



Factor II, Incorporated

Inventing and Innovating...
(Information: 1.928.537.8387)
ONLINE ORDERING www.factor2.com

PRODUCT INFORMATION A-RTV-4040 – Multi Catalyst System

PRODUCT DESCRIPTION:

A-RTV-4040 is a two component clear, high strength silicone elastomer that cures at room temperature by polyaddition reaction at a 10:1 ratio. It is formulated to be used with multiple catalysts to cure overnight at room temperature or within hours at elevated temperature to give a variety of hardness. Its low viscosity makes the product easy to pour and quick to degas. **A-RTV-4040** is designed to reproduce intricate details and maintain tight tolerances.

APPLICATIONS:

- Conventional production and prototype molds
- Healthcare and Medical Device Components
- Orthopedic Devices
- Prosthetics
- Skin-like applications and Life-like parts

FEATURES:

A-RTV-4040 system is formulated to meet ISO 10993 Biological Evaluation of Medical Devices – Part 1: Evaluation and testing requirements for skin contact or healthcare applications of less than 30 days.

It is the sole responsibility of the purchaser to determine suitability for an application and comply with all applicable statutory, regulatory and industry requirements.

TYPICAL PROPERTIES:

TYPICAL PROPERTIES – AS SUPPLIED		TYPICAL CATALYZED PROPERTIES
Part A – Base Component		Mixed at 24°C (75°F) and 50% R.H.
• Color	Translucent	• Mix Ratio , A:B (Parts by weight) 10:1
• Consistency	Pourable	• Viscosity , cP. (mPa.s) 40,000
• Viscosity , cP. (mPa.s)	50,000	
Part B – Catalyst Component		
• Color	Translucent	

TYPICAL PROPERTIES OF CURED RUBBER, Cured 24 hours at 24° C (75°F) and 50% RH				
Property	Test Method	CATA 4020 HT	CATA 4020	CATA 4040
• Color			Translucent	
• Specific Gravity		0.75	1.08	
• Work Life, hours		1.5	0.75	1.0
• Pot Life, hours		22	1.5	2.0
• Hardness, (Shore A)	ASTM D2240	775 (5.3)	25	38
• Tensile Strength, psi (N/mm ²)	ASTM D412	525	570 (3.9)	920 (6.3)
• Elongation, (%)	ASTM D412	130 (23)	390	340
• Tear Resistance, ppi, (N/mm)	ASTM D624, Die B		72 (13)	120 (121)
• Linear Shrinkage (5) 24 hours, 7 days			<0.1 <.01	



Factor II, Incorporated

Inventing and Innovating...

(Information: 1.928.537.8387)

ONLINE ORDERING www.factor2.com

• Temperature Range °C (°F)			-54 to 204 (-65 to 400)	
--------------------------------	--	--	----------------------------	--

Note: Cure may be accelerated by curing at 40-65°C (120-150°F) for 3-4 hours. HEAT CURING MAY INCREASE SHRINKAGE.

- (1) Time required to double initial catalyzed viscosity
- (2) Time at which material gels
- (3) 8x8x0.25 in (20.3x20.3x0.64 cm) molded sheet, cured at room temperature

INSTRUCTIONS FOR USE:

- (1) Stir the base (Part A) well before use (except when machine dispensing).
- (2) Shake the catalyst container (Part B) well before use.
- (3) Weigh the desired amount of base into a clean mixing container. Tip the container and roll the base all the way around the side wall up to two inches from the top. This will prevent the catalyst from becoming absorbed into the container depth to allow sufficient room for expansion during the deaeration procedure.
- (4) Weigh the proper amount of catalyst into the container. Mix the base and catalyst together by stirring with a stiff, flat ended metal spatula until a uniform color is obtained. Scrape the container walls and bottom well to insure a thorough mix.
- (5) Place the container into a vacuum chamber and evacuate the entrapped air from the mixture using a vacuum pump capable of achieving 29 inches of mercury vacuum. The mixture will rise, crest and then collapse in the container. Interruption (bumping) of the vacuum may be necessary to prevent overflowing the container. Keep the mixture under full vacuum for 2-3 minutes after the material has receded in the container.
- (6) Bleed air slowly into the vacuum chamber. When the chamber is at atmospheric equilibrium, remove the cover plate and take out the container.
- (7) Pour the desired material slowly in a steady stream from one end of the mold box so that the material flows evenly over the patten. This should minimize entrapment of air bubbles under the flowing material. A "print" coat may be poured first over the pattern which will also help reduce the possibility of entrapping air on the pattern and in the cured rubber. A mold release (petroleum jelly) may be applied on the pattern first to improve release.
- (8) Allow the rubber to cure for 16-24 hours at 75±5°F (24°C) before removing the cured rubber mold from the pattern. For best results, allow the mold to air cure an additional 24 hours before using it in production. Full cure is achieved in 3-7 days.

