



Thermal Insulation Chemicals

TIC CORPORATION

Product Data Sheet

TIC 5060

PU Adhesive

Description

TIC 5060 PU Adhesive is a solvent-free, two-component adhesive, based on polyurethane. The resin consists of organic compounds with hydroxyl-groups whereas the hardener is based on isocyanates. By mixing both components in a ratio by weight of 4 : 1, a hard elastic adhesive is achieved via a chemical reaction. The product exhibits no measurable change in volume after curing.

TIC 5060 PU Adhesive is used for bonding of metal, plywood, PIR, RPUF and triplex, particularly in the manufacturing of composite elements in the construction industry, in vehicle and container manufacture, in ship building as well as in the engineering insulation down to -196 °C (-321 °F)

TIC 5060 PU Adhesive is strong bonding condition which can be durable to thermal and mechanical impacts.

TIC 5060 PU Adhesive contains no asbestos, lead, mercury, or mercury compounds.

Properties

Property	Specification	Test method
Color	Beige (part A) / Brown (part B) Beige (mixed)	TSTM-01
Application	Brush or airless spray	TSTM-06
Density	Part A - 1.45 ± 0.05 kg/ℓ Part B - 1.22 ± 0.05 kg/ℓ Mixed (A&B) - 1.45 ± 0.05 kg/ℓ	ASTM D 1475
Volume non-volatile	99 ± 1 % (mixed)	ASTM D 1644
Weight non-volatile	99 ± 1 % (mixed)	ASTM D 1644
Coverage	1.46 kg/m ² (1.01 ℓ/m ²) Dried film thickness: 1.0 mm	TSTM-07
Mixing ratio	Weight - part A : part B = 4 : 1 Volume - part A : part B = 3.3 : 1	TSTM-16
Pot life	1 ~ 2 hours (25±2°C, 50±2% RH)	TSTM-09
Service temperature limits	(Temperature at coated surface) -196 °C ~ 100 °C (-321 °F ~ 212 °F)	TSTM-04
Wet flammability	≥ 93 °C (200 °F)	ASTM D 3278
Lap shear strength	≥ 12 MPa	ISO 4587

Limitations

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

Pot life will be longer at lower temperatures, shorter at higher temperatures.

Part B is sensitive to moisture and humidity. Keep container tightly sealed when not in use.



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Application Guide

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Material Preparation

Substrate should be dry and free from dust, oil and other contamination. When you use metal, do primer coating on the surface. Primer coating and solvent cleaning are appropriate method for material preparation.

Application

Mix resin and a hardener according to given mixed ratio before use. The adhesive can only be used within Pot Life. After Pot Life, it become gel or can't be used. The amount to be only used within Pot Life should be mixed.

Pot Life depends on the temperature and amount of mixture. If the temperature is high and using large amount, the Pot Life would be shortened, while Pot Life would be increased in low temperature. If you put too much of a hardener, the viscosity of mixture will be lowered and film will be easily broken.

TIC 5060 PU Adhesive can be used by trowel or machine. The adhesive is only applied on a single surface. Adhesive components should not come into contact with moisture before or during application, since this would react with the isocyanate, which leads to bubbles or foam formation. Therefore, pails must always be kept properly sealed and protected against moisture.

Clean-up

Before adhesive cures, clean tools and equipment with chlorinated solvent (non-flammable) or mineral spirits (flammable); cured adhesive can only be removed mechanically.

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 perform 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.