

HS40 Carbon Fiber

Grade: HS40

Formula: C

Length: 20m

Type: Epoxy Sized (0.7%)

Filament Diameter: 0.008mm

Number Of Filaments: 10000

Tex Number: 900

Type: Epoxy Sized (0.7%)

CAS Number: 7440-44-0

UOM Code: 121-301-64

SKU: 1000032008-group

Product Code: C-00-FB-000130

Material Properties for Metals

Atomic Properties

| Element | Value |
|---|------------------------------------|
| Atomic number | 6 |
| Crystal structure | Hexagonal/Diamond |
| Electronic structure | He 2s ² 2p ² |
| Valences shown | 2, 3, 4 |
| Atomic weight(amu) | 12.011 |
| Thermal neutron absorption cross-section(Barns) | 0.0034 |
| Photo-electric work function(eV) | 4.8 |
| Natural isotope distribution(Mass No./%) | 12/ 98.89 |
| Natural isotope distribution(Mass No./%) | 13/ 1.11 |
| Atomic radius - Goldschmidt(nm) | 0.077 |
| Ionisation potential(No./eV) | 6/ 490 |
| Ionisation potential(No./eV) | 4/ 64.5 |
| Ionisation potential(No./eV) | 1/ 11.26 |
| Ionisation potential(No./eV) | 3/ 47.9 |
| Ionisation potential(No./eV) | 2/ 24.38 |
| Ionisation potential(No./eV) | 5/ 392 |

Mechanical Properties

| Element | Value |
|------------------------|----------|
| Hardness - Mohs | 0.5-1 |
| Hardness - Mohs | 10 |
| Material condition | Diamond |
| Material condition | Graphite |
| Bulk modulus(GPa) | 33 |
| Bulk modulus(GPa) | 542 |
| Tensile modulus(GPa) | 4.8 |

Electrical Properties

| Element | Value |
|---|------------|
| Electrical resistivity(μOhmcm) | 1375@0@0°C |
| Thermal emf against Pt (cold 0C - hot 100C)(mV) | 0.7 |

Physical Properties

| Element | Value |
|---------------------------|-----------|
| Boiling point(C) | 5000 |
| Density(gcm^3) | 2.25@20°C |

Thermal Properties

| Element | Value |
|--|-----------------|
| Melting point(C) | 3650 |
| Specific heat($\text{J K}^{-1} \text{kg}^{-1}$) | 712@25°C |
| Thermal conductivity($\text{W m}^{-1} \text{K}^{-1}$) | 80-240@0-100°C |
| Coefficient of thermal expansion($\times 10^{-6} \text{K}^{-1}$) | 0.6-4.3@0-100°C |