

MIL-Spec. Silicone Resin Adhesive (MIS-20220)

Technical Bulletin # 3103

Product Description

INSULCAST RTVS A-4000 is a two component solvent based silicone resin adhesive with excellent lap shear and peel strengths at elevated temperatures. RTVS A-4000 can be used to bond silicones, mylar, metals and many engineering plastics, and will maintain significant peel strength up to 300°F. It will retain flexibility over an elevated temperature range of -73° to 260 °C.

RTVS A-4000 is approved for use within the Army Missile Command, The Department of the Army and is available for use by all agencies of the Department of Defense under MIL-A-47317(MI). The overall balance of peel strength, cohesion, lap shear strength and high temperature holding power observed in **RTVS A-4000** adhesive provides a versatility that makes this product useful in a wide variety of fastening and bonding applications.

Properties Uncured

	Part A	Part B	
COLOR, VISUAL:	Light Straw	Clear	
VISCOSITY @ 25°C, cps:	1000-5000	50	ASTM D 2393
SPECIFIC GRAVITY:	0.99	0.95	
MIX RATIO (by wt.):	100:3.3		
MIXED VISCOSITY, cps:	900-2500		ASTM D 2393
SHELF LIFE @ 25°C, months:	6		
POT LIFE (Refrigerated) @ 25°C, mins:	24		
SOLVENT	Toulene		
SOLIDS, %	55		
FLASHPOINT COC °F	40		

Properties Cured

PHYSICAL			
SERVICE TEMPERATURE, °C:	-73 to 260		
180° PEEL STRENGTH, (mylar to mylar), oz/inch	36		
LAP SHEAR, ppi (mylar to mylar), @25°C, psi	130		ASTM D 624
LAP SHEAR (silicone to aluminum), @25°C, psi	120		ASTM D 624

Electrical

DIELECTRIC STRENGTH, volts/mil:	450	ASTM D 149
---------------------------------	-----	------------

Use Instructions

1. Blend 3.3% catalyst Part B into 100 Parts of Part A.
2. Mix thoroughly. Apply to both surfaces to be bonded.
3. Allow solvent to evaporate for ½ hour. Then mate second surface to adhesive.

Cure Schedule

1 to 4 days at room temperature.
8 hours at 200°C will give the same ultimate physical strength as several days at room temperature. Completely cured **RTVS A-4000** is tack free and is not useful for pressure sensitive adhesive applications.

Storage Requirements

Store material in a cool dry place.

Date 02/2009

IMPORTANT:

The following supersedes any provision in your company's forms, letters and papers. AMERICAN SAFETY TECHNOLOGIES makes NO WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR THIS PRODUCT. No statements or recommendations contained in the product literature are to be construed as inducements to infringe any relevant patent, now or thereafter in existence. UNDER NO CIRCUMSTANCES SHALL AMERICAN SAFETY TECHNOLOGIES BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES FROM ALLEGED NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY OR ANY OTHER THEORY, ARISING OUT OF THE USE OR HANDLING OF THIS PRODUCT. The sole liability of AMERICAN SAFETY TECHNOLOGIES for any claims arising out of the manufacture, use or sale of its products shall be to refund the buyer's purchase price, provided such products have been demonstrated in AMERICAN SAFETY TECHNOLOGIES sole opinion, to justify such refund.

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.