ENCAPSULANTS, ADHESIVES & SILICONE GREASES

INSULCAST®
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INSULCAST MRTV 9

High Tear Mold Making RTV Silicone

Technical Bulletin # 3094

Product Description

INSULCAST MRTV 9 is a high tear strength, high elongation addition cure mold making RTV silicone rubber. **MRTV 9** has low shrinkage and reproduces the most intricate detail.

Properties Uncured

	Part A	Part B	
COLOR, VISUAL:	Black	Clear	
VISCOSITY @ 25°C, cps:	1.15	1.0	ASTM D 1084
SPECIFIC GRAVITY:	100000	<1,000	
MIX RATIO (by wt.):	100:10		
MIXED VISCOSITY, cps:	50000		ASTM D 1084
SHELF LIFE @ 25°C, months:	6		
POT LIFE (100 gr.) @ 25°C, mins:	1.5 - 2		

Properties Cured

PHYSICAL

HARDNESS, DUROMETER (Shore A):	24	ASTM D 2240
TENSILE STRENGTH, psi:	500	ASTM D 412
TENSILE ELONGATION, %:	1000	ASTM D 412
COMPRESSIVE STRENGTH, psi:		
FLEXURAL STRENGTH, psi:		
TEAR STRENGTH, Die B lb/in :	117	ASTM D 624
TEAR STRENGTH, Die C lb/in :	125	ASTM D 624
COEFFICIENT OF THERMAL EXPANSION, °C:	4.2×10^{-4}	
THERMAL CONDUCTIVITY, BTU-in/(ft^2)(hr)(°F):	0.18	
THERMAL CONDUCTIVITY, W/m °K:	0.026	
HEAT DISTORTION POINT, °C:		
SERVICE TEMPERATURE, °C:	-55 TO +204	

Electrical

DIELECTRIC STRENGTH, volts/mil:	550	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz:	2.94	ASTM D 150
DISSIPATION FACTOR, 1 KHz:	0.002	ASTM D 150
VOLUME RESISTIVITY, ohm-cm:	1.6×10^{15}	ASTM D 257

ITW PHILADELPHIA RESINS
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Use Instructions

1. Pre-mix MRTV 9 base and curing agent before use to be sure any settled filler is Re-incorporated.
2. Weigh out amount of base component required for mold. Weigh into the base one part of catalyst for each 10 parts of MRTV 9 base.
3. Mix thoroughly, scraping both the bottom and side of the mixing container.
4. Place in a vacuum chamber and draw about 29 inches of mercury. The mixture will rise to about 3-4 times its original volume, then collapse. Hold the vacuum for another minute or two and release.
5. Proceed to pour mold.

Cure Schedule

16-24 hours @ Room Temperature (25^{o}C)
3 - 4 hours @50^{o}C
1 - 2 hours @65^{o}C
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Storage Requirements

This product may settle upon shipment or storage. The product should be re-mixed well prior to use. Store material in a cool dry place.

Special Notes

Certain materials may inhibit the cure of **MRTV 9** when placed in contact with the mixed, uncured rubber. Materials such as amines and amine cured epoxies, sulfur containing materials and condensation (tin cured) silicones, are some which may cause inhibition. Even surfaces which have been in contact with such materials may cause it. If in doubt, a patch test should be done.

Date 02/2009

HEALTH CAUTION:
Avoid breathing possible fumes, mists and vapors which can cause severe respiratory damage. Use of NIOSH approved breathing apparatus is required for more than minimal exposure. Always work in areas with adequate ventilation to allow dissipation of polyamine and other chemical fumes, and where applicable, solvent fumes. Use of goggles, protective garments, rubber gloves, protective cream is required. If material gets into eyes, flush thoroughly with clean water for twenty (20) minutes; then seek medical treatment. Avoid skin contact. Material can cause contact dermatitis. Always wash exposed areas immediately, using warm water and soap, followed by rinsing with clean water. Observe all safety precautions, It is important when using solvent based materials or solvents to keep away from open flame or ignition source.

PLEASE REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER FIRST AID INFORMATION.
FOR CHEMICAL EMERGENCY, CALL CHEMTREC (DAY OR NIGHT) 800 424-9300.