

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: July 30, 2019

SPI Catalog #'s 05007-AB, 05007-DA

Thinner for Carbon Conductive Paint

Section 1.1: Identification

Chemical Name/Synonyms isopropyl alcohol, isopropanol, 2-propanol

Product or Trade Name Thinner for Carbon Conductive Paint
(Formulated for use with SPI# 5006 Carbon Paint)

CAS #'s 67-63-0

Chemical Formula..... C₃H₈O

Section 1.2: Relevant Uses/Restrictions

Thinner for SPI Catalog # 05006 Conductive Carbon 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)

Flammable liquids (Category 2)

Skin irritation (Category 3)

Eye irritation (Category 2A)
Specific target organ toxicity- single exposure (Category 3)
Specific target organ toxicity – repeated exposure
Nerves., Kidney, Cardiovascular system, Gastrointestinal tract, Liver

2.2 Label elements

Pictogram



Signal Word: Danger

Hazard statements:

H225: Highly flammable liquid and vapor.
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary statements:

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/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353 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.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
H336 May cause drowsiness or dizziness
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P235 Keep cool.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with local, state & federal regulations.

Carcinogenicity:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

2.3 Other Hazards:

Hazardous Material Information System USA

Health 2* (Chronic health hazard)
Fire Hazard 3
Reactivity 0
Personal Protection

NFPA Rating (estimated)

Health 1
Flammability..... 3
Reactivity 0

Section 3: Composition

3.1 Substances:

Chemical Name: Isopropanol
CAS #: 67-63-0
EC #: 200-661-7
Concentration: 100%

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation:

Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Use oxygen as required, provided a qualified operator is present.
Call a physician.

Skin Contact:

Wash off immediately with plenty of water for at least 15 minutes.
Take off contaminated clothing and shoes immediately.
Wash contaminated clothing before re-use.
Call a physician if irritation develops or persists.

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician.

Ingestion

Do not induce vomiting without medical advice.
Immediate medical attention is required.
Never give anything by mouth to an unconscious person.
Call a physician.

Notes to physician:

Treat symptomatically.

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

No further relevant information available.

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

No further relevant information available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media:

Suitable extinguishing media: Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical.
Cool closed containers exposed to fire with water spray.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Flammable.

Vapors may form explosive mixtures with air.

Vapors are heavier than air and may spread along floors.

Vapors may travel to areas away from work site before igniting/flashing back to the vapor source.

5.3 Hazardous combustion products:

Hazardous decomposition products which may be produced under fire conditions:

Carbon monoxide (CO)

Carbon dioxide (CO₂)

5.4 Advice for firefighters:

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective suit.

Section 6: Accidental Release Measures

6.1 Personal precautions:

Wear personal protective equipment.

Immediately evacuate personnel to safe areas.

Keep people away from and upwind of spill/ leak.

Ensure adequate ventilation.

Remove all sources of ignition.

Do not swallow.

Avoid breathing vapors, mist or gas.

Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so.

Prevent product from entering drains.

Discharge into the environment must be avoided.

Do not flush into surface water or sanitary sewer system.

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

6.3 Methods and material for containment and cleaning up:

Ventilate the area.

No sparking tools should be used.

Use explosion-proof equipment.

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:

See Section 8 for personal protection equipment.

See Section 13 for information on disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Protective measures:

- Wear personal protective equipment.
- Use only in well-ventilated areas.
- Keep container tightly closed.
- Do not smoke.
- Do not swallow.
- Avoid breathing vapors, mist or gas.
- Avoid contact with skin, eyes, and clothing.

7.2 Conditions for safe storage, including any incompatibilities:

- Keep away from fire, sparks and heated surfaces.
- Take precautionary measures against static discharges.
- Ensure all equipment is electrically grounded before beginning transfer operations.
- Use explosion-proof equipment.
- Keep product and empty container away from heat and sources of ignition.
- No sparking tools should be used.
- No smoking.

