

# Special Specification 4059

## UHMW-PE Timber Pads- Replacement



### 1. DESCRIPTION

Provide material to be used for UHMW-PE (ultra - high molecular weight polyethylene) pads for use on marine fender systems and install as shown on the plans.

### 2. MATERIALS

Provide UHMW-PE Fender System Timber Pads provided conforming to the following physical properties in accordance with table 1.

**Table 1**

Property	Value	Test Method
Molecular Weight	3.5 – 6 million	ASTM D-4020-81
Impact Strength Izod Impact Strength Double notch 23 deg C	18 ft-lbs/ in 2 Min.	ASTM D-256A
Hardness	65 Durometer Min.	ASTM D-2240
Tensile Strength Yield Break Elongation @ Break	3000 lbs. Min. 4500 lbs. min. 300% Min.	ASTM D-638

In addition to the above requirements, stabilize the UMMW-PE material against ultraviolet radiation. Use either virgin or reclaimed material as approved by the engineer.

### 3. GENERAL

Provide UHMW-PE pads meeting dimensions shown in the plans. Complete all machining by the manufacturer prior to delivery to the field. Use the following tolerances in Table 2.

**Table 2**

Pad Size	Machining
Thickness = + 1/16"	Hole location = + 0.05"
Width and length = + 1/4"	

Install the Timber pads as shown on the plans. Replace any pads damaged by over tightened bolts or gouges at the Contractors expense

### 4. MEASUREMENT

Measurement for the UHMW-PE fender pads is by the each.

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**5. PAYMENT**

Payment for the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" is paid at the unit price bid for "UHMW-PE Timber pads", of the size shown in the plans. This price is full compensation for all machining, furnishing and installation of the pads, anchor bolts and incidentals; and for furnishing tools, equipment, labor, materials and incidentals necessary to complete the work.