A. Acute toxicity:**

RTECS #: CAS# 67-64-1: AL3150000  
 CAS# 141-78-6: AH5425000  
 CAS # 108-05-4: AK0875000

Toxicity data:	CAS# 67-64-11		
Type of Test	Species/Route	Dose/Duration	Results
Draize	Human/Eye	500 ppm	
Open Irritation	Rabbit/Skin	395 mg	Mild
Draize	Rabbit/Skin	500 mg/24H	Mild
Draize	Rabbit/Eye	20 mg	Severe
Draize	Rabbit/Eye	20 mg/24H	Moderate
TD <sub>Lo</sub>	Human/Oral	2857 mg/kg	Coma; Kidney, Ureter, Bladder, other
TD <sub>Lo</sub>	Human/Oral	2857 mg/kg	Coma; Metabolism (intermediary)-other

TC <sub>Lo</sub>	Human/Inhalation	440 µg/m <sup>3</sup> /6M	Brain & Covering
TC <sub>Lo</sub>	Human/Inhalation	10 mg/m <sup>3</sup> /6H	Metabolism (intermediary)-other
TC <sub>Lo</sub>	Human/Inhalation	500 ppm	Sense Organs and Special Senses
TC <sub>Lo</sub>	Human/Inhalation	12000 ppm/4H	Nausea or Vomiting/Muscle Weakness
LD <sub>Lo</sub>	Human/Unreported	1159 mg/kg	Lethal Dose Value
LD50	Rat/Oral	5800 mg/kg	Altered Sleep; Tremor
LC50	Rat/Inhalation	50100 mg/m <sup>3</sup> /8H	Lethal Dose Value
LD <sub>Lo</sub>	Rat/Intraperitoneal	500 mg/kg	General Anesthetic; Muscle Weakness
LD50	Rat/Intravenous	5500 mg/kg	Lethal Dose Value
LD50	Mouse/Oral	3 gm/kg	Lethal Dose Value
LC50	Mouse/Inhalation	44 gm/m <sup>3</sup> /4H	Lethal Dose Value

\*\*\* See RTECS for full listing \*\*\*

Toxicity data: CAS# 141-78-6

Type of Test	Species/Route	Dose/Duration	Results
Draize	Human/Eye	400 ppm	
TC <sub>Lo</sub>	Human/Inhalation	400 ppm	Sense Organs & Special Senses Conjunctive Irritation; Lungs, Thorax – other
LD50	Rat/Oral	5260 mg/kg	Lethal Dose Value
LC50	Rat/Inhalation	200 gm/m <sup>3</sup>	Somnolence; Acute Pulmonary Edema
LD <sub>Lo</sub>	Rat/Subcutaneous	5 gm/kg	Lethal Dose Value
LD50	Mouse/Oral	4100 mg/kg	Somnolence; Changes in Motor Activity; coma
LC50	Mouse/Inhalation	45 gm/m <sup>3</sup> /2H	Lethal Dose Value
LD50	Mouse/Intraperitoneal	709 mg/kg	Lethal Dose Value
LD50	Rabbit/Oral	4935 mg/kg	Lethal Dose Value
LD50	Rabbit/Skin	>20 mL/kg	Lethal Dose Value
LD50	Guinea Pig/Oral	5500 mg/kg	Somnolence; Changes in Motor Activity; coma
LD50	Guinea Pig/Subcut.	3 gm/kg	Somnolence
TD <sub>Lo</sub>	Rat/Intraperitoneal	8 mL/kg/8D-I	Liver; Enzyme Inhibition; Metabolism

\*\*\* See RTECS for full listing \*\*\*

Toxicity data: CAS# 108-05-4

Type of Test	Species/Route	Dose/Duration	Results
LD50	Rat/Oral	2920 mg/kg	
LD50	Rabbit/Dermal	2335 mg/kg	
LC50	Rabbit/Inhalation	2500 ppm/4 H	
LC50	Rabbit/Inhalation	2511 ppm/4H	
LC50	Rabbit/Inhalation	8800 ppm/4H	
LC50	Rat/Inhalation	3680 ppm/4 H	

Immediate and Delayed Health Effects: Central nervous system, Irritant, Mutagen, Some evidence of carcinogenicity.

