

SPI Supplies Division

Structure Probe, Inc.

206 Garfield Ave., West Chester, PA 19380-4512 USA

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

sales@2spi.com

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

Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: May 1, 2019

SPI Catalog # 04989-AB
Thinner for Platinum Conductive Paint

Section 1.1: Identification

Chemical Family Organic solvent

Product or Trade Name Thinner for Platinum Conductive Paint

CAS #'s 123-86-4

Chemical Formula..... C₆H₁₂O₂

Section 1.2: Relevant Uses/Restrictions

Thinner for Platinum Conductive Paint.

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)

Serious eye damage/ eye irritation Category 2B

Specific target organ toxicity (single exposure) Category 3

Flammable liquids Category 3

2.2 Label elements

Pictogram



Signal Word: Warning

Hazard statements:

- H316 Causes mild skin irritation.
- H320 Causes eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H226 Flammable liquid and vapor.
- H333 May be harmful if inhaled.

Precautionary statements:

- P264 Wash face, hands and any exposed skin thoroughly after handling.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P271 Use only outdoors or in a well-ventilated area.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces. – No smoking.
- P233 Keep container tightly closed.
- P240 Ground/ bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/light/... /equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P235 Keep cool.
- P370 + P378 In case of fire: Use CO₂, dry chemical, or foam to extinguish.
- 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 advice/ attention.
- P303 + P361 + P363 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P403 + P333 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Unknown percentage statements (if needed): Not applicable.

2.3 Other Hazards:

Hazardous Material Information System USA

Health 0
Fire Hazard 3
Reactivity 0
Personal Protection

NFPA Rating (estimated)

Health 1
Flammability..... 3
Reactivity 0

Section 3: Composition

Component	CAS#	Percentage	EC Number
n-Butyl acetate	123-86-4	100 %	204-658-1

Section 4: First Aid Measures

4.1 Description of first aid measures:

Eyes: Flush eyes immediately with copious amounts of water, holding the eyelids open, for at least 15 minutes. Seek medical attention.

Skin: Flush skin with copious amounts of water, while removing contaminated clothing. Wash affected skin areas with soap and water. Wash contaminated clothing before reuse. Seek medical attention if symptoms develop.

Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately for further instructions.

Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if breathing has stopped. Seek immediate medical attention.

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

Eye: Causes eye irritation. Vapors cause eye irritation.

Skin: May cause skin irritation. Prolonged or repeated skin contact may cause defatting of the skin or dermatitis.

Ingestion: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause CNS depression.

Inhalation: Respiratory system irritant. May cause a variety of symptoms such as dryness of the throat, tightness of the chest, and shortness of breath. May cause central nervous system depression, characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.

Chronic: Repeated or prolonged solvent overexposure may result in permanent central nervous system damage. Chronic skin contact may cause dermatitis.

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

Notes to Physician: Treat symptomatically.

Protection of first-aiders: Avoid exposure blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

Section 5: Fire Fighting Measures

5.1 Extinguishing media:

Suitable extinguishing media:

Carbon dioxide (CO₂). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable extinguishing media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Flammable.

May be ignited by heat, sparks or flames.

Container explosion may occur under fire conditions or when heated.

Vapor may travel considerable distance to source of ignition and flash back.

Vapors may form explosive mixtures with air.

Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks).

5.3 Hazardous combustion products:

Carbon oxides.

5.4 Advice for firefighters:

Specific methods:

Water mist may be used to cool closed containers.

For larger fires, use water spray or fog.

Cool containers with flooding quantities of water until well after fire is out.

Dike fire-control water for later disposal; do not scatter the material.

Special protective equipment and precautions for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

6.1 Personal precautions:

Ensure adequate ventilation.

Keep people away from and upwind of spill/leak.

Avoid contact with skin, eyes and clothing.

Use personal protection equipment.

Remove all sources of ignition.

Pay attention to flashback.

Take precautionary measures against static discharges.

All equipment used when handling the product must be grounded.

Use spark-proof tools and explosion-proof equipment.

In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

6.2 Environmental precautions:

- Prevent further leakage or spillage, if safe to do so.
- Prevent product from entering drains.
- Prevent entry into waterways, sewers, basements, or confined areas.

