



DESCRIPTION

CONATHANE EN-9050 is halogen free based on IEC 61249-2-21



CONATHANE EN-9050 is a filled two-component polyurethane system designed for use as a potting and encapsulating material for electronic components where critical thermal cycling characteristics are a factor. CONATHANE EN-9050 has excellent electrical properties, low shrinkage, low stress build-up, and can be hand mixed or machine dispensed.

CHARACTERISTICS AND PROPERTIES

Table 1 | Product Description

Property	Prepolymer PART A	Curative PART B
Viscosity @ 25°C (77°F)	250 cps	8,700 cps
Specific Gravity @ 25°C (77°F)	1.21	1.52
Color	Brown	Black or White

Table 2 | Processing Parameters

Property	Value
Mix ratio by Weight, Prepolymer/Curative	17 / 100
Initial mixed viscosity @ 25°C (77°F), cps	5000
Work life @ 25°C (77°F), 150 gm mass to 100K cps	60 minutes
Cure, Handling Strength @ 25°C (77°F)	24-48 hours
Full Cure @ 25°C (77°F), for maximum properties	7 to 10 days
Alternate Cure @ 80°C (176°F), for maximum properties	16 hours

The two components should be mixed together thoroughly in metal or glass containers using metal or glass stirrers. Degassing of the mixed material should be accomplished at room temperature to 40°C at 1-5mm of mercury vacuum. Containers should be large enough to allow for frothing during degassing. Any material or container that could introduce water into the system should be avoided.

Table 3 | Cured Properties

Property	Value
Hardness, Shore D	52
Tensile Strength, psi	1000
Elongation, %	57
Tear Strength, pli	130
Volume Resistivity @ 25°C (77°F), ohm-cm	3.1×10^{14}
Surface Resistivity @ 25°C (77°F), ohms	3.5×10^{15}
Dielectric Strength, vpm	525
Dielectric Constant @ 25°C (77°F), 1 MHz	3.60
Dissipation Factor @ 25°C (77°F), 1 MHz	0.025
Flammability, 6 mm	Passes UL 94V-O
Operating Temperature	-55°C to +130°C



HANDLING AND STORAGE INSTRUCTIONS

CONATHANE EN-9050 Part A and Part B should be stored at temperatures of 65°F-85°F in tightly closed containers. If containers are opened and the contents only partially used, the containers should be flushed with dry nitrogen (CONAP® Dri-Purge) or dry air before being resealed.

The shelf life of CONATHANE EN-9050 Part A and Part B is 18 months from date of manufacture in the original unopened containers.

NOTE: The fillers in CONATHANE EN-9050 Part B have a tendency to settle. Generally, this is a soft settlement that can be brought back into suspension by agitation or by rolling. To ensure that mix ratios are correct, it is important that the fillers be brought back into suspension.

AVAILABILITY

CONATHANE EN-9050 is available in gallon, 5-gallon, and 55-Gallon units. Each unit consists of pre-weighed quantities of Part A and Part B packaged in individual containers. An evaluation kit is available at a nominal cost.

CAUTION: Responsible handling of Cytec Industries Inc. products requires a thorough review of safety, health, and environmental issues prior to use. Review the Material Safety Data Sheets(s) for the specific Cytec Industries Inc. product(s) and container label information before opening containers. Ensure that employee exposure issues are understood, communicated to all workers, and controls are in place to prevent exposures above Permissible Exposure Limits (PELs). Review safety and environmental issues to be certain controls are in place to prevent injury to employees, the community, or the environment, and ensure compliance with all applicable Federal, State, and Local laws and regulations. For assistance in this review process, please call your Cytec Industries Inc. representative or our office noted below.

CONTACT INFORMATION

Olean, New York
tel 716.372.9650
fax 716.372.1594

DISCLAIMER: The data and information provided in this document have been obtained from carefully controlled samples and are considered to be representative of the product described. Because the properties of this product can be significantly affected by the fabrication and testing techniques employed and since Cytec Engineered Materials (CEM) does not control the conditions under which its products are tested and used, CEM cannot guarantee that the properties provided will be obtained with other processes and equipment. CEM has the right to change any data or information when deemed appropriate.

TRADEMARK NOTICE: The © indicates a Registered Trademark in the United States and the ™ or * indicates a Trademark in the United States. The mark may also be registered, the subject of an application for registration or a trademark in other countries.