PROCESSING INFORMATION

CATALYZED PROCESSING PROPERTIES ARE AFFECTED BY TEMPERATURE AND HUMIDITY VARIATION

- (1) For best results, mix and cure the material at 75°F (24°C) and 50% relative humidity.
- (2) Higher temperature and humidity will decrease the work life and pot life of the material. The faster cure will also affect the flow properties. Refrigeration of the base prior to use in hot environments has been shown to improve the handling properties of this material.
- (3) Lower temperatures and humidity will increase the work life and pot life of the material. The slower cure will increase the flow time. Cure temperatures below 68°F (20°C) are not recommended and have been found to cause a reduction in final cure hardness and properties.
- (4) It is important that the catalyst containers are tightly closed after use to prevent contamination.

PATENT WARNING:

Factor II Technology disclaims any expressed or implied warranty against the infringement of any patent. Factor II does not warrant that the use or sale of the products described herein will not infringe the claims of any U.S. patents or other country's patents covering the product itself or the use in combination with other products or in the operation of any process.

WARNINGS ABOUT PRODUCT SAFETY:



Factor II, Incorporated

Inventing and Innovating...

(Information: 1.928.537.8387)

ONLINE ORDERING www.factor2.com

Factor II technology believes that the information and data contained herein is accurate and reliable; however, it is the user's responsibility to determine suitability and safety of use for these materials.

Factor II cannot know the specific requirements of each application and hereby makes the user aware that it has not tested or determined that these materials are suitable or safe for any application. It is the user's responsibility to adequately test and determine the safety and suitability for their application. Factor II makes no warranty concerning fitness for any use or purpose. There has been no testing done by Factor II to establish safety of use in any medical application. Factor II has tested this material only to determine if the product meets the applicable specification. When considering the use of Factor II products in a particular application, you should review the latest Material Safety Data Sheets and contact Factor II for any questions about product safety information you may have.

IT IS RECOMMENDED THAT THE PURCHASER THOROUGHLY TEST ANY APPLICATION PRIOR TO FULL SCALE PRODUCTION OR COMMERCIALIZATION. INFORMATION CONTAINED IN THIS TECHNICAL PROFILE SHOULD NOT BE TAKEN AS INDUCEMENT TO FRINGE ANY PATENT. FACTOR II WARRANTS ONLY THAT ITS PRODUCTS MEET ITS SPECIFICATIONS. THERE IS NO WARRANTY OF MERCHANTABILITY OF FITNESS FOR USE OR ANY OTHER WARRANTIES EXPRESS OR IMPLIED. FACTOR II MAKES NO GUARANTEE OF SATISFACTORY RESULTS

PATENT WARNING:

Factor II Technology disclaims any expressed or implied warranty against the infringement of any patent. Factor II does not warrant that the use or sale of the products described herein will not infringe the claims of any U.S. patents or other country's patents covering the product itself or the use in combination with other products or in the operation of any process.

WARNINGS ABOUT PRODUCT SAFETY:

Factor II technology believes that the information and data contained herein is accurate and reliable; however, it is the user's responsibility to determine suitability and safety of use for these materials.

Factor II cannot know the specific requirements of each application and hereby makes the user aware that it has not tested or determined that these materials are suitable or safe for any application. It is the user's responsibility to adequately test and determine the safety and suitability for their application. Factor II makes no warranty concerning fitness for any use or purpose. There has been no testing done by Factor II to establish safety of use in any medical application. Factor II has tested this material only to determine if the product meets the applicable specification. When considering the use a Factor II product in a particular application, you should review the latest Material Safety Data Sheets and contact Factor II for any questions about product safety information you may have.

IT IS RECOMMENDED THAT THE PURCHASER THOROUGHLY TEST ANY APPLICATION PRIOR TO FULL SCALE PRODUCTION OR COMMERCIALIZATION. INFORMATION CONTAINED IN THIS TECHNICAL PROFILE SHOULD NOT BE TAKEN AS INDUCEMENT TO FRINGE ANY PATENT. FACTOR II WARRANTS ONLY THAT ITS PRODUCTS MEET ITS SPECIFICATIONS. THERE IS NO WARRANTY OF MERCHANTABILITY OF FITNESS FOR USE OR ANY OTHER WARRANTIES EXPRESS OR IMPLIED. FACTOR II MAKES NO GUARANTEE OF SATISFACTORY RESULTS

DISCLAIMER / STATEMENT OF LIABILITY:

This is to certify that the above designated material has been tested and did comply with the listed specifications (with listed exceptions) when supplied in original container. The material is subject to the conditions listed on the invoice. The above is a copy of information on file. The lot acceptance data are available for examination. This is a computer-generated document that is valid without a signature. The information above is supplied in good faith and, to the best of our knowledge, is based on available sources believed to be reliable and accurate. This document and any information provided herein are for your guidance only. The use by the requestor is beyond Factor II control; therefore, the responsibility for appropriate and safe use of the above information lies with the End user. Factor II shall not be responsible for any misuse and/or misapplication of the information in this document. Factor II is a distributor of this product not the manufacture. Factor II will warrant this product 6-months from the ship date, some restrictions apply.



Factor II, Incorporated

Inventing and Innovating...
(Information: 1.928.537.8387)
ONLINE ORDERING www.factor2.com