

Chafe-Pro[®]

Don't Dock Without It !

2015 Catalog

The First Name in Chafe Protection

www.ChafePro.com



It's a Family Thing



Chafe-Pro began as FJORD, Inc., a company originally founded as a partnership in 1967 by Gail & Edward Ratigan to manufacture their self-designed compact nautical range-finding analog calculator. The calculator was primarily used for navigating the coasts and rivers of Southeast Asia where visual navigational aids were often limited.

In 1991, FJORD developed the Chafe-Pro® concept for protecting marine lines from chafe abrasion and in 1995 was awarded a US patent for their innovative and unique design with wrap-around-closing feature (i.e. the hook and loop).

FJORD was incorporated in the state of North Carolina as a small business entity in 1997 and to this day all Chafe-Pro® products are still manufactured in the state under their US and EU registered* trade name - Chafe-Pro®.

Gail, a veteran of many small boat ocean crossings, and Ed, who is an unlimited master mariner in the Merchant Marine and a former Navy signalman and reserve line officer, turned the business over in 2010 to their son Michael, who himself made his first ocean crossing under sail at the age of seven and currently resides in North Carolina with his lovely wife Kate.

Gail and Ed spend part of their days in Spain and the remaining in North Carolina working on new innovative Chafe-Pro products alongside Michael and are looking forward to one day soon applying their engineering skills to grandparenting.

*Chafe-Pro® is registered in the U.S. Pat. & Tm. Office and in the European Union.





Chafe-Pro®

Don't Dock Without It !

Chafe-Pro Mission

Chafe-Pro strives to be the leading manufacturer of removable chafe-abrasion protection devices sold to the marine and maritime communities.

Chafe-Pro seeks to provide its customers with high performance chafing gear that will meet or exceed expectations and satisfy their unique applications.

Chafe-Pro aspires to carry a reputation in the marketplace for developing and supplying the most cost-effective devices used for the protection of marine ropes, vessel finishes and hydraulic hoses from chafe-abrasion and deterioration due to the harsh marine environment.

Chafe-Pro continues its research efforts in designing, finding, and using better and more cost-effective materials in its product line.

Chafe-Pro Guarantee

Chafe-Pro specializes in the manufacturing of chafe-abrasion protection. We guarantee our products will outlast and outperform all removable anti-chafe devices, when tested under the same conditions.

The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro[®]

Don't Dock Without It !

Corporate Contact

Physical:

1808 Anthony Rd., Suite 103
Burlington, NC USA 27215

Mailing:

P.O. Box 823
Graham, NC USA 27253

Phone: +1 (336) 567-0336

Toll Free: +1 844-NO CHAFE (662-4233)

Fax: +1 (336) 270-5290

Email: info@chafepro.com

Michael L. Ratigan

President

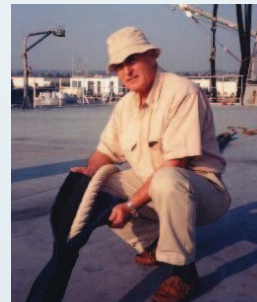
Michael.Ratigan@chafepro.com



Capt. Edward Ratigan

Director of R & D

Edward.Ratigan@chafepro.com



David Levesque

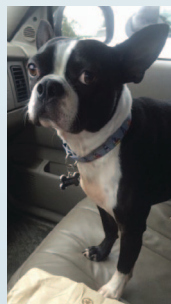
Business Development

DavidL@chafepro.com



Beckett

Office Dog



Cory Hooker

Office Manager

cory@chafepro.com



The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro[®]

Don't Dock Without It !

Our Unique Product Characteristics

Chafe-Pro[®] manufactures anti-chafing devices for mooring lines, fender lines, eye splices, ship tow & ship assist lines, hydraulic hoses and shore power lines. As a result of our unique designs each one of our product categories surpasses the expectations and demands of our customers.

