



ABS Machine Grade

Acrylonitrile Butadiene Styrene

Description and Overview

Machine grade ABS is an engineering plastic that is easy to machine and fabricate. Machine grade ABS is a cost effective material for structural applications where durability, stiffness and impact strength at low temperatures are required. Compared to extruded ABS, machine grade ABS is compression molded and air annealed during a structured heating and cooling process. This minimizes expansion and contraction and helps to prevent internal part failure.

Natural and black machine grade ABS are FDA compliant for use in food processing applications.

Applications and Uses

Machine grade ABS is used for machining pre-production prototypes due to its excellent dimensional stability and ability to accept paint and solvent bonds.

- Business machines
- Communications equipment
- Housings for small appliances
- Electrical devices
- Dental equipment
- Medical equipment
- Automotive parts and housings
- Prototyping



ABS is available in machine & extruded grades.

Full sheet: 24" x 48" (0.25" through 3.0" thick)

Rod: (0.5" through 4.0" diameter)

Properties and Specifications

Property	ABS Machine Grade
Yield Tensile Strength (psi)	5,100
Yield Tensile Elongation	15%
Flexural Strength (psi)	8,000
Flexural Modulus (psi)	270,000
Izod Impact Strength (ft-lbs/in.)	6.3
Coefficient of Friction	0.19 - 0.21
Heat Deflection Temperature	200.F @ 66 psi
Heat Deflection Temperature	177.F @ 264 psi
Vicat Softening Temperature	224
Flammability, UL94	HB
Continuous Operating Temp.	150.F
Affixable Properties	Chem / Mech

Properties are typical.
Chem is an abbreviation for chemically affixed with glues, chemicals, or adhesive.
Mech is an abbreviation for mechanically affixed bonding.
Field testing is recommended for any application.

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 WARNING: This product can expose you to chemicals including Acrylonitrile, CAS 107-13-1, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

 WARNING: This product can expose you to chemicals including Styrene, CAS 100-42-5, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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ADVANCED MATERIALS

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