PHILLYSTRAN, INC.

Technical Bulletin

151-2/06

PHILLYSTRAN® SHIPBOARD ROPES ARAMID

Phillystran aramid fiber ropes jacketed with abrasion-resistant, moisture-blocking extruded polymers are made to order for most shipboard applications. Phillystran ropes provide the strength and low-stretch characteristics of steel with the light-weight, non-corrosive, and dielectric properties of fiber ropes.

The U.S. Navy has approved Phillystran for use in lifelines and boat davit preventer stays. Some of the advantages of replacing steel cables for these applications are:

- Inter-modulation interference (IMI) is eliminated.
- Electromagnetic interference (EMI) is eliminated.
- Received and transmitted signal patterns are improved.
- Expensive maintenance such as painting, greasing, and de-icing is eliminated.
- Useful life is dramatically increased when corrosion due to sea water and stack gases is eliminated.
- Safety concerns due to metal "fish hook" injuries and corrosion-weakened steel wire ropes are eliminated.

Applications where electrically transparent, corrosion-resistant Phillystran is the best choice are:

- Mast and antenna stays.
- Jackstaff and canopy-awning lines.
- Boat gripes, preventer stays, and spanwires.
- Mooring lines.
- Tow lines and winch lines.
- Lashing ropes and rigging lines.

SHIPBOARD ROPES

PART NUMBER	BREAK STRENGTH		DIAMETER		WEIGHT		REEL LENGTH	NSN #
	LBS	kN	IN	mm	LBS/1000FT	kg/km	FT	
SB-115	17,000	76	0.50	12.7	62	90	5,000	4020-01-358-4655
SB-130	20,000	89	0.62	15.7	90	130	2,000	4010-01-288-1592

NAVSEA approved Kevlar* lifeline system, drawing #804-5959308
NAVSEA approved boat davit preventer assembly, drawing #803-5184124

MAST STAYS

PART NUMBER	EHS EQUIVALENT	SOCKET SIZE	BREAK STRENGTH		REEL LENGTH
	IN	IN	LBS	kN	FT
HPTG 27000I	1/2	5/8	27,000	120	5,200
HPTG 35000I	9/16	3/4	35,000	160	4,500
HPTG 42400I	5/8	7/8	42,400	190	3,100
HPTG 58300I	3/4	1	58,300	260	2,400

Weights and Dimensions can vary
Kevlar® is a Registered Trademark of DuPont

CAUTION: Break Strength: The breaking strength of a rope is the load at which a new rope will break when tested under laboratory conditions. Break strength should not be mistaken for safe working load. **Safe Working Load:** Because of the wide range of rope use, rope condition and the degree of risk of life or property, it is not possible to make a blanket recommendation for safe working load. It is ultimately dependent on the rope user to determine what percentage of break strength is their own safe working load. **Wear:** Ropes wear out with use; the more severe the usage, the greater the wear. It is often not possible to detect wear on a rope by visible signs alone. Therefore, it is recommended that the rope user determine a retirement criteria for ropes in their application. For assistance in developing safe working load and retirement criteria for each application please call or write Phillystran, Inc.

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