



Description

Insulcast® RTVS 42 Curtis II is a low viscosity, unique silicone-epoxy copolymer formulated to withstand severe thermal shock and provide low moisture absorption and excellent dielectric insulation. With built-in adhesion promoters, RTVS 42 Curtis II bonds well to most metals and plastics.

Typical Uncured Properties	Part A	Part B
Color	Black	Amber
Mix Ratio by Volume	100	7
Mix Ratio by Weight	100	4.8
Component Density, g/ml	1.43	1.02
Component Viscosity, cP @25°C	18000	125
Pot Life @25°C, min.	20	
Shelf Life, Months @25°C	9	

Typical Cured Properties	
Tensile Strength, psi (MPa)	900 (6.2)
Tensile Elongation, %	175
Service Temperature, °C	-55 to 125
Thermal Conductivity, W/mK	0.58
UL94 Performance	V0
Shore Hardness	75 A (10-15 D)

Typical Cure Schedule

Temperature	25°C (77°F)	65°C (149°F)	120°C (248°F)
Cure Time, hrs	24	N/A	N/A
Alternative Cure Time, hrs	8 (first)	2 (after RT cure)	N/A

Electrical Properties	
Dielectric Strength, V/mm	500
Dielectric Constant (1 KHz)	4.0
Dissipation Factor (1 KHz)	0.006
Volume Resistivity, Ω*cm	1x10 ¹⁵
Coefficient of Thermal Expansion	45x10 ⁻⁶

Mixing Instructions

NOTE: Some light, but soft settling will occur which is readily redispersed. Premix Part A and Part B in original containers before removing any material

1. Measure correct amount (by weight) of Part A and Part B
2. Mix thoroughly, scraping both the bottom and the sides of the mixing container
3. Evacuate the mixture at 14.24 psi (29 in. Hg) for 5 to 10 minutes for void-free castings
4. Pour into desired unit or mold

Storage Requirements

Store at room temperature. 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

The Part B is sensitive to ambient moisture. Keep Part B in a tightly closed metal container. Purge with dry nitrogen in automatic filling equipment to prevent pre-mature skinning of the Part B. Store material in a cool dry place.



Safety & Handling

ITW Performance Polymers (ITW PP) recommends users to follow all recommended safe practices for handling its products. Refer to the Safety Data Sheet (SDS) and label for health and safety information before using this product. Also refer to itwpp.com for additional information and other frequently asked questions. 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 goggles, protective garments, rubber gloves, protective cream is suggested. 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. Observe all safety precautions. It is important when using solvent-based materials or solvents to keep away from open flame or ignition sources.

Product Use

Industrial Use Only. Many factors beyond ITW PP control and uniquely within user's knowledge and control can affect the performance of this product in any particular application. Given the variety of factors that can affect use and performance, the end user is solely responsible for evaluating any ITW PP product and determining its suitability and fitness for a particular purpose, product design, production, final application, and end result.

Exclusion of Warranties

The Data stated here are typical values and offered in good faith. Given the variety of factors that can affect the use and performance of an ITW PP product, the end user is responsible for evaluating any ITW PP product and determining whether it is fit for purpose and suitable for user's design, production, and final application. Unless an additional Warranty is expressly stated, ITW PP warrants that the ITW PP product meets the applicable ITW PP product specification at the time ITW PP Ships the product. As to the herein described materials and test results, there are no warranties which extend beyond the description on the face hereof. ITW PP MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. IF THE ITW PP product does not conform to this warranty, then the sole and exclusive remedy is, at ITW PP's option, replacement of the ITW PP product or refund of the purchase price.

Limitation of Liability

Except where prohibited by law, ITW PP shall not otherwise be liable for loss of damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.



chemical-concepts.com

800.220.1966

410 Pike Road • Huntingdon Valley, PA 19006

ITW Performance Polymers

North America

130 Commerce Drive
Montgomeryville, PA 18936
+1 855-489-7262

Last Update Date: 5/11/2026

EMEA

Shannon, Ireland
+353 61 771500

www.itwpp.com
cs@itwpp.com