6.3 Methods and material for containment and cleaning up:

Methods for containment:

- Stop leak if you can do it without risk.
- Absorb spill with inert material (e.g. vermiculite, dry sand, or earth).
- In case of large spill, dike if needed.
- Dike far ahead of liquid spill for later disposal.

Methods for cleaning up:

- Use appropriate tools to put the spilled material in a suitable chemical waste disposal container.
- Use only non-sparking tools.
- Clean contaminated surface thoroughly.

6.4 Reference to other sections:

- See Section 13 for disposal information.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Technical measures/precautions:

- Provide sufficient air exchange and/or exhaust in work rooms.
- Remove all sources of ignition.
- To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
- Keep away from incompatible materials.

Save handling advice:

- Wear personal protective equipment.
- Use only in well-ventilated areas.
- Avoid contact with skin, eyes and clothing.
- Keep away from heat and sources of ignition.
- Do not breathe vapors or spray mist.
- Do not ingest.
- When using, do not smoke.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities:

Technical measures/storage conditions:

- Keep container tightly closed in a dry and well-ventilated place.
- Store at room temperature in the original container.
- Store away from incompatible materials.
- Keep away from heat and sources of ignition.

Incompatible materials:

- No information available.

7.3 Specific end uses:

- Thinner for Platinum Conductive Paint.

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: For Butyl acetate / CAS # 123-86-4

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Butyl acetate	150 ppm TWA 710 mg/m ³ TWA	= 150 ppm TWA	= 200 ppm STEL	none

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Butyl acetate	= 150 ppm TWA = 713 mg/m ³ TWA	= 20 ppm TWA	150 ppm TWA	150 ppm TWAEV 713 mg/m ³ TWAEV 200 ppm STEV 950 mg/m ³ STEV

Australia and Mexico

Components	Australia	Mexico
Butyl acetate	950 mg/m ³ STEL 200 ppm STEL 150 ppm TWA 713 mg/m ³ TWA	= 150 ppm TWA = 710 mg/m ³ TWA

Biological limit values: No data available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Ensure adequate ventilation.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

8.2.2 Individual protection measures:

Eye protection:

Goggles; Safety glasses with side-shields.

Skin and body protection:

Chemical resistant apron. Gloves. Long sleeved clothing.

Respiratory protection:

Vapor respirator.

Be sure to use an approved/certified respirator or equivalent.

Hygiene measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and immediately after handling the product.

When using, do not eat, drink or smoke.

8.2.3 Environmental exposure controls:

Prevent product from entering drains.

Prevent entry into waterways, sewers, basements, or confined areas.

Section 9: Physical and Chemical Properties

Appearance: colorless liquid

Odor: fruit-like

Odor threshold: 0.31

pH: no information available

Melting point/Freezing point: -77.9 °C (-108.2 °F)

Boiling point/Boiling point range: 126.5 °C (259.7 °F)

Flash Point:

Closed cup: 23.9 °C (75 °F)

Open cup: 37 °C (98.6 °F)

Evaporation rate: no information available

Flammability (solid, gas): no information available

Upper/lower flammability or explosive limits:

Lower: 1.7

Upper: 7.6

Vapor Pressure @ 20 °C (kPa): 1.3

Vapor density: 4.01

Density (g/cm³): no information available

Specific gravity: 0.9

Solubility: partially soluble in cold water

Partition coefficient (n-octanol/water): no information available.

Auto-ignition temperature: 421 °C (789.8 °F)

Decomposition temperature: no information available

Viscosity: no information available

VOC content (g/L): no information available

Formula: C₆H₁₂O₂

Molecular / Formula Weight: 116.16

9.2 Other information: No further information available.

Section 10: Stability and Reactivity

10.1 Reactivity: No information available.

10.2 Chemical Stability: Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions: Hazardous polymerization does not occur.

10.4 Conditions to avoid: Heat. Ignition sources. Incompatible materials.

10.5 Incompatible materials: No information available.

10.6 Hazardous decomposition products: Carbon oxides.

No further relevant information available.

Section 11: Toxicological Information

Information on the likely routes of exposure:

Principal Routes of Exposure: Eyes, Ingestion, Inhalation

Target Organs: Lungs, Mucous membranes, Nervous system

11.1 Information on toxicological effects:

A. Acute toxicity:

Butyl acetate CAS # 123-86-4
LD50 / oral / rat: 10768 mg/kg
LD50 / oral / mouse: 6 gm/kg
LD50 / dermal / rat: No information available
LD50 / dermal / rabbit: 17600 mg/kg
LC50 / inhalation / rat: 390 ppm – 4 h
LC50 / inhalation / mouse: 6 gm/m³ – 4 h
Other LD50 or LC50 information: No information available

B. Skin corrosion/irritation:

May cause mild skin irritation.

