

# TIVAR® DockGuard UHMW-PE

## Key benefits

- **Low-friction surface:** Allows vessels to glide easily along the surface, protecting hulls and dock structures. Sheds mussels and barnacles with minimum cleaning. Impervious to marine bore worms.
- **Wear-resistant surface:** Outwears hardened steel.
- **No water absorption:** No swelling or deterioration from water permeation.
- **Chemical and corrosion resistant:** Withstands salt water, fuel and chemicals.
- **Chemically inert and eco-friendly:** Does not leach chemicals into waterways, disturbing fragile ecosystems.
- **Performs in weather extremes:** Sub-zero conditions will not degrade TIVAR® performance. It retains key physical properties to -30° C. TIVAR® material is UV-resistant, which increases wear life in seaport exposures.



## Excellent wear capabilities for fender systems

Developed by the Mitsubishi Chemical Group - Advanced Materials Division, TIVAR® DockGuard fender facing performs in the most stringent situations and wear conditions, and outlasts other materials such as wood, rubber, urethane, or high density polyethylene; even after 20 maintenance-free years in corrosive saltwater, sunlight, and extremely cold weather. Outwearing hardened steel, UV-resistant TIVAR® DockGuard withstands salt, fuel, and chemical spills.

## Common applications

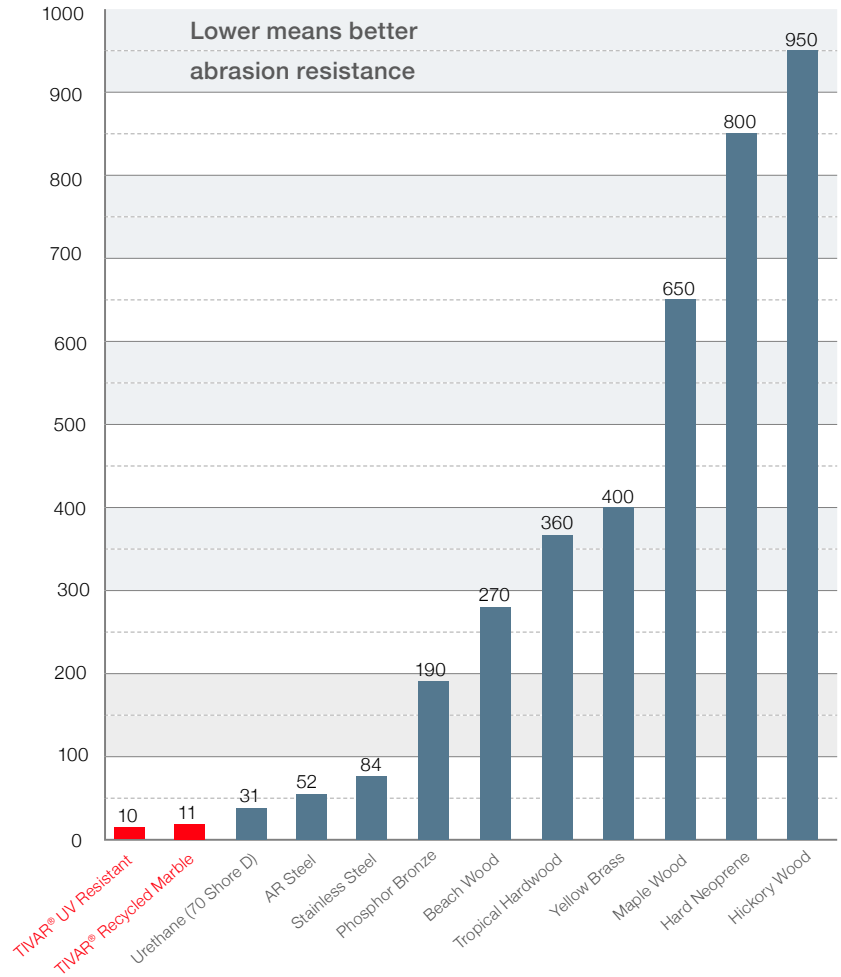
- Fender facing
- Piling rub strips
- Custom extrusions, molds, fabrications
- Rubber backing

## Dynamic coefficient of friction on polished steel

MATERIALS	DRY	WATER
TIVAR® UV Resistant	0.10 - 0.14	0.06 - 0.10
TIVAR® Recycled Marble	0.15 - 0.18	0.06 - 0.10
PTFE (Teflon®)	0.04 - 0.25	0.04 - 0.08
Nylon	0.15 - 0.40	0.14 - 0.19
HDPE	0.20 - 0.30	
Wood (Bongossil)	0.20 - 0.30	
Wood (Oak)	0.20 - 0.30	



TIVAR® wear resistance (sland/slurry) index



## Dedicated fabricating center

The Advanced Materials Division of the Mitsubishi Chemical Group makes fender system components to exact specifications. Machinery includes CNC routers with oversize, split tables, shaper, and multi-head moulder; proprietary seamless welding technologies, and standard planers, saws, and milling machines.



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