



Thermal Insulation Chemicals

# TIC CORPORATION

## Product Data Sheet **TIC 6050 Butyl Cryogenic Adhesive/Coating**

### Description

**TIC 6050 Butyl Cryogenic Adhesive/Coating** is two parts black elastomeric adhesive/coating designed for use in cryogenic and specific chemical resistance applications. It is suitable for application to polyurethane foam, polyisocyanurate (PIR) foam, cellular glass, fibrous glass and other rigid and flexible insulations in conjunction with aluminum, steel, wood and masonry construction materials.

**TIC 6050 Butyl Cryogenic Adhesive/Coating** has excellent resistance of moisture, water vapor and other gases. It also has good resistance to most oils, mild solvents, inorganic acids, inorganic bases and salt solutions.

**TIC 6050 Butyl Cryogenic Adhesive/Coating** is suitable for bonding and sealing lap joints in plywood and metal, and for adhering glass cloth to itself and other surfaces. It can function both as a vapor barrier and as adhesive in very low temperature applications where a water vapor tight insulation system is required. It is an excellent vapor stop material.

**TIC 6050 Butyl Cryogenic Adhesive/Coating** contains no lead, asbestos, mercury or mercury compounds.

### Properties

Property	Specification	Test method
Color	Black (mixed)	TSTM-01
Application	Brush, airless spray or roller	TSTM-06
Density	Mixed (A&B) - 1.15 ± 0.05 kg/ℓ	ASTM D 1475
Volume non-volatile	65 ± 1 % (mixed)	ASTM D 1644
Weight non-volatile	73 ± 1 % (mixed)	ASTM D 1644
Coverage	1.42 kg/m <sup>2</sup> (1.23 ℓ/m <sup>2</sup> ) Dry film thickness: 0.8mm	TSTM-07
Mixing ratio	Weight - part A : part B = 1 : 1 Volume - part A : part B = 1 : 1	TSTM-16
Bonding time	40 ~ 80 minutes	TSTM-17
Drying time	Set to touch: 12 hours Dry through: 48 hours Full curing time: 2 weeks	ASTM D 1640
Pot life	6 ~ 9 hours (25±2°C, 50±2% RH)	TSTM-09
Service temperature limits	(Temperature at coated surface) -196 °C ~ 121 °C (-321 °F ~ 250 °F)	TSTM-04
Water vapor permeance	≤ 0.01 perms (0.0066 metric perms) at DFT 0.64mm	ASTM E 96
Wet flammability	≥ 44 °C (111 °F)	ASTM D 93
Tensile strength	≥ 300 psi (207 N/mm)	ASTM D 412

### **Limitations**

Store and apply between 4 °C (40 °F) and 38 °C (100 °F).

Always test plastic materials for compatibility when using a solvent base product.

Make certain this product is completely dry and the area free from solvent odor if food is involved.

Not recommend for application between two impermeable surfaces or as an exposed finished coating.



Thermal Insulation Chemicals

# TIC CORPORATION

## Application Guide      TIC 6050      Butyl Cryogenic Adhesive/Coating

### Material Preparation

Mixing instructions: Add TIC 6050 part B into part A and mix thoroughly for about 5 minutes, using an air driven mechanical stirrer. Do not whip air into the product.

### Application

Apply only to clean, dry surfaces. New concrete surfaces must be at least 4 weeks old. When used as a vapor barrier adhesive, apply at the rate of 1 gal/100 sq.ft (0.41  $\ell/m^2$ ) and allow curing for 24 hours. Apply a second coat at 2 gal/100 sq.ft (0.81  $\ell/m^2$ ) and embed the insulation into the adhesive after 40 to 80 minutes open time, but before it skins over, making certain complete contact is made. When used as a vapor barrier and/or vapor stop, TIC 6050 Butyl Cryogenic Adhesive/Coating may be applied up to 2 gal/100 sq.ft (0.81  $\ell/m^2$ ) on vertical surfaces (21 mils/0.53mm dry thickness).

### Clean-up

Use solvents such as chlorinated solvent (non-flammable) or mineral spirits (flammable) for cleaning tools and equipment.

Completely clean all equipment before pot life expires, and the adhesive sets up. Dried TIC 6050 Butyl Cryogenic Adhesive/Coating is extremely difficult to remove.

### Note

**Important:** We make no other warranties and expressly disclaim any warranties of merchantability or fitness for a particular purpose. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. Our acceptance of any orders for the product is expressly conditional upon purchaser's assent to the terms on the applicable invoice.

**Adequate Tests:** The information contained herein we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be performed by you to determine if this product meets all of your requirements. The shelf life can be affected by storage and handling conditions. When products are stored in the original unopened container in an enclosed area and protected from contamination, moisture and extreme temperatures, the warranted shelf life is twelve months from the date of shipment to the original purchaser.