- **Ease of Installation/Removal:** Chafe-Pro[®] is hand wrapped around the line that is to be protected. It can be installed on lines already in position.
- **No Lacing or Lashing Required:** Chafe-Pro[®] uses a unique arrangement of nylon hooks to hold it in the desired protective position.
- **High Resistance for Abrasion:** Chafe-Pro[®] is made from marine grade abrasion-resistant polyester and nylon textiles and features a proprietary weave designed to protect lines under the harshest of conditions.
- **UV Protected:** All Chafe-Pro[®] units are resistant to damage from UV rays.
- **Mildew Resistant:** Chafe-Pro[®] units will not deteriorate from the effects of moisture and mildew.
- **High Flexibility:** Chafe-Pro[®] can be installed in an eye-splice on a capstan or windlass, or heaved through a chock.
- **Ability** to manufacture any custom chafe guards for any application .

1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

What Makes Effective Chafing Gear?

ABRASION RESISTANT

Abrasion resistance is obvious. Marine chafing gear must resist marine abrasion, such as that from piers, chocks, poor fair-leads, etc.

FLEXIBLE

Marine chafing gear needs to be flexible so that it can conform as closely as possible to a line's dynamic deployed configuration (DDC). The DDC is particularly important for a line that undergoes a tight bending radius. Chafing gear that is semi-rigid (i.e. due to the use of polymer coatings etc.) tend to develop cracks in the coating. This results in abrasion and delaminating of the coating material. For example, some manufacturers who use semi-rigid materials for eye units sew to a shape that will conform to that of the intended eye. This would be satisfactory if eyes maintained their shapes under load - but they do not. Nylon, as used in Chafe-Pro products, is flexible and readily conforms to any lines' DDC under both static and dynamic load conditions.

TENSILE STRENGTH

Tensile strength, while not directly providing any abrasion resistance, is actually an important characteristic in the manufacturing of marine chafing gear. One is not going to use chafing gear to tie a vessel to a pier or to tow a barge or ship, that's what lines are for. However marine chafing gear must be strong enough to respond to the stretching that a line undergoes during surging. Preferably the chafing gear will stretch if the line stretches and recoil if the line recoils. Nylon has these characteristics. Certain other materials used in chafe abrasion products do not. They will break whereas nylon will not. Chafe-Pro's line of products use our proprietary nylon weave providing unparalleled abrasion protection under stress.

The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Commercial Series

08 Model - 8" Wide

12 Model - 12" Wide

16 Model - 16" Wide

Color - Black

Chafe-Pro's Commercial Grade Series were developed after several years of extensive testing with the US Coast Guard & US Navy. Today's models consist of an outer layer of our proprietary nylon weave with an inner layer of ballistic nylon. This series protects lines from 1" - 4" diameter with standard lengths up to 20'.

Custom lengths and widths are available upon request.



Model	Dimensions	Line Size
08-HB-02	8" x 2'	1" - 1 3/4"
08-HB-03	8" x 3'	1" - 1 3/4"
08-HB-04	8" x 4'	1" - 1 3/4"
08-HB-06	8" x 6'	1" - 1 3/4"
08-HB-08	8" x 8'	1" - 1 3/4"
08-HB-10	8" x 10'	1" - 1 3/4"
08-HB-12	8" x 12'	1" - 1 3/4"
08-HB-20	8" x 20'	1" - 1 3/4"
12-HB-03	12" x 3'	1 1/2" - 2 1/2"
12-HB-04	12" x 4'	1 1/2" - 2 1/2"
12-HB-06	12" x 6'	1 1/2" - 2 1/2"
12-HB-08	12" x 8'	1 1/2" - 2 1/2"
12-HB-10	12" x 10'	1 1/2" - 2 1/2"
12-HB-12	12" x 12'	1 1/2" - 2 1/2"
12-HB-20	12" x 20'	1 1/2" - 2 1/2"
16-HB-04	16" x 4'	2 1/2" - 4"
16-HB-06	16" x 6'	2 1/2" - 4"
16-HB-08	16" x 8'	2 1/2" - 4"
16-HB-10	16" x 10'	2 1/2" - 4"
16-HB-12	16" x 12'	2 1/2" - 4"
16-HB-20	16" x 20'	2 1/2" - 4"

