

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: April 11, 2016

SPI #02829-AB, 02829-AF SPI-Chem™ NSA Epoxy
Hardener

Component of 02680-AB SPI-Chem™ Low Viscosity
Kit, Spurr Formula Kit I

Component of 02690-AB SPI-Chem™ Ultra-Low
Viscosity Kit, Spurr Formula Kit II

Component of 02662-AB SPI-Chem™ Quetol™ 651
NSA Resin Kit

Section 1.1: Identification

Chemical Name/Synonyms..... Nonenyl Succinic Anhydride

Product or Trade Name..... NSA Epoxy Hardener

CAS #'s..... 28928-97-4

Chemical Formula..... C₁₃H₂₂O₃

Section 1.2: Relevant Uses/Restrictions

Laboratory chemical for use as an epoxy hardener.

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)

GHS Classification(s):

- Skin Sensitization Category 1
- Skin Corrosion/Irritation Category 2
- Serious Eye Damage/Eye Irritation Category 2

2.2 Label elements

Pictogram



Signal Word: Warning

Hazard statements:

- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.

Precautionary statements:

- P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264: Wash hands thoroughly after handling.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321: Specific treatment (see supplemental information on this label).
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313: If eye irritation persists: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P363: Wash contaminated clothing before reuse.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

2.3 Other Hazards:

Hazardous Material Information System USA

- Health.....2
- Fire Hazard.....1
- Reactivity.....0
- Personal Protection.....

NFPA Rating (estimated)

- Health.....2
- Flammability.....1
- Reactivity.....0

Section 3: Composition

3.1 Substances:

Component Name	CAS #	Percent	EINECS/ELINCS
Nonenyl Succinic Anhydride	28928-97-4	~100%	249-317-8

Section 4: First Aid Measures

4.1 Description of first aid measures:

Eyes: Immediately flush with copious amounts of water for at least 15 minutes, holding the eyelids open. If irritation or other symptoms develops, seek medical attention.

Skin: Wash with copious amounts of soap and water. If irritation occurs, seek medical attention.

Ingestion: Seek immediate medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration. Seek medical attention.

Notes to Physician: Treat symptomatically and supportively.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Section 5: Fire Fighting Measures

Flash Point: 296° F (147° C) (Closed Cup)

Autoignition Temperature: n/a

Explosion Limits:

Lower: n/a

Upper: n/a

5.1 General Information:

Remove non-emergency personnel from the area.
Toxic gases, vapors, and fumes may be generated.

5.2 Extinguishing Media: Water fog, foam, alcohol foam, carbon dioxide, dry chemical. Water spray.

5.3 Hazardous products of combustion: As with other organic materials, combustion will produce carbon monoxide and carbon dioxide. Dense smoke, irritating and toxic fumes and vapors may be generated by thermal decomposition and combustion.

5.4 Protective Equipment/Clothing: Wear a NIOSH approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

Section 6: Accidental Release Measures

6.1 Personal precautions

General Information:

Wear respirator, chemical safety goggles, rubber boots, and chemical resistant gloves.

6.2 Environmental precautions

No data available.

6.3 Methods and material for containment and cleaning up

Spills/Leaks:

Absorb spill with inert material such as dry sand, earth, or vermiculite and place in closed containers for disposal. Ventilate area. Wash spill site after material pickup is complete.

6.4 Reference to other sections

Refer to Section 13 for disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Handling:

Use adequate ventilation. Do not breathe vapor. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated contact. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Keep container tightly closed.

Store away from: Acids, alkalies, oxidizing agents.

7.3 Specific end uses

Laboratory chemical for use as an epoxy hardener.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Workplace exposure limits

Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Nonenyl succinic anhydride	n/a	n/a	n/a

OSHA Vacated PELs: n/a

Biological limit values

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Engineering Controls:

Mechanical exhaust requires. Eye wash station and safety shower must be available to work area.

8.2.2 Individual protection measures

Personal Protective Equipment

Eyes: Chemical safety goggles

Skin: Chemical-resistant gloves

Clothing: Suitable to prevent skin contact

Respirators: Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Use a NIOSH/MSHA or EN approved air purifying respirator as needed. For uncontrolled releases, use a full-face supplied air respirator.