7.3 Specific end uses:

Thinner for SPI Catalog # 05006 Conductive Carbon 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: Isopropanol CAS # 67-63-0

Value	Control parameters	Update	Basis
TWA:	(200 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
STEL:	(400 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
REL:	980 mg/m ³ ; (400 ppm)	2005	NIOSH/GUIDE:US. NIOSH Pocket Guide to Chemical Hazards
STEL:	1,225 mg/m ³ ; (500 ppm)	2005	NIOSH/GUIDE:US. NIOSH Pocket Guide to Chemical Hazards
PEL:	980 mg/m ³ ; (400 ppm)	02.2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
TWA:	980 mg/m ³ ; (400 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
STEL:	1,225 mg/m ³ ; (500 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

TWA=Time Weighted Average

STEL=Short Term Exposure Limit

PEL=Permissible Exposure Limit

Biological limit values: No data available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

- Use with local exhaust ventilation.
- Prevent vapor buildup by providing adequate ventilation during and after use.
- Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2 Individual protection measures:

Eye protection:

Do not wear contact lenses.
Wear as appropriate: safety glasses with side-shields.
If splashes are likely to occur, wear: Goggles or face shield, giving complete protection to eyes.

Hand protection:

Solvent-resistant gloves.
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection:

Wear as appropriate:
Solvent-resistant apron.
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Use NIOSH approved respiratory protection.

Hygiene measures:

When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapors, mist, or gas.
Avoid contact with skin, eyes and clothing.

8.2.3 Environmental exposure controls:

Prevent product from entering drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire-fighting to enter drains or water courses.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance: Colorless liquid

Odor: Slight alcohol-like

Odor threshold: No data available

pH: Not applicable

Melting point/Freezing point: -88 °C

Boiling point/Boiling point range: 82.3 °C

Flash Point: 54 ° F (12 ° C)

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits:

Lower: 2 %(V)

Higher: 12 %(V)

Vapor Pressure: 44 hPa at 20 °C (68 °F)

Vapor density: 2.1 (Air = 1.0)
Density: 0.785 g/cm³ at 20 °C
Solubility: Completely soluble
Partition coefficient (n-octanol/water): No data available
Ignition temperature: 399 °C
Decomposition temperature: No data available
Viscosity, dynamic: 2.1 mPa.s at 25 ° C
Explosive properties: No data available
Oxidizing Properties: No data available
Molecular weight: 60.11 g/mol

9.2 Other information: No further relevant information available.

Section 10: Stability and Reactivity

10.1 Reactivity:

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, flames and sparks.

Keep away from direct sunlight.

10.5 Incompatible materials:

Strong acids

Strong oxidizing agents,

Keep away from metals.

Acetaldehyde

Aluminium

Chlorine

Ethylene oxide

Isocyanates

Oxygen

May attack many attack many plastics, rubbers, and coatings.

10.6 Hazardous decomposition products:

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide (CO)

Carbon dioxide (CO₂)

Section 11: Toxicological Information

Information on the likely routes of exposure:

11.1 Information on toxicological effects:

A. Acute toxicity:

Acute oral toxicity:
LD50: 50.45 mg/kg Species: Rat
Acute inhalation toxicity:
LC50: 16,000 ppm Species: Rat
Acute dermal toxicity:
LD50: 12,800 mg/kg Species: Rabbit

B. Skin corrosion/irritation:

Skin irritation:
Result: Slight irritation Species: Rabbit

C. Serious eye damage/irritation: Eye irritation:

Result: Severe eye irritation Species: Rabbit

D. Respiratory or skin sensitization:

No data available.

E. Germ cell mutagenicity:

No data available.

F. Carcinogenicity:

IARC: Group 3: Not classifiable as to its carcinogenicity to humans.

NTP: No component of the product present at levels greater or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of the product present at levels greater or equal to 0.1% is identified as a known or anticipated carcinogen by OSHA.