1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

HB Eye Units

Custom Ordered

Color - Black



Removable chafe guard designed specifically for the eye splice on lines, the **Chafe-Pro HB Eye Units** are all custom ordered and are available for all standard diameter lines. These units are built for everyday use and are lightweight and easy to dip the eye when mooring. They are easy to install and remove on pre-spliced lines. All HB Eye Units are treated with our proprietary Viking Armor urethane coating.

Model	Dimensions	Line Size
HB Eye-12	12" x Custom	1" - 1 3/4"
HB Eye-14	14" x Custom	1 3/4" - 2 1/2"
HB Eye-16	16" x Custom	2 1/2" - 4"
HB Eye-20	20" x Custom	4" - 5"

Thor Guard®

(US Pat. 9,010,265)

Fits Lines

1" - 1 3/4"

Color - Black



Thor Guard® is a one-piece unit that encloses both the splice and the eye of the line. It offers a continuous layer of abrasion resistant material without a break in protection at the transition from the eye to the splice. The standard Thor Guard® is designed for lines 1" - 1 3/4" in diameter, with a 3 foot eye (i.e. 6 linear feet), having a mooring tail extending 7 feet from the throat of the splice. It's design features handles on the eye to assist in handling the line.

Custom Thor Guard® units are available upon request.

Model	Dimensions	Line Size
ThorGuard	3' Eye with 7' Mooring Tail	1" - 1 3/4"



The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Viking Armor™

Ship Tow & Ship Assist

Fits Lines

1 1/2" - 4 1/2"



Chafe-Pro's Viking Armor Ship Tow & Ship Assist Units have been designed to protect lines under heavy strains. These units are constructed of thick industrial grade nylon webbing and are built to protect lines specifically for tow and assist operations. All Ship Tow & Ship Assist units are treated with our proprietary Viking Armor urethane coating for added abrasion resistance. The Ship Tow (VAST) units are fixed location units that will hold in the desired place once installed on the line. These units can be reopened and repositioned at any time. The Ship Assist (VASA) units are free sliding units and will not hold in place on the line. These units are sealed using our permanent Velcro® that will not reopen.

All of these are custom units ordered to desired lengths.

Model	Dimensions	Line Size
VAST-12	12" x Custom	1 1/2" - 2 1/2"
VAST-16	16" x Custom	2 1/2" - 3 1/2"
VAST-18	18" x Custom	3 1/2" - 4"
VAST-20	20" x Custom	3 1/2" - 4 1/2"
VASA-12	12" x Custom	1 1/2" - 2 1/2"
VASA-16	16" x Custom	2 1/2" - 3 1/2"
VASA-18	18" x Custom	3 1/2" - 4"
VASA-20	20" x Custom	3 1/2" - 4 1/2"

1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Hydraulic Hose Covers

Custom Ordered
Color - Black



Chafe-Pro's Hydraulic Hose Covers are built to protect hoses from destruction caused by long exposure to UV radiation and the elements, from cutting and chafe abrasion. The covers are constructed with a layer of the same non-porous ballistic nylon that is used in the Commercial Series models. These covers provide additional protection from leaks, should they occur, acting as a barrier to the leak spray (mist) which could result in a fire if such a mist were to come in contact with an ignitable source. These units are made to custom lengths and are removable with our traditional hook & loop closure system. They are hemmed at each end for a zip-tie closure providing added security.

Model	Dimensions	Line Size
COV-05	5" W x Custom	Fits hoses 1/2" - 1" diameter
COV-06	6" W x Custom	Fits hoses 1" - 1 1/4" diameter
COV-08	8" W x Custom	Fits hoses 1 1/4" - 2" diameter
COV-09	9" W x Custom	Fits hoses 2" - 2 1/2" diameter
COV-11	11" W x Custom	Fits hoses 2 1/2" - 3" diameter
COV-13	13" W x Custom	Fits hoses 3" - 3 1/2" diameter
COV-15	15" W x Custom	Fits hoses 3 1/2" - 4" diameter

The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Shore Service Line Covers

Custom Ordered
Color - Black



Chafe-Pro's Shore Service Line Covers are designed to be installed on service lines and are made of the same materials used in the Commercial Series models. What makes this cover unique is the double closure system. The feature enables the user to add an additional temporary line such as a phone line, water hose, DSL cable, etc. without having to undo and/or remove the entire cover. These units are made to custom lengths and are removable with our traditional hook & loop closure system. They are hemmed at each end for a zip-tie closure providing added security.

Model	Dimensions	Line Size
HCOV-06	6" W x Custom	Fits diameter of 3/4" - 1 1/4"
HCOV-07	7" W x Custom	Fits diameter of 1" - 1 1/2"
HCOV-09	9" W x Custom	Fits diameter of 2" - 2 1/2"
HCOV-13	13" W x Custom	Fits diameter of 3" - 3 1/2"

1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Tubular Sleeves

Custom Ordered

Color - Black

Sold in 300' Rolls



Chafe-Pro's standard abrasion protective nylon tubular sleeves - the tubular textile sleeves manufactured from abrasion resistant Nylon - are our most economical option for managing, containing and protecting your product.

The applications for the standard sleeves include protection and containment for hose assemblies (Hose Sleeves, or Hose Covers, Abrasive Hose Protection), ropes and wire harnesses. Sleeving can be used over ropes or chains to prevent those items from causing damage.

Typical market applications include hose and wire harness protection for heavy equipment manufacturers, cable and hose protection and containment in the automobile industry, distributors, hose repair shops and rope companies.

Abrasion - Meets or exceeds ISO6985 abrasion standard

Approved by MSHA for use in underground mines, IC171/1

Melting Point - 374-410 F (210-220 C)

Material - Polyamide 6

Dimensional Stability - Great resistance to sun, atmospheric agents and aging

Toxicity - non-toxic

Chemical Compatibility:

Gasoline - Very good

Benzene - Very good

Oil - Very good

Acetone - Very good

Mineral and vegetable oil - Very good

Ether - Very good

Alcohols - Very good

Carbone tetrachloride - Very good

Diluted bases - Very good

Chlorine based solvents - Very good

Diluted acids - Good

Mildew and bacteria growth - Resists

Model	Dimensions
SL-108	0.68" - 0.80"
SL-116	0.85" - 0.98"
SL-128	1.05" - 1.18"
SL-204	1.15" - 1.28"
SL-208	1.42" - 1.51"
SL-216	1.36" - 1.49"
SL-224	1.56" - 1.68"
SL-300	1.75" - 1.87"
SL-328	2.31" - 2.43"
SL-516	3.31" - 3.43"

The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Classic Yacht Series

05 Model - 5" W x 14" L

06 Model - 6" W x 16" L

Barracuda - 8" W x 18" L

Color - Black

Sold in pairs



Chafe-Pro's Yacht Series chafe guards have been designed specifically for the recreational boater who use smaller diameter lines.

Model	Line Size
05-98Y-14	3/8" - 3/4"
06-98Y-16	3/8" - 1"
Barracuda	3/4" - 1 1/2"

The Barracuda model was designed specifically for use on the US Coast Guard 87 foot Protector-class and the old 82 foot Point-class cutters. The Barracuda differs in design from the 98Y series by its dimensions and the materials used. This model has an outer layer of black colored marine-grade polyester and an inner layer of our heavy-grade black nylon. The Barracuda is designed to withstand hurricane-force strain on the lines.



FJORD, Inc. guarantees that all Chafe-Pro® products will last longer and resist chafe better than all removable anti-chafe devices when tested under the same conditions.

1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

Mega-Yacht Series

08 Model - 8" Wide

12 Model - 12" Wide

Color - Black



Chafe-Pro's Mega-yacht Series evolved from the Commercial Series which have found success for over 20 years protecting the lines of the USCG & USN. The Mega-yacht Series have been designed to have an aesthetic look as they protect the lines of luxurious mega-yachts while still maintaining the durability Chafe-Pro customers have come to expect in the commercial industry. This series protects lines from 1" - 2 1/2" diameter with standard lengths up to 6'.

Custom lengths and widths are available upon request.

Model	Dimensions	Line Size
08-NH-02	8" x 2'	1" - 1 3/4"
08-NH-03	8" x 3'	1" - 1 3/4"
08-NH-04	8" x 4'	1" - 1 3/4"
08-NH-06	8" x 6'	1" - 1 3/4"
12-NH-03	12" x 3'	1 1/2" - 2 1/2"
12-NH-04	12" x 4'	1 1/2" - 2 1/2"
12-NH-06	12" x 6'	1 1/2" - 2 1/2"

FJORD, Inc. guarantees that all Chafe-Pro® products will last longer and resist chafe better than all removable anti-chafe devices when tested under the same conditions.

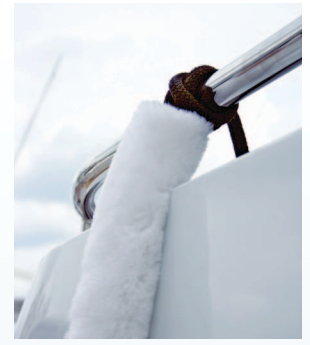
The First Name in Chafe Protection

www.ChafePro.com



WOOLLY

by Chafe-Pro®



Woolly by Chafe-Pro

04 Series

3/8" - 5/8" Diameter

05 Series

3/4" - 1" Diameter

06 Series

1" - 1 1/4" Diameter

08 Series

1 1/4" - 1 1/2" Diameter

Larger Diameters Available

Custom Lengths Available

Colors - White & Black



Made with 100% New Zealand sheepskin the **Woolly**® prevents fender and dock lines from scuffing paint or gel coat finishes. Installing in the same quick and easy fashion and incorporating the same hook & loop closure as the classic Chafe-Pro products, the Woolly can be installed or removed in a matter of seconds and binds securely to the line. Designed to match the elegance of the yachts they protect and built to fit lines from 3/8" to 1 1/2" diameter the Woolly is available in lengths of 18 inches to 6 feet and comes in white or black. Our proprietary color and tanning process guarantees our dyes will not fade or run even under the harshest conditions at sea.

Custom sizes and colors are available upon request.

The Woolly Conditioner is specially formulated to help preserve the Woolly sheep-skin from the harsh marine environments. Using a proprietary blend of mink and mineral seal oil, the Woolly Conditioner not only helps to preserve and extend the life of these leather units, it also serves as a water repellent, leather softener and conditioner.

Model	Dimensions
CPW-18-Single	4" x 18"
CPW-18-Pair	4" x 18"
CPW-30-Single	4" x 30"
CPW-30-Pair	4" x 30"
05-CPW-03	5" x 3'
05-CPW-04	5" x 4'
05-CPW-06	5" x 6'
06-CPW-03	6" x 3'
06-CPW-04	6" x 4'
06-CPW-06	6" x 6'
08-CPW-03	8" x 3'
08-CPW-04	8" x 4'
08-CPW-06	8" x 6'

Woolly Conditioner

Sold by the dozen



1-844-NO-CHAFE

www.ChafePro.com



Chafe-Pro®

Don't Dock Without It !

