



MATERIAL SAFETY DATA SHEET

REVISION DATE: June 18, 2004

SECTION I: MANUFACTURER AND MATERIAL

MATERIAL TRADE NAME: Pyrogel® AR5401 and Pyrogel AR5402

CHEMICAL FAMILY: Silica Aerogel Material

MANUFACTURER: ASPEN AEROGELS, INC.
30 Forbes Road
Northborough, MA 01532

INFORMATION PHONE: (508) 691-1111 8 AM to 6 PM EST

EMERGENCY PHONE: 800-535-5053 US
(INFOTRAC) 352-323-3500 INTERNATIONAL (call collect)

FORMULA: Proprietary

SECTION II: PRODUCT INGREDIENTS

	CAS#	EXPOSURE LIMITS	
		OSHA	ACGIH
Silica Gel	63231-67-4	None Established	
Oxidized polyacrylonitrile fiber	N/A	None Established	

SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE: Dark grey blanket

ODOR: None

SPECIFIC GRAVITY: 0.12 g/cc

SOLUBILITY IN WATER: Insoluble

pH: Not Applicable

www.aerogel.com

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA:	Non-Flammable. Use Media Suitable for Surrounding Fire.
SPECIAL FIRE FIGHTING PREC:	Wear NIOSH/MSHA Approved SCBA and Full Protective Equipment.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None

SECTION V: REACTIVITY DATA

STABILITY:	Stable
MATERIALS TO AVOID:	Reacts with Hydrogen Fluoride
HAZARDOUS DECOMPOSITION PRODUCTS:	PAN fibers can generate gaseous products on heating to temperatures higher than 650 F and It's recommended that the PAN fibers be used with ventilation. Depending on the temperature you can generate different proportions of the following,nitrogen-containing products; NH3 (ammonia), HCN (hydrogen cyanide), N2, and monomeric acrylonitrile
HAZARDOUS POLY OCCUR:	None

SECTION VI: HEALTH HAZARD DATA

ROUTE OF ENTRY-INHALATION:	Yes
ROUTE OF ENTRY-SKIN:	Yes
ROUTE OF ENTRY-INGEST:	Yes
HEALTH HAZARD ACUTE AND CHRONIC:	Silica Gel is a Synthetic Amorphous Silica not to be Confused with Crystalline Silica. Epidemiological Studies Indicate Low Potential for Adverse Health Effects. Silica Gel is considered by Davison to be a Nuisance Dust. In Activated Form.
CARCINOGENICITY – NTP:	No
CARCINOGENICITY – IARC:	No

CARCINOGENICITY – OSHA:	No
EXPLANATION OF CARCINOGENICITY:	Not Applicable
SIGNS/SYMPTOMS OF OVEREXPOSURE:	In activated form, silica gel acts as a desiccant and can cause a drying irritation of mucous membranes and skin in cases of severe exposure. Not considered an ocular irritant.
MEDICAL CONDITION:	None known
AGGRAVATED BY EXPOSURE: EMERGENCY/FIRST AID PROCEDURE:	<p>Eye: Immediately wash with large amounts of water for at least 15 minutes, occasionally lifting lids. If irritation occurs and persists, get medical treatment.</p> <p>Skin: Wash with soap and water.</p> <p>Ingest: Material will pass through the body normally.</p> <p>Inhale: Remove to fresh air.</p>

SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS IF MATERIAL IS RELEASED/SPILL:	Not known to have any adverse affects on the aquatic environment. Material is insoluble and nontoxic. Sweep or vacuum up.
WASTE DISPOSAL METHOD:	Dispose in an approved landfill IAW federal, state, and local regulation. Cover promptly to avoid blowing of dust.
OTHER PRECAUTIONS:	Avoid prolonged breathing of dust, contact of dust with skin. Drying action can cause irritation of mucous membranes of nose and throat and irritation of skin. If use requires material handling, wear long sleeves and close weave cotton or rubber gloves. If dusty conditions prevail, wear a properly fitted NIOSH/MSHA approved respirator designed for nuisance type dusts.

SECTION VIII: CONTROL MEASURES

RESPIRATORY PROTECTION:	If dusty conditions prevail, wear properly fitted NIOSH/MSHA approved dust respirator.
VENTILATION:	Local exhaust to control dust
PROTECTIVE GLOVES:	Close-weave cotton or rubber gloves
EYE PROTECTION:	Chemical workers goggles
OTHER PROTECTIVE EQUIPMENT:	Long sleeves
WORK HYGIENIC PRACTICES:	None

SECTION IX: TRANSPORTATION DATA

DOT PROPER SHIPPING NAME:	Not regulated by this mode of transportation.
IMO PROPER SHIPPING NAME:	Not regulated by this mode of transportation.
IATA PROPER SHIPPING NAME:	Not regulated by this mode of transportation.
AFI PROPER SHIPPING NAME:	Not regulated by this mode of transportation.

SECTION X: DISPOSAL DATA

WASTE DISPOSAL METHOD:	Dispose in an approved landfill IAW federal, state, and local regulation. Cover promptly to avoid blowing of dust.
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SECTION XI: DISCLAIMER:

The Data set forth in these sheets are based on the information provided by the suppliers of the raw materials and chemicals used in the manufacturing of the aforementioned product. Aspen Aerogels makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon.