

SILPAK, INC

P.O. BOX 2830 169 ATLANTIC ST. POMONA, CA 91768-2830
(909) 595-6191 FAX (909) 598-2446 WWW.SILPAK.COM

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MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER: SILPAK, INC.
ADDRESS: 169 ATLANTIC STREET, POMONA, CA 91768
EMERGENCY TELEPHONE #: 909-595-6191
CHEMICAL NAME AND SYNONYMS: ORGANOPOLYSILOXANE MIXTURE
TRADE NAME AND SYNONYMS: R-2237 A
CHEMICAL FAMILY: 2 PART RTV SILICONE
FORMULA: MIXTURE

SECTION II HAZARDOUS INGREDIENTS

Organopolysiloxane Mixture <50
Silica Filler >40

Proprietary Mixture

SECTION III PHYSICAL DATA

BOILING POINT (F): 500F **SPECIFIC GRAVITY:** 1.08
VAPOR PRESSURE (mm Hg) @ 77F: NEG
PERCENT VOLATILE @ 221F AFTER 3 HRS BY VOLUME (%): <1.0 MAX
VAPOR DENSITY (AIR=1): N/A
EVAPORATION RATE (ETHYL ETHER=1): NEG
SOLUBILITY IN WATER: N/A
APPEARANCE AND ODOR: CLEAR AND ODORLESS PASTE

SECTION IV

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 375F (OPEN CUP)
FLAMMABLE LIMITS: NOT MEASURED
EXTINGUISHING MEDIA: FOAM, DRY CHEMICAL, OR CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES: NONE KNOWN
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: N/A
EFFECTS OF OVEREXPOSURE: No significant effect
Eye contact: May cause slight irritation
Ingestion: Induce vomiting and contact a physician

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: Remove liquid from skin with a towel or dry cloth and wash exposed area with soap and water.
EYES: Immediately flush with water for at least 15 minutes.
INGESTION: Induce vomiting.

SECTION VI REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid contact with acidic, basic and oxidizing materials.

INCOMPATIBILITY (MATERIALS TO AVOID): None known

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Silicon Dioxide

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain the spill or leak, scrape with cardboard or a rag and place in a container.

WASTE DISPOSAL METHOD: In accordance with Federal, State and Local Regulations.

SECTION VIII

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Not required

OTHER: None Known

PROTECTIVE GLOVES: Cloth Gloves

EYE PROTECTION: Safety glasses

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP CONTAINER CLOSED. STORE IN A COOL PLACE AND KEEP AWAY FROM HEAT OR FLAME. DON'T LAY CONTAINER ON ITS SIDE.

OTHER PRECAUTIONS: NONE KNOWN

Prepared by: Philip J. Galameau 1/2/2001

SILPAK, INC.

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PRODUCT DEVELOPMENT

In development of every product ~~sold~~ on the market, industrial models are used to evaluate appearance, function, properties (~~structural~~ & design) and market acceptance. In the first stage of a product 1-5,000 units may be ~~needed~~. Silicone and Urethane RTV's are used to create low cost reproduction of products. With ~~modern~~ technology and competitive markets, speed and proven designs are needed to capture your market. Product development has taken a giant step forward replacing costly metal tools and long lead times. Silpak offers a large selection of tooling elastomers and variety of room temperature curing resins with excellent guidance in application usage.

PRODUCTS MADE WITH:

Polyester
Polyurethane
Vinyl - hot cast
Low- melt metals
Epoxy
Elastomers
 1. Urethane
 2. Latex
 3. Silicone
 4. Vinyl's
Plasters
Cements
Wax

Many mixtures of above materials are ~~formulated~~ for custom manufacturing. Room temperature cure (RTV's) are used for low cost tools ~~when few~~ parts are needed in low production or industrial models and product samples.

