

Vartube Extruded Tubing

Extruded Polyvinyl Chloride Plastic Tubing

Description

Vartube Extruded Tubings are made from polyvinyl chloride (PVC) and its copolymers which, because of the ease with which they combine with a large number of compounding elements, make it possible to produce tubings with a variety of performance characteristics.

There are three types of Vartube, all of which are resistant to oils, alcohol, aliphatic solvents, acids and alkalies as well as to fungus growth and corrosion.

Type SHH: A high heat-resistant, Class 105 tubing recognized by UL for continuous use in 105°C applications and VW-1 Flame test compliance under File #E69513. Also meets the requirements of, and is on the QPL for, MIL-I-631, Grade c, Classes I and II, Category 1.

Type 120/210: A high-quality, general purpose Class 90 tubing which exhibits an exceptionally wide temperature range from -55°C to 90°C maintaining a high dielectric strength and excellent flexibility over its full thermal span. Meets the requirements of, and is on the QPL for, MIL-I-631, Grades a and b, Classes I and II, Category 1.

Type 302/203: A Class 85 tubing able to withstand temperatures as low as -70°C. Its low-temperature characteristics exhibit unusual flexibility and high cut-through resistance with maintenance of dielectric strength. The upper thermal limit of 85°C is outstanding for this type of tubing. Meets the requirements of MIL-I-7444, Class 1, Types I and III.

Applications

Type SHH: Widely used on transformer, motor and coil lead wires. Also finds applications in electronic apparatus and in consumer goods such as toys, blenders, food machines, outboard motors, lawn care equipment, lighting equipment, motorcycles, etc. May also be used for vacuum or pressure hoses and transfer of compatible liquids.

Type 120/210: Used in appliances, electric motors, commercial and military aircraft, automotive components and a host of other installations. Its low temperature characteristics make it particularly useful in airborne equipment, electrical harnesses and snow machines.

Type 302/203: Recommended for cable and conduit installations and harnessing, especially where very low temperatures are to be encountered such as airborne devices, aircraft, missiles and snow machine wiring harness jackets.

Sizes

Type SHH: Std. wall - #24 through 2-1/2" I.D.; 1/32" wall - #20 through 1/2" I.D.

Type 120/210: #24 through 1/2" I.D.

Type 302/203: #24 through 1" I.D.

Standard Colors

Transparent and black - #24 through #0

Black only - 5/16" I.D. and larger

Other colors made to order subject to minimum quantity ordering restrictions.

Standard Packaging

Spools. Cut lengths are available subject to cutting charges.

Typical Properties

	Vartube SHH MIL-I-631, Grade c		Vartube 120/210 MIL-I-631, Grades a & b		Vartube 302/203 MIL-I-7444, Class 1	
Property	Requirements	Performance	Requirements	Performance	Requirements	Performance
Physical						
Tensile Strength – Unaged	Min. 1800psi	3480psi	Min. 1800psi	3000psi	Min. 1800psi	2150psi
Elongation – Unaged	200 - 350%	315%	200 - 450%	350%	Min. 200%	350%
Flexibility	No cracks, 180° bend-1/8" rod	No cracking	No cracks, 180° bend-1/8" rod	No cracking	No cracks/splits when flexed	No cracks/splits
Chemical						
Oil Resistance	No cracks or oil penetration	Conforms	No cracks or oil penetration	Conforms	No tack or decomposition	Conforms
Corrosion Resistance	No corrosion	Conforms	No corrosion	Conforms	No corrosion of contact metals	Conforms
Fungus Resistance	No fungus growth	Conforms	No fungus growth	Conforms	No fungus growth	Conforms
Electrical						
Dielectric Strength — Dry	800v/mil	1180v/mil	750v/mil	1000v/mil	200v/mil	545v/mil
— Wet	85% of dry	94% of dry	85-90% of dry	95% of dry	200v/mil	493v/mil
Thermal						
Thermal Endurance (continuous)	None	105°C	None	90°C	None	85°C
Cold Brittleness - Unaged	- 10°C	- 25°C	- 46°C	- 57°C	- 67.8°C	- 74°C
Flame Resistance	15 sec. max.	Under 10 sec.	15 sec. max.	0 sec.	45 sec. max.	Under 10 sec.