



Designation: C 591 – 001

Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers the types, physical properties, and dimensions of unfaced, preformed rigid cellular polyisocyanurate plastic material intended for use as thermal insulation on surfaces from – 297°F (–518°C) to 300°F (150°C). For specific applications, the actual temperature limits shall be agreed upon by the manufacturer and purchaser.

1.2 This specification only covers “polyurethane modified polyisocyanurate” thermal insulation which is commonly referred to as “polyisocyanurate” thermal insulation. This standard does not encompass all polyurethane modified materials. Polyurethane modified polyisocyanurate and other polyurethane materials are similar, but the materials will perform differently under some service conditions.

1.3 This standard is designed as a material specification, not a design document. Physical property requirements vary by application and temperature. ~~Consult~~ At temperatures below – 70°F (– 51°C) the ~~manufacturer for specific recommendations and physical properties regarding applications, which include cryogenic service, of the polyisocyanurate insulation at the service temperature are of particular importance.~~ Below – 70°F (– 51°C), the manufacturer and the purchaser must agree on what additional cold temperature performance properties, may be required to determine if the material can function adequately for the particular application.

1.4 The use of thermal insulation material covered by this specification may be regulated by building codes that address fire performance.

1.5 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only and may be approximate.

~~1.6 Polyisocyanurate thermal insulation should be kept dry during storage, shipping, installation, start-up, and operation.~~

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1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This specification is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.22 on Inorganic and Nonhomogeneous Inorganic Thermal Insulation.

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