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*
E-mail: *spi3spi@2spi.com*
WWW: http://www.2spi.com
Manufacturer's CAGE: 1P573

Material Safety Data Sheet

SPI #05065-AB Carbon Paste

Section 01 Identification

Date Effective.....	June 7, 2010 (most recent revision)
Chemical Name/Synonyms...	Mixture
Chemical family.....	Graphite and carbon particles in solvents
Emergencies Use Only #'s.....	Contacting CHEMTREC 24 Hour Emergency Worldwide phone : 1-(703)-527-3887 Worldwide FAX : 1-(703)-741-6090 Toll-free phone : 1-(800)-424-9300
USA/Canada only	
Product or Trade Name....	SPI #05065-AB Carbon Paste for Electron Microscopy Applications
CAS #.....	See Section 10 Hazardous Ingredients
Chemical Formula.....	Not applicable

NFPA
(National Fire Protection Association) Rating

(Scale 0-4) : Not rated

Section 02 Physical Data

Boiling Point.....	760 mm Hg : 181-243° F for the carrier; graphite/carbon graphite does not "boil".

Formula Weight.....	Not applicable
Coeff. of Water/Oil Dist.	NOT DETERMINED
pH (Liquids Only).....	NOT DETERMINED
% Volatile By Volume.....	50-65
Melting Point.....	Not applicable
Vapor Pressure.....	mm Hg: 26.8 @ 20° C
Vapor Density/Air is 1...	Heavier than air
Solubility In Water.....	Solvent up to 10%; colloid, insoluble
Appearance and Color.....	Thixotropic black/gray paste
Specific Gravity.....	(H_2O = 1): 1.2
Evaporation Rate (n-butyl acetate = 1):	Faster than butyl acetate
Odor.....	"Alcoholic" type odor

Section 03 Fire And Explosion Hazard Data

Flash Point..... (53° F) (TCC-Tagged Closed Cup)
Flammable Limits in Air..... Flammable limit in air, % by vol.
LEL (Lower Explosive Limit) : Not available

UEL (Upper Explosive Limit) : Not available

Fire Extinguishing Media:
Dry Chemical, CO_2, "alcohol" foam, water spray
to cool fire-exposed containers and disperse vapor; water on fire itself may be ineffective but can be used to cool surrounding areas that are being overheated. Care must be taken not to spread the fire.

Firefighting Procedure:
Wear self-contained breathing apparatus and protective clothing. Use water spray to cool overheated containers in the surrounding area. Care must be taken to not spread the fire with the application of water. Material will burn rapidly with intense heat.

Fire and explosion hazards:
Dangerous fire and explosion hazard. Vapor can travel some distance to an ignition source and the flash back. Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below published autoignition or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes. Ignition may occur at typical elevated temperature process conditions, especially in a process operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

We do not anticipate this material to be potentially dangerous via the above paragraph since it is designed for use in the electron microscope laboratory and the typical unit of purchase is 30 g, not

enough of the material to pose a significant health or safety risk to anyone. Furthermore, in its mode of normal use, it is not applied as a mist or spray.

Section 04 Reactivity Data

Stable: Yes

Hazardous Polymerization:
Does not occur.

Hazardous Decomposition Products:
CO_x (Carbon Dioxide / Carbon Monoxide) and monomers

Conditions to avoid:
Extreame heat, contact with ignition source such as open flames or sparks.

Materials to avoid:
Strong oxidizers, strong acids, strong bases, acids, NaOH, amines, and alkali contamination.

Hazardous polymerization: Will not occur

Polymerization conditions to avoid: Material not know to polymerize.

Section 05 Spill, Leak and Disposal Procedures

Spill Response:
Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under exposure/personal protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source. If this can be done without risk. Take up and containerize for proper disposal as described under disposal. Comply with federal, state, and local regulations on reporting release. Refer to regulatory information for reportable quantity and other regulatory data. Prevent material from entering sewers, water courses, or ground water.

Of course, the small squeeze tubes sold for use in a microscopy laboratory are not ever going to result in the kind of spill situation described above. The only kind of spill envisioned, would be, as an example, a single tube falling on the floor and someone stepping on it. In that kind of situation, the prudent thing to do would to be take what is the handiest wiper that might around, be it an ordinary paper towel, or even one or more lint free cotton or lint free polyester wipers.

Quickly wipe up the spill and dispose of according to proper disposal conditions described above.

Waste Disposal Method:
Consult with federal, state, and local waste regulations.

Section 06 Health Hazard Data

Effects of over exposure:

Inhalation:
Excessive inhalation of vapors (or mists) can cause headache, nausea, vomiting, dizziness, intoxication, and a slight irritation of the nose and throat.

Ingestion:
Can cause gastrointestinal irritation.

