

## INSULTHERM® HD

### HEAT TREATED, FRAY-RESISTANT FIBERGLASS · PROTECTS UP TO 650°C IT WILL NOT BURN, MELT OR BECOME BRITTLE

INSULTHERM® (HD) Heavy Duty is a braided fiberglass sleeving made in a heavy wall construction with a high temp cord braided into the sleeving. Insultherm® HD is saturated with high temperature acrylic resins which adds rigidity and reduces fray when cut. The high temperature fiberglass cord braided into the sleeving adds significant abrasion protection and allows the sleeving to expand to much larger diameters, making it easier to apply over longer lengths. Insultherm® HD is ideal heat protection for cables and hoses in a wide range of available sizes and will withstand 650°C temperatures. This sleeving is designed to provide thermal insulation and protection for EGR tubes, fuel lines, hydraulic and industrial hose applications as well as many welding and automotive applications.

#### SIZING CHART

Nominal Size	Part #	Maximum Diameter	Wall Thickness	*Put-Ups		Available Colors	Kgs/100m
				M	L		
12,7mm	FGS0.50BK	22,2mm	1,3mm	15,2m	61,0m	1	10,86
19,1mm	FGS0.75BK	69,6mm	1,5mm	15,2m	61,0m	1	20,24
25,4mm	FGS1.00BK	63,5mm	1,9mm	15,2m	61,0m	1	25,30
31,8mm	FGS1.25BK	85,7mm	1,8mm	7,6m	30,5m	1	32,39
34,9mm	FGS1.38BK	111,1mm	1,8mm	7,6m	30,5m	1	35,72
38,1mm	FGS1.50BK	136,5mm	2,3mm	7,6m	30,5m	1	41,37

\*Put-Ups: "M" = Shop Spool and "L" = Bulk Spool



#### FEATURES

Material	Acrylic Coated Fiberglass
Grade	FGS
Wall Thickness	Refer To Chart
Drawing Number	TF001FGS-WD
Cutting	Scissors

#### COLORS



Black (BK)

#### CERTIFICATIONS



VW-1

## ABRASION

Abrasion Resistance	<b>VERY HIGH</b>
Abrasion Test Machine	Taber 5150
Abrasion Test Wheel	Calibrase H-18
Abrasion Test Load	500g
Room Temperature	°F
Humidity	%
Visible Minor Scuffing	Test Cycles
Scuffing & Wear Continues	Test Cycles
Several Broken Strands	Test Cycles
Material Destroyed	Test Cycles
Pre-Test Weight	mg
Post-Test Weight	mg
Test End Loss Of Mass Point Of Destruction	mg

## PHYSICAL PROPERTIES

Monofilament Diameter (ASTM D-204)	NA
Flammability Rating	VW-1
Recommended Cutting	Scissors
Colors	1
Wall Thickness	1,3mm - 2,3mm
Tensile Strength (Yarn) (ASTM D-2256 Lbs)	NA
Specific Gravity (ASTM D-792)	1,0-1,8
Moisture Absorption % (ASTM D-570)	0,01%
Hard Vacuum Data (ASTM E-595 at 10-5 torr)	NA
TML	0,02
CVCM	0,01
WVR	0,00
Smoke D-Max (ASTM E-662)	NA
Outgassing	Low
Oxygen Index (ASTM D-2863)	NA

## FLAMMABILITY

Rating	UL VW-1
--------	---------

## OPERATING TEMPERATURES

Melt Point (ASTM D-2117)	2,048°F / 1,120°C
Maximum Continuous (Mil-I-23053)	1,202°F / 650°C
Minimum Continuous (Mil-I-23053)	-94°F / -70°C

## CHEMICAL RESISTANCE

1=No Effect 2=Little Effect 3=Affected 4=More Affected 5=Severely Affected

Aromatic Solvents	1
Aliphatic Solvents	1
Chlorinated Solvents	1
Weak Bases	1
Salts	1
Strong Bases	1
Salt Water (O-S-1926)	1
Hydraulic Fluid (MIL-H-5606)	1
Lube Oil (MIL-L-7808)	1
De-Icing Fluid (MIL-A-8243)	1
Strong Acids	2
Strong Oxidants	2
Esters/Ketones	1
UV Light	2
Petroleum	1
Fungus (ASTM G-21)	1
Halogen Free	Yes
RoHS	Yes
SVHC	None