

Material Data

PowerTrak Side Chains

MATERIAL :

Molded fiber-glass reinforced virgin nylon (polyamide).
Standard color is black.

MECHANICAL PROPERTIES:

1. Specific gravity-1.37
2. Tensile strength-25,500 psi (DAM)*/17,000 psi (RH50)**
3. Flex modulus-1,100,000 psi (DAM)/760,000 psi (RH50)
4. Deflection temperature @ 264 psi-420 degrees F.
5. Izod impact @ 73 degrees F.-2.5 ft-lbs/in (DAM)
6. Elongation @ 73 degrees F.-2.0% (DAM)
7. Shear strength-12,000 psi (DAM)

* DAM = Dry-as-molded condition

** RH50=Moisture conditioned to equilibrium at 50% Relative Humidity

WATER ABSORPTION (by weight):

1.1% in 24 hours

DIELECTRIC STRENGTH:

530 volts/mil (DAM)

CONTINUOUS OPERATING TEMPERATURE:

Deviation from ambient temperature range of +50°F to +90°F requires special consideration. Allowable ambient temperature range: -10°F or +250°F.

FLAMMABILITY RATING:

UL94-HB

ULTRAVIOLET RADIATION RESISTANCE:

Very good due to carbon black color additive (black color only)

GAMMA RADIATION RESISTANCE:

10 megarads total dosage at 85% retention of mechanical properties

CHEMICAL RESISTANCE:

1. Unaffected by lubricating oils & greases, aliphatic & aromatic hydrocarbons, including conventional fuels
2. Resistant to variety of paints & lacquers, detergents, aerosol preparations, food products containing animal or vegetable fats, organic compounds (such as aldehydes, ketones, monohydroxyl alcohols, most esters, chlorinated aliphatic and aromatic materials). Some of these compounds will be absorbed and cause reduction in mechanical strength.
3. Affected by phenols, formic acid, trichloroacetic acid, fluoroalcohols, organic acids, acetic and strong acids.
4. Temperature, chemical concentration, time and stress levels all affect service life in a chemical environment.

CORROSION RESISTANCE:

Unaffected by salt water and hard water

- A. Prolonged exposure in water will plasticize the material to increase impact strength and reduce tensile strength
- B. Unaffected by electrolytic corrosion

WEATHERABILITY:

Resistant to molds, bacteria and fungi.

PowerTrak Carrier Styles VC, V1, VTB, VT1

MATERIAL :

Black, Exterior Grade, Rigid PVC extrusion compound.

MECHANICAL PROPERTIES:

1. Specific gravity - 1.45
2. Tensile strength - 6,600 psi
3. Tensile modulus - 435,000 psi
4. Flexural Strength - 11,200 psi
5. Flexural Modulus - 410,000 psi
6. Deflection temperature @ 264 psi - 160 degrees F.
7. Notched Izod Impact @ 73 degrees F. - 15 ft-lbs/in
8. Shore D Hardness - 79

WATER ABSORPTION (by weight):

0.4% in 24 hours

DIELECTRIC STRENGTH:

400 volts/mil

CONTINUOUS OPERATING TEMPERATURE:

-20°F to +140°F.

FLAMMABILITY RATING:

UL94 V-0

ULTRAVIOLET RADIATION RESISTANCE:

Very good due to carbon black colorant

CHEMICAL RESISTANCE:

1. Unaffected by hard or soft water, household chemicals, and waste water.
2. Resistant to petroleum-based chemicals, paint, and organic compounds.

WEATHERABILITY:

Resistant to molds, bacteria and fungi.