Eye:
May cause irritation of the eyes with corneal inflammation.

Skin:
Repeated or prolonged contact can cause dermatitis around the fingernails and along the side of the fingers. Extensive exposure can result in significant absorption through the skin.

Carcinogenicity:
No ingredients of this product are designated by IARC, NTP, or ACGIH as potential carcinogens.

Section 07 First Aid Procedures And Physician Notes

Inhalation:
If affected, remove individual to fresh air; if breathing is difficult, administer oxygen; if breathing has stopped, give artificial respiration and seek medical attention immediately. Never attempt to give any liquids to an unconscious person.

Ingestion:
Keep injured person calm and seek medical attention immediately.

Eyes:
Flush eyes with water, lifting upper and lower lids occasionally, and seek medical attention immediately.

Skin:
Wash with soap and water; remove contaminated clothing and launder before reuse.

Other:
Eyewash station, emergency shower.

Section 08 Special Handling Information

Ventilation requirements:
Provide sufficient local exhaust ventillation to maintain exposure below TLV(s).

Respirator:
If PEL and TLV levels are exceeded, a NIOSH approved self-contained breathing apparatus or vapor cartridge respirator must be worn.

Protective equipment:

Eye:	Wear chemical splash goggles
Glove:	Wear impervious gloves to avoid direct skin contact.
Other:	No special equipment deemed necessary under normal usage.
Special note:	This product is sold primarily is small squeeze tubes for use in an SEM laboratory. The small quantities per tube make highly unlikely that any of these procedures or emergency instructions would ever have to be used. However, even when small quantities are invoiced we would recommend zero exposure by way of eye contact, skin contact, or inhalation contact.

Section 09 Special Precautions and Additional Information

Handling and Storage:
Avoid prolonged inhalation of mists or vapors.

Handling and Storage:
Keep container closed.
Store in a cool area away from ignition source and oxidizers.
Do not breath vapors.
Do not get in eyes.
Avoid, prolonged, or repeated, skin contact.
Electrically ground all equipment when handling this product.

Also, keep in mind that over heating, could cause the squeeze tube to rupture. Also, if used in other applications, be sure that all electrical equipment is explosion proof. Tube should be kept tightly closed also to prevent vapor build up in enclosed spaces.

Other precautions: Check all tubes for leaks. All leaking tubes should be disposed of according to recommended procedures for disposal. Make sure that when used on electrical equipment that all such equipment be grounded to prevent static discharge.

Section 10 Hazardous Ingredients

Component	Appr % Volume	TLV	LEL	CAS #
Iso-propyl alcohol	35-60	____	33.0	71-23-8
Graphite, colloidal	20-35	____	N/A	7782-42-5
n-Butyl alcohol	3-10	100	5.5	71-36-3
Propylene glycol methyl ether	5-15	____	10.9	107-98-2
Proprietary ingredients	5-10	N/A		

The CAS Numbers for the components of this product are listed on the 1985 TSCA inventory list.

Definitions:

SARA: Superfund Amendments and Reauthorization Act of 1986

CERCLA: Comprehensive Environment Response Compensation and Liability Act

EHS: Extremely Hazardous Substance

OSHA: Occupational Safety and Health Act.

Section 11 Additional information

The usual size of this product is sold in a 30 g squeeze tube. This is a very small amount. Occasionally the tube, which has a crimped end, accidentally is over stressed during the "squeezing" and the crimped end fails, with product leaking out the side of the tube. This does not happen very often, but it happens often enough that hand protection is recommended during the use of this product. Or on occasion, a tube might fall on the floor and be stepped on accidentally. When these situations arise, some element of reason must be applied as to the appropriateness of response. And logic would dictate that a few quickly applied paper towels or if handly, cotton wipers or polyester wipers, of the type found in most electron microscopy laboratories, be applied to the puddle of the carbon paste, soaking it up before the vapors get disseminated through out the room, would be the response of choice. It would be recommended that the paper towels or wipers wet with the spilled product be stored temporarily in a fume hood until the institutional safety people can be contacted for the proper disposal of the now wet paper towels. In the years since 1975, when this product was commercialized, we are unaware of any spill that involved more than a partial tube of the product. And we are unaware of any customers that has suffered any medical consequences due to the use of this product.

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.

****

The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof, however SPI Supplies and Structure Probe, Inc. make no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assume no liability to any user thereof. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation.

ON-LINE To Ask a Question or Make a Comment

ON-LINE To Place an Order or Request a Quote

Search SPI Navigator Index

Return to:

- SPI Supplies MSDS Safety Sheets Table of Contents
- SPI Carbon Paint Table of Contents
- SPI Supplies Catalog Table of Contents
- SPI Supplies Home Page

Worldwide Distributors, Representatives, and Agents