



Thermal Insulation Chemicals

TIC CORPORATION

Product Data Sheet TIC 8020 Vapor Barrier Sealant

Description

TIC 8020 Vapor Barrier Sealant is a fire-resistive, fibrated water based, indoor/outdoor Vapor barrier sealant for low, medium and high velocity heating and air conditioning ducts. It performs as a tough and flexible adhesive and sealant, forming a durable seal against air leakage when used with or without reinforcing tape or membrane. Mechanical fasteners of the type and number normally used for duct assemblies are required to provide rigidity to the duct system.

TIC 8020 Vapor Barrier Sealant has excellent weather resistance, low water Vapor permeance and good water resistance, allowing it to be used outdoors and in high humidity environments. It is U.V. resistant. When dry, it may be painted with good quality water base paint.

TIC 8020 Vapor Barrier Sealant may be pressure tested within 24 hours dry time above 21 °C (70 °F). It quickly forms a strong bond to galvanized, aluminum or mild steel metal ducts. It has a mild odor when wet.

TIC 8020 Vapor Barrier Sealant contains no asbestos, lead, mercury, or mercury compounds.

Properties

Property	Specification	Test method
Color	Light gray	TSTM-01
Application	Brush, trowel, caulking gun, or power extrusion	TSTM-06
Density	1.38 ± 0.05 kg/ℓ (11.5 lbs/gal)	ASTM D 1475
Volume non-volatile	58 ± 1 %	ASTM D 1644
Weight non-volatile	71 ± 1 %	ASTM D 1644
Coverage	Brush/Trowel 1.90 kg/m ² (1.38 ℓ/m ²) Dried film thickness: 0.8 mm Caulking gun (310 ml tube) 3.2 mm bead:38 m/6.4 mm bead:9 m	TSTM-07
Drying time	Set to touch: 1 hour Dry through: 24 hours	ASTM D 1640
Service temperature limits	(Temperature at coated surface) -7 °C ~ 93 °C (20 °F ~ 200 °F)	TSTM-04
Wet flammability	≤ 0.45 perms (DFT 0.9 mm)	ASTM D 3278
Fungal growth resistance	≥ 100 °C (212 °F), No flash to boiling	ASTM G 21
Surface burning characteristics	Classification: CLASS A Flame spread: 5 (0~25) Smoke developed: 0 (0~450) Surface: Applied over fiber reinforced cement board at a coverage rate of 25 sq. ft/gal (4.6 m ² /ℓ)	ASTM E 84

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.

Systems may be pressure-tested 36 hours after application, above 16 °C (60 °F).

Make sure that this product is completely dry and the area free from solvent odor.

For outdoor application select TIC 8020, 8030 or top coat 8010 with a UV resistant finish.



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Application Guide

TIC 8020

Vapor Barrier Sealant

Material Preparation

DO NOT THIN. Apply only to clean, oil-free dry surfaces. Keep container closed when not in use.

Application

- 1. Brush/Trowel** - Uniformly coat the TIC 8020 Vapor Barrier Sealant over the joint, at total coverage rate to be 0.6 ~ 1.2 m²/ℓ (wet film thickness: 1.6 ~ 0.8 mm). Allow the completed joint to dry at least 24 hours above 21 °C (70 °F) before pressure testing. High humidities (over 70%) and/or cooler temperature may retard drying. Apply a continuous film of TIC 8020 Vapor Barrier Sealant over all areas of the indoor or outdoor duct system where air leakage may occur. A brush may be used to work the sealant into joints and remove excess. On spiral ducts apply a coat TIC 8020 Vapor Barrier Sealant to the male end of the coupling prior to fitting the straight run of spiral duct over it. Brush excess TIC 8020 Vapor Barrier Sealant over the joint to complete the seal. Screw holes and flanges should also be sealed with a coat of TIC 8020 Vapor Barrier Sealant. It may be applied to the inside or the outside of the duct.
- 2. Power extrusion** - TIC 8020 Vapor Barrier Sealant may be applied using a wide variety of power (pressure) extrusion equipment suitable for use with water base sealants. It is a soft buttery gel with a typical viscosity range of 250,000 - 270,000 cps. Corrosion resistant pumps and fittings are suggested. After it is completely dry, TIC 8020 Vapor Barrier Sealant may be top coated with good quality water base paint.

Clean-up

Use fresh water to clean brushes and equipment before product dries. Dry product may be removed with hot soapy water or strong solvent such as chlorinated solvent (non-flammable) or xylene (flammable).

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.