

Industry and Agency Approvals

Torlon engineering polymers have been tested successfully against many industry standards and specifications. The following list is a summary of approvals to date, but should not be considered inclusive, as work continues to qualify Torlon polyamide-imide for a myriad of applications.

ASTM D5204 Standard Classification System for Polyamide-imide (PAI) Molding and Extrusion Materials

Grade	ASTM D5204 Designation
4203L	PAI000R03A56316E11FB41 or PAI011M03 or PAI021M03
4301	PAI000L15A32232E12FB42 or PAI012L15 or PAI022L15
4275	PAI000L23A22133E13FB42 or PAI012L23 or PAI022L23
4435	PAI0120R35 or PAI0220R35
4630	PAI0120R30 or PAI0220R30
4645	PAI0120R45 or PAI0220R45
5030	PAI000G30A61643E15FB46 or PAI013G30 or PAI023G30
7130	PAI000C30A51661FB47 or PAI013C30 or PAI023C30

Federal Aviation Administration

Torlon 5030 and 7130 pass FAA requirements for flammability, smoke density, and toxic gas emissions.

Military Specification MIL-P-46179A

This specification was cancelled on July 27, 1994 and ASTM D5204 was adopted by the Department of Defense. The following cross reference table appears in the adoption notice.

	Type	Class	ASTM D5204
4203L	I		PAI000R03A56316E11FB41
4301	II	1	PAI000L15A32232E12FB42
4275	II	2	PAI000L23A22133E13FB42
5030	III	1	PAI000G30A61643E15FB46
7130	IV		PAI000C30A51661FB47

National Aeronautics and Space Administration

NHB8060.1 "Flammability, Odor, and Offgassing Requirements and Test Procedures for Materials in Environments that Support Combustion" Torlon 4203L and 4301 have passed the NASA spacecraft materials requirements for non-vacuum exposures per NHB8060.1.

Society of Automotive Engineers-Aerospace Material Specifications

AMS 3670 is the specification for Torlon materials. The specification suggests applications requiring a low coefficient of friction, thermal stability, and toughness up to 250°C (482°F). Torlon 4203L, 4275, 4301, 5030, and 7130 are covered in the detail specifications:

- AMS 3670/1-Torlon 4203L
- AMS 3670/2-Torlon 4275
- AMS 3670/3-Torlon 4301
- AMS 3670/4-Torlon 5030
- AMS 3670/5-Torlon 7130

Underwriters Laboratories

Vertical Flammability

All Torlon grades have been awarded a V-0 classification. See Table 19 on page 18.

Continuous Use

The Relative Thermal Indices of Torlon 4203L, 4301, and 5030 are shown in Table 10 on page 12.