**B. Skin or Respiratory corrosion/irritation:**

Causes mild skin irritation.

**C. Serious eye damage/irritation:**

Causes serious eye irritation.

**D. Respiratory or skin sensitization:**

In case of skin contact: Not sensitizing.

After inhalation: Not sensitizing.

**E. Germ cell mutagenicity:**

CAS # 67-64-1:

Sex chromosome loss and non-disjunction(Yeast-Saccharomyces cerevisiae) – 47600 ppm

Cytogenetic analysis (Rodent – hamster Fibroblast) – 40 gm/L

No indications of human germ cell mutagenicity exist.





**Appropriate disposal / Package:**

Dispose according to all local, state, and federal legislation. Handle contaminated packages in the same way as the substance itself.

**Additional information:** No data available.

**Section 14: Transport Information****DOT:**

14.1 UN number: UN1090  
14.2 UN proper shipping name: Acetone  
14.3 Transport hazard class(es): 3  
14.4 Hazard label: 3  
14.5 Packing Group: II  
14.6 Environmental hazards: No  
14.7 Marine pollutant: No  
14.7 Special precautions for user: No data available.

**IATA:**

UN number: UN1090  
UN proper shipping name: ACETONE  
Transport hazard class(es): 3  
Classification code:  
Hazard label: 3  
Packing Group: II  
Special precautions for user: No data available.

**IMDG:**

UN number: UN1090  
UN proper shipping name: ACETONE  
Transport hazard class(es): 3  
Classification code:  
Hazard label: 3  
Packing Group: II  
Environmental hazards: No  
MARINE POLLUTANT: No data available.  
Special precautions for user: No data available.  
Segregation group:  
EmS-No.: F-E S-D  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: not relevant

**Section 15: Regulatory Information****15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture:****US FEDERAL:****TSCA**

CAS # 67-64-1 is listed on the TSCA Active Inventory List.  
CAS # 141-78-6 is listed on the TSCA Active Inventory List.  
CAS # 108-05-4 is listed on the TSCA Active Inventory List.

**Chemical Test Rules**

Not listed

**TSCA Significant New Use Rule**

Not listed on SNUR under TSCA.

**SARA****Section 302 (RQ/TPQ)**

CAS# 67-64-1: final RQ = 5000 pounds (2270 kg)

CAS# 141-78-6: final RQ = 5000 pounds (2270 kg)

CAS# 108-05-4: TPQ = 1000 pounds (454 kg)

**SARA Codes**

CAS# 67-64-1: fire hazard, acute health hazard, chronic health hazard

CAS# 141-78-6: fire hazard, acute health hazard, chronic health hazard

CAS # 108-05-4: fire hazard, acute health hazard, chronic health hazard

**Clean Air Act:**

CAS# 108-05-4: CAA TQ=15,000 pounds

**Clean Water Act:**

Not listed

**OSHA:**

Not listed as highly hazardous by OSHA.

**STATE:**

CAS# 67-64-1 may be found on the California Right to Know List.

CAS # 141-78-6 may be found on the California and Massachusetts Right to Know Lists.

CAS # 108-05-4 may be found on the California, New Jersey, and Massachusetts Right to Know Lists.

**15.2 Chemical Safety Assessment:**

Date of Preparation: 30 January 2019.

**Abbreviations and acronyms**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

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

LD<sub>L0</sub>: The lowest amount of a solid or liquid material reported to have caused the death of animals or humans.

PBT: Persistent, Bio-accumulative and Toxicological

vPvB: very Persistent and very Bio-accumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

ATE: Acute Toxicity Estimates

TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
STEL: Short Term Exposure Limit  
CEIL: Ceiling  
TSCA: Toxic Substances Control Act (USA)  
DSL: Domestic Substances List (Canada)  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
ENCS: Existing and New Chemical Substances (Japan)  
AICS: Australian Inventory of Chemical Substances  
IECSC: Inventory of Existing Chemical Substances in China  
KECL: Korea Existing Chemicals List

## **Section 16: Other Information**

### **Disclaimer of Liability:**

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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