



Thermal Insulation Chemicals

TIC CORPORATION

Product Data Sheet

TIC 6060

Cryogenic Adhesive

Description

TIC 6060 Cryogenic Adhesive is a chemically curing composition, which develops high tensile strength and adhesion, at room temperature, to a variety of substrates including metal, wood, and masonry. It is supplied at virtually 100% solids enabling immediate bonding between non-porous surfaces without solvent entrapment problems.

TIC 6060 Cryogenic Adhesive also can be used as a fabricating adhesive. It often provides bonds stronger than the materials joined. The cured film has excellent resistance to solvents, water, and many chemicals. The adhesive also performs well with various materials after thermal shock exposure at cryogenic temperatures. It is an ideal choice for bonding steel pipe shoes or saddles to pipe insulation assemblies.

TIC 6060 Cryogenic Adhesive contains no asbestos, lead, mercury or mercury compounds.

Properties

Property	Specification	Test method
Color	Black (part A, paste)/ Brown (part B, liquid) / Beige (part C, sand) / Black (mixed)	TSTM-01
Application	Trowel	TSTM-06
Density	Part A - 1.25 ± 0.05 kg/ℓ Part B - 1.00 ± 0.05 kg/ℓ Part C - 1.65 ± 0.05 kg/ℓ Mixed (A&B&C) - 1.70 ± 0.05 kg/ℓ	ASTM D 1475
Weight non-volatile	99 ± 1 % (mixed)	ASTM D 1644
Coverage	3.43 kg/m ² (2.02 ℓ/m ²) Dried film thickness: 2.0 mm	TSTM-07
Mixing ratio	Weight -part A:part B:part C= 3:1:9	TSTM-16
Pot life	40 ~ 90 minutes (25±2°C, 50±2% RH)	TSTM-09
Drying / curing time	Set to touch: 100 minutes Dry through: 24 hours Curing time: 36 hours Maximum strength: 72 hours	ASTM D 1640
Service temperature limits	(Temperature at coated surface) -196 °C ~ 121 °C (-321°F ~ 250°F)	TSTM-04
Wet flammability	≥ 150 °C (302 °F)	ASTM D 3278
Lap shear strength	≥ 10 MPa	ISO 4587

Limitations

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

Apply between 16 °C (60 °F) and 38°C (100 °F).

Pot life is longer at lower temperatures, shorter at higher temperatures. Mixing large quantities also shortens pot life, thus mixing more than one kit at a time is not recommend.



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Application Guide

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Material Preparation

Mixing instruction: Mix part A and B into clean container with a cage type mixing paddle and a 1/2 inch (12.7 mm) heavy-duty electric drill on slow speed (350 rpm). Mix thoroughly for 3 minutes making sure to scrape the sides and the bottom of the container. While mixing, slowly add part C (aggregate) and mix an additional 2 - 3 minutes until uniform. Do not lengthen or shorten the mixing time. DO NOT THIN.

Mixing Ratio: TIC 6060 Cryogenic Adhesive is supplied in 18kg (40lb.) kits. Either mixes the entire kit or divides each component into 2 equal parts and mixes half of the kit at one time. Do not attempt to mix less than half of a kit.

Application

Apply by trowel to clean dry surfaces only.

Metal surfaces should be solvent cleaned and allowed to dry.

When used in Cryogenic applications (below -40 °C /-40 °F), the metal surface must be sandblasted or primed with a polyamide epoxy primer.

Apply at 16 °C to 38 °C (60 °F to 100 °F) ambient temperature. At temperatures above 35 °C (95 °F), the pot life will be less than 30 minutes.

To prolong pot life at high temperatures, TIC 6060 Cryogenic Adhesive should spread out as much as possible immediately after mixing.

Clean-up

Before adhesive cures, clean tools and equipment with chlorinated solvent (non-flammable) or mineral spirits (flammable). Dried TIC 6060 Cryogenic Adhesive 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.