G. Reproductive toxicity:

TDLo: Oral, rat 8 g/kg female 6-15 days after conception
Toxic effects: Fetotoxicity (except death) – e.g. stunted fetus

TDLo: Inhalation, rat 3500 ppm/7H female 1-19 days after conception
Toxic effects: Fetotoxicity (except death) – e.g. stunted fetus

TDLo: Inhalation, rat 10,000 ppm/7H female 1-19 days after conception
Toxic effects: Fertility – pre-implantation mortality (e.g. reduction in number of implants per female)

Toxic effects: Reproductive – effects on Embryo or Fetus – fetal death

TDLo: Inhalation, rat 7000 ppm/7H female 1-19 days after conception
Toxic effects: Specific Developmental Abnormalities – musculoskeletal system

TDLo: Oral, rabbit 6240 mg/kg female 6-18 days after conception
Toxic effects: Maternal Effects – other effects

H. STOT-single exposure:

Specific target organ toxicity- single exposure
Central nervous system

I.. STOT-repeated exposure:

Specific target organ toxicity – repeated exposure
Nerves., Kidney, Cardiovascular system, Gastrointestinal tract, Liver

J. Aspiration hazard:

No data available.

Additional information: RTECS # NT8050000.

Section 12: Ecological Information

12.1 Ecotoxicity:

Toxicity to fish:

LC50: >5 g/l, 24H Species: Carassius auratus (goldfish)

LC50: 8,970 mg/l, 48H Species: Leuciscus idus (golden orfe)

LC50: 10,4000 mg/l, 96 H Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates:

EC50: > 100 mg/l, 48H Species: Daphnia magna (Water flea)

Toxicity to algae:

LC50: >2,000 mg/l, 72H Species: Desmodesmus subspicatus (green algae)

Toxicity to bacteria:

EC50: 35,390 mg/l, 5 min Species: Photobacterium phosphoreum

12.2 Persistence and degradability:

Biodegradability:

Biochemical Oxygen Demand (BOD) – Biochemical oxygen demand within 5 days:

Value: 58%

12.3 Bio-accumulative potential:

Additional ecological information”

Accumulation in aquatic organisms is unlikely.

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:

Dispose of contents/ container in accordance with local, state, and federal regulations.

Section 14: Transport Information

DOT

UN#: UN1263

Paint Related Material

Hazard Class: 3

Flammable Liquid

Packing Group: III

IATA

UN#: UN1263
Hazard Class: 3
Packing Group: III

Paint Related Material
Flammable Liquid

Hazard Labels: 3

EmS Number: F-E, S-D

Marine pollutant: no

Section 15: Regulatory Information

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

U.S. Government Regulations:

TSCA:

Isopropanol CAS # 67-63-0 is on the TSCA Active Inventory List.

SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

The following components are subject to reporting levels established by SARA Title III, Section 313:

Isopropanol CAS # 67-63-0

SARA 311/312 Hazards:

Fire Hazard
Acute Health Hazard
Chronic Health Hazard

California Prop. 65:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK:

Isopropanol, CAS # 67-63-0, is on the list.

New Jersey RTK:

Isopropanol, CAS # 67-63-0, is on the list.

Pennsylvania RTK:

Isopropanol, CAS # 67-63-0, is on the list.

International Regulations:

CANADA:

WHMIS Classification:

B2: Flammable liquid

D2B: Toxic Material Causing Other Toxic Effects

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

Canadian Environmental Protection Act (CEPA), Domestic Substances List DSL:

All components of this product are on the Canadian DSL.

AUSTRALIA:

Industrial Chemical (Notification and Assessment) Act:
On the inventory, or in compliance with the inventory.

JAPAN:

Kashin-Hou Law List:
On the inventory, or in compliance with the inventory.

KOREA:

Toxic Chemical Control Law (TCCL) List:
On the inventory, or in compliance with the inventory.
KE-29363

PHILIPPINES:

The Toxic Substances and Hazardous and Nuclear Waste Control Act:
On the inventory, or in compliance with the inventory.

CHINA:

Inventory of Existing Chemical Substances:
On the inventory, or in compliance with the inventory.

NEW ZEALAND:

NZIOC:
On the inventory, or in compliance with the inventory.

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

Date of Preparation: 30 July 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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