TYPE OF TOOL	MFG. TIME DAYS	NUMBER OF PIECES PRODUCED	SHAPES
Metal	60	<100,000	Good Relief
Cast metal	30-40	< 10,000	Good Relief
Spray metallizing	14-30	> 5,000	Good Relief
Epoxy-Fiberglass	14-30	> 1,000	Good Relief
Silicone & Urethane	1-7	> 100	No Limit

Silicones are selected for best release in high temperature applications, resins - low metal melts, and thermal plastics. Urethanes are used ~~where~~ impressions in wax, plasters or cements are needed.

Selection of resin or substrate is determined by function, structural strength or desired need.

MATERIAL SAFETY DATA SHEET
"B" COMPONENT

SECTION I

MANUFACTURER: S'LP'AK, INC.
ADDRESS: 169 ATLANTIC STREET
POMONA, CA 91768
(909) 595-6191

CHEMICAL NAME AND SYNONYMS: ORGANOPOLYSILOXANE MIXTURE
TRADE NAME AND SYNONYMS: R-2237 B
CHEMICAL FAMILY: CATALYST FOR LIQUID SILICONE RUBBER COMPOUND
FORMULA: MIXTURE

SECTION II HAZARDOUS INGREDIENTS

Organopolysiloxane Mixture 100% Pigment/Green >1%

Proprietary Mixture

SECTION III PHYSICAL DATA

BOILING POINT (F): >500F. >260C
SPECIFIC GRAVITY: 1.00
VAPOR PRESSURE (mm Hg.) @ 77F.: NEG
PERCENT VOLATILE BY VOLUME: <1%
SOLUBILITY IN WATER: INSOLUBLE
VAPOR DENSITY (AIR=): N/A
EVAPORATION RATE: N/A
APPEARANCE & ODOR: SLIGHTLY SOLVENT ODOR. COLOR GREEN

SECTION IV

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 201F. MIN. (OPEN CUP)
FLAMMABLE LIMITS: NOT MEASURED
EXTINGUISHING MEDIA: FOAM, DRY CHEMICAL OR CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: N/A
EFFECTS OF OVEREXPOSURE:
SKIN CONTACT: NO SIGNIFICANT EFFECT
EYE CONTACT: MAY CAUSE MILD IRRITATION
EMERGENCY AND FIRST AID PROCEDURE:
EYES: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CALL PHYSICIAN AND GET MEDICAL ATTENTION IF IRRITATION PERSISTS
SKIN: REMOVE FROM SKIN WITH A DRY CLOTH. THEN WASH WITH SOAP AND WATER.

SECTION VI REACTIVITY DATA

STABILITY: STABLE
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON DIOXIDE, CARBON MONOXIDE, SILICON DIOXIDE, HYDROGEN
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
INCOMPATIBILITY: AVOID CONTACT WITH ACIDIC, BASIC AND OXIDIZING AGENTS
CONDITIONS TO AVOID: PRODUCT GENERATES FLAMMABLE GAS ON CONTACT WITH ACIDIC, BASIC AND OXIDIZING MATERIALS

SECTION VII

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CONTAIN THE SPILL OR LEAK. SCRAPE UP WITH CARDBOARD OR RAG AND PLACE IN A CONTAINER.

WASTE DISPOSAL METHOD: DISPOSE OF ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION VIII

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NONE REQUIRED

VENTILATION: LOCAL EXHAUST-NONE REQUIRED

PROTECTIVE GLOVES: CLOTH GLOVES

EYE PROTECTION: SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: NONE REQUIRED

SECTION IX SPECIAL PRECAUTION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP CONTAINER CLOSED. STORE IN A COOL PLACE (BELOW 85F. / 30C.).

DO NOT REUSE THIS CONTAINER

OTHER PRECAUTIONS: WASH THOROUGHLY AFTER HANDLING. KEEP AWAY FROM FLAME AND HEAT. KEEP CONTAINER CLOSED WHEN NOT IN USE TO PREVENT CONTACT WITH ACIDIC, BASIC OR OXIDIZING MATERIALS.

PREPARED BY: PHILIP J. GALARNEAU 1/2/2001