



TECHNICAL DATA BULLETIN

INSTAbond® 1645 Gray

One Part Neutral Cure RTV Silicone

PRODUCT DESCRIPTION:

Mil-A-46146B (3) Type 1 Groups 2 & 3

INSTAbond® 1645 Gray is a one part methoxy curing (neutral cure) silicone that reacts with atmospheric moisture at room temperature to create a non-corrosive seal. INSTAbond® 1645 Gray liberates methanol during the cure process which makes it the best choice for sealing sensitive electrical components or electrical housings.

INSTAbond® 1645 Gray has high tensile-strength, high tear-strength and is resistance to moisture, ozone exposure and weathering. It also provides thermal stability up to 600°F (315.6°C) and is non-sagging for overhead or vertical applications. It can be used with INSTAbond® 1645 Primer to enhance bond properties.

Specification and Qualified National Stock Numbers:

Meets Mil-S-46146B (3) Type 1 Groups 2 & 3

- 8040-01-375-4805 - 2.8oz tube (Gray)
- 8040-00-145-0020 - 3oz tube (Gray)
- 8040-01-408-7366 - 10.3oz Cartridge (Gray)
- 8040-01-331-7128 - 10.3oz Cartridge (Gray)
- 8040-00-144-9774 - 10.3oz Cartridge (Gray)
- 8040-01-057-0091 - Pint container

<u>Characteristic</u>	<u>Test Method</u>	<u>Result</u>
Color	Visual	Gray
Viscosity	ASTM D1084 Method B	Non-flowable paste
Extrusion Rate – g/min	ASTM C1183M - 13	min. 40
Flow rate – inches	IAW Mil-A-46146B(3) Section 4.5.3.2.3	max 0.75
Tack Free time – min.	IAW Mil-A-46146B(3) Section 4.5.3.2.5	up to 300 (5 hours)
Specific Gravity – cured compound	ASTM D792	1.10
Non – Volatile content - %	IAW Mil-A-46146B(3) Section 4.5.3.2.1	96.9
Durometer- Shore A	ASTM D2240-15	min. 25
Tensile Strength, psi	ASTM D412-15a	min. 500
Elongation - %	ASTM D412-15a	min. 500
Tensile Modulus – 100%	ASTM D412-15a	not required by spec but reported



Tensile Modulus – 300%	ASTM D412-15a	not required by spec but reported
Tear Strength – Die B	ASTM D624-00, Die B	not required by spec but reported
Unprimed Adhesion – ppi Peel Strength – AL	ASTM D903-98 IAW MilA-46146B (3)	min. 40 in/lb
Unprimed Adhesion – ppi Peel Strength – Steel	ASTM D903-98 IAW MilA-46146B (3)	min. 40 in/lb
Dialectric Strength – volts/mil	ASTM D 149 Method A	300 min.
Dialectric Constant – 100Hz	ASTM D150	3.25 max
Dissipation Factor – 100kHz	ASTM D150	0.02 max
Volume Resistivity	ASTM D257	min. 1×10^{13} ohm/cm
Corrosion – Over water Brass, Steel, Aluminum	IAW Mil-A-46146B(3) Section 4.5.3.2.6.1	No corrosion or discoloration
Corrosion – Copper Wire	IAW Mil-A-46146B(3) Section 4.5.3.2.6.2	No corrosion or discoloration
Corrosion – Direct contact Steel, Aluminum	IAW Mil-A-46146B(3) Section 4.5.3.2.6.3	No corrosion or discoloration

INSTRUCTIONS FOR USE:

Surface Preparation

INSTAbond® 1645 Gray bonds well to many clean surfaces. As necessary, all surfaces should be free from grease, oil, surface contaminants, particles and foreign matter. Conventional surfaces may be cleaned with a solvent. If possible, light surface abrasion will improve adhesion.

Application and Curing

INSTAbond® 1645 Gray will cure under normal ambient conditions. A ¼-inch bead will be cured in approximately 24 hours in an unconfined state. Optimum physical and electrical properties are achieved after 7 days. Under most conditions, an 18-24 hour cure is sufficient to handle parts.

Recommended Operating Temperature Range: -45°C - 200°C (-49°F - 392°F)

STORAGE:

This product should be stored below 90°F, out of direct sunlight in a cool dark place. Product should be stored in the original, closed container. If opened, purge with nitrogen prior to closing container. Shelf life is 1 year from date of manufacture when stored in accordance with manufacturer’s recommendations.

Refer to Safety Data Sheet for instructions on safe handling.

PACKAGING:

INSTAbond® 1645 Gray is available in 3oz tubes and 10.3oz cartridges and five gallon pails. Other package sizes and options are available upon request. Contact ACCRAbond for additional details.



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NOTE:

The information contained in this document is furnished for information only and it's believed to be reliable based on previous evaluations. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for user's application based on user's production methods. This data should only be used as a guide for determining feasibility for a particular application. INSTAbond® 1645 Gray has not been tested for pharmaceutical or medical use.

PRODUCT INFORMATION CONTAINED HEREIN IS INTENDED FOR REFERENCE ONLY. ACCRAbond disclaims and express or implied warranty. Fitness for use is the responsibility of this user.

SAFETY DATA INFORMATION AVAILABLE AT (662) 895-4480 OR IN WRITNG TO: ACCRAbond, Inc. 8848 Hacks Cross Road, Olive Branch, MS 38654-1827, www.accrabond.com.