8.2.3 Environmental exposure controls

No additional information available.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Yellow liquid

Odor: Slight

Odor threshold: Not available

pH: Not available

Melting point/Freezing point: Not available

Boiling point/Boiling point range: 617°F (325°C)

Flash Point: 296°F (147°C)

Autoignition temperature: Not available

Evaporation rate: 0.02-0.1 (n-Butyl acetate = 1)

Flammability (solid, gas): Not available

Explosion limits:

Lower: not available

Upper: not available

Vapor Pressure: Not available

Vapor density: 7.7 (relative to air)

Specific gravity: 0.957 g/ml

Solubility in water: Insoluble

Partition coefficient (n-octanol/water): Not available

Decomposition temperature: Not available

Viscosity: Not available

Molecular Formula: $C_{13}H_{22}O_3$

Molecular Weight: 226

9.2 Other information

No additional information available.

Section 10: Stability and Reactivity

10.1 Reactivity: Hazardous Polymerization: Will not occur

10.2 Chemical Stability: Stable

10.3 Possibility of Hazardous Reactions

10.4 Conditions to avoid: Avoid contact with strong oxidizers. Avoid incompatible materials and excessive heat.

10.5 Incompatible materials: Acids, alkalies, oxidizing agents.

10.6 Hazardous decomposition products: Carbon monoxide, Carbon dioxide, Dense smoke

Section 11: Toxicological Information

Information on the likely routes of exposure

Potential Health Effects

Eye: Causes eye irritation.

Skin: Prolonged or repeated contact may cause itching, redness and rash. May cause skin sensitization.

Ingestion: May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Inhalation: May cause respiratory tract irritation.

11.1 Information on toxicological effects

The chemical, physical and toxicological properties of this material have not been thoroughly investigated. However, data on similar alkenyl succinic anhydrides give the following values:

LD50	Oral, rat	2550 mg/kg
LD50	Dermal, rabbit	6200 mg/kg
Skin irritation	rabbit:	3.29/8.0
Eye irritation	rabbit:	eye irritant based on conjunctiva effects
Skin sensitization	guinea pigs in	the maximization test, the Buehler test, and the adjuvant and patch test.

Section 12: Ecological Information

12.1 Toxicity:

Exotoxicity: No data available

12.2 Persistence and degradability:

Environmental Fate: No data available, although slow oxidation is anticipated.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

Section 13: Disposal Considerations

13.1 Waste treatment methods

RCRA P-Series: n/a

RCRA U-Series: n/a

Use a licensed professional waste disposal service to dispose of this material. Dispose of in accordance with all federal, state and local regulations.

Section 14: Transport Information

US DOT Hazard Class:

Not regulated. Non-hazardous from the standpoint of shipping.

IATA (for international shipments):

Not regulated. Non-hazardous from the standpoint of shipping.

Section 15: Regulatory Information

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

United States:

TSCA

This chemical is listed on the TSCA Inventory

CERCLA Section 103:

This chemical is not listed under CERCLA.

SARA:

Section 302 (RQ)

This material does not have an RQ.

Section 302 (TPQ)

This material does not have a TPQ.

SARA Codes

Section 311/312:

This material is considered an Acute Health Hazard.

OSHA:

This chemical is not considered to be highly hazardous by OSHA.

California Prop. 65:

This chemical is not listed under California Prop. 65.

European/International Regulations:

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi Irritant

Risk Phrases:

R 36/38: Irritating to the eyes and skin.

R 43: May cause sensitization by skin contact.

Safety Phrases:

S 24/25: Avoid contact with skin and eyes.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 Wear suitable protective clothing.

S 37: Wear suitable gloves.

Canada

WHMIS:

This chemical has a WHMIS classification of D2B.

DSL/NDSL:

This chemical is not listed on the DSL List.

This chemical is listed on the NDSL List.

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out on this material

Date of Preparation: April 11, 1016

Abbreviations and acronyms

n/a = not available

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limitations

REL: Recommended Exposure Limitations

BEI: Biological Exposure Limit

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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