Inhalation:

May cause respiratory tract irritation.

May cause drowsiness / sleepiness.

May cause dizziness and headache.

Ingestion:

May cause digestive / gastrointestinal tract irritation.

C. Serious eye damage/irritation:

Causes eye irritation.

D. Respiratory or skin sensitization:

No information available.

E. Germ cell mutagenicity:

No information available.

F. Carcinogenicity:

Not considered carcinogenic.

Not listed by ACGIH, IARC, NTP, OSHA HCS,

Australia –Prohibited or Notifiable Carcinogenic Substances

G. Reproductive toxicity:

No data available.

H. STOT-single exposure:

No information available.

I.. STOT-repeated exposure:

No information available.

J. Aspiration hazard:

No information available.

Section 12: Ecological Information

12.1 Ecotoxicity:

Freshwater Algae Data:
674.7 mg/L EC50 Desmodesmus subspicatus / 72 h
Freshwater Fish Species Data:
100 mg/L LC50 Lepomis macrochirus / 96 h – static 1
17-19 mg/L LC50 Pimephales promelas / 96 h – flow-through 1
62 mg/L LC50 Leuciscus idus / 96 h – static 1
Water Flea Data:
72.8 mg/L EC50 Daphnia magna / 24 h

12.2 Persistence and degradability:

No information available.

12.3 Bio-accumulative potential:

No information available.

12.4 Mobility in soil:

No information available.

12.5 Results of PBT and vPvB assessment:

No information available.

12.6 Other adverse effects:

No additional information available.

Section 13: Disposal Considerations

13.1 Waste treatment methods:

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State, and Local regulations.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery, or waste disposal.

No RCRA F Series, K Series, P Series, or U Series wastes.

Section 14: Transport Information

DOT:

UN Number:	UN1123
Proper Shipping Name:	Butyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
ERG No:	129
Marine Pollutant:	No data available.
DOT RQ (lbs.):	No information available

IATA:

UN Number:	UN1123
Proper Shipping Name:	Butyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
ERG Code:	3L
Description:	No information available

IMDG:

UN Number:	UN1123
Proper Shipping Name:	Butyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
Description:	No information available
Marine Pollutant:	No information available
EMS:	F-E
MFAG:	No information available
Maximum Quantity:	No information available

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

Butyl acetate CAS # 123-86-4 is present on the following inventories:

- U.S. TSCA Active Inventory List
- Korea KECL – Present KE-04179
- Philippines PICCS
- Japan ENCS – Present (2)-731
- China
- Australia (AICS)
- EINECS-No. – Present 204-658-1

U.S. Government Regulations:**SARA:****Section 302 (RQ)**

none

Section 302 (TPQ)

None

SARA Codes

CAS# 123-86-4: Fire Hazard

Section 313

none

CERCLA

CAS# 123-86-4 has an RQ of 5000 lb.; 2270 kg Final RQ

OSHA:

This product is not considered hazardous as defined by 29 CFR 1910.1200(OSHA HazCom Standard.)

State Right-To-Know Lists:

CAS # 123-86-4 is listed on the Massachusetts, Pennsylvania, and New Jersey Right-to-Know Lists.

California Prop. 65:

The product contains no components known to the State of California to cause cancer, birth defects, or other reproductive harm.

European/International Regulations:

European Labeling in Accordance with EC Directives

Hazard Symbols: n/a

Risk Phrases:

- R10 Flammable
- R66 Repeated exposure may cause skin dryness or cracking
- R67 Vapors may cause drowsiness and dizziness

Safety Phrases:

- S2 Keep out of the reach of children
- S25 Avoid contact with eyes

WGK (Water Danger/Protection):

n/a

Canada

WHMIS classification: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

This product has a WHMIS classification of B2, D2B.

DSL/NDSL

CAS# 123-86-4 is listed on the DSL list. CAS# 123-86-4 is not listed on the NDSL list.

15.2 Chemical Safety Assessment: Has not been carried out.

Date of Preparation: 01 May 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

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 or fluids.

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