ScuffGuard™

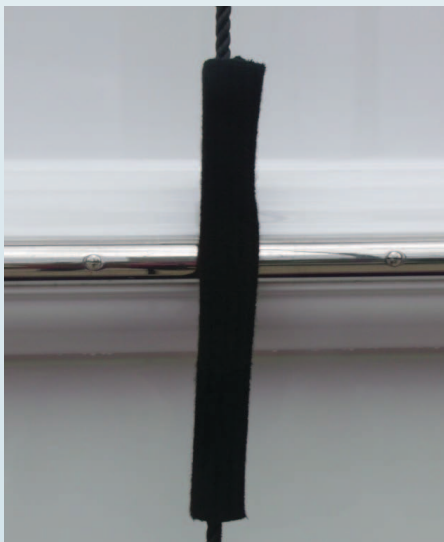
Fits Lines
3/8" - 3/4"

Colors - Navy Blue & Black

Sold in Pairs

Designed to fit lines 3/8" - 3/4" and is manufactured using a soft-loop acrylic blend, closed cell cushioning and hook & loop fastening. The ScuffGuard is UV, moisture and mold resistant, comes in stock lengths of 12, 18 and 30" and is offered in Royal Blue and Black.

Custom lengths and widths are available upon request.



Model	Dimensions	Line Size
SG-12-BL	5 1/2" W x 12" L	3/8" - 3/4"
SG-12-BK	5 1/2" W x 12" L	3/8" - 3/4"
SG-18-BL	5 1/2" W x 18" L	3/8" - 3/4"
SG-18-BK	5 1/2" W x 18" L	3/8" - 3/4"
SG-30-BL	5 1/2" W x 30" L	3/8" - 3/4"
SG-30-BK	5 1/2" W x 30" L	3/8" - 3/4"

The First Name in Chafe Protection

www.ChafePro.com



Chafe-Pro[®]

Don't Dock Without It !

Custom Work

We take pride in our ability to manufacture any custom chafe guards for any application. Chafe-Pro is regarded as the best chafing gear offered on the world market and we attribute that success to our customers; we listen to suggestions; many of which have been incorporated into the product line. Chafe-Pro's experienced design & manufacturing team has an excellent reputation for quickly responding to customers' requests for special applications. On this page are just some of our unique responses to our customers' unique requests.



Custom Sling Cover
Photo courtesy of SWOS



Custom Protection - Claw Lift
Photo courtesy of Versabar



Protection for Orion Project Recovery
Photos courtesy of NASA



Chafe-Pro[®]

Don't Dock Without It !

TAMS Project



“TAMS have used the Chafe-Pro product on a few different applications to date and have found it to be bullet proof. I was impressed with the application to a spliced eye and even more impressed at the snug fit, solid secur-ing hook and loop closure and after using the first could not believe its strength and overall resistance to wear and chafe. Also the application of handles on the outside of the rope eye, this is great as I have been present during injuries to hands and fingers from tensioned ropes on bollards.

We have used to date the chafe guard on 48mm grommet bridle for cyclone mooring to protect the rope from the UV, chafe, shackle snag pins and daily handling issues.

For extra chafe guard fitted to Turbo 75 which was passing through the staple of a tug vessel to act as a secondary protection, which could also be removed and used on the tugs mooring lines.

Lastly to date to fit to a 30mtr length of 120mm Nylon Superstrong. This line had been supplied with a Polyester braided guard, the style that is fitted during fabrication. This was a messy style of guard as its strands regularly collected rocks and snag points as it spanned over a limestone rock wall at a wharf edge. The decision to use the Chafe-Pro was my own after seeing the product at SWOS and I was pleased that I could send specific measurements and request extra hook and loop as required to ensure a snug fit for the guard. This guard effectively ensured the rope would not have to be changed out until the end of the job and it saved my client allot of time and money in not having to source a long lead time replacement line.

The Chafe-Pro guarded Nylon actually slipped between 2 limestone rocks of approx 3-4ft diameter so I halted the winch tensioning, we were not able to rectify the snag so I gave it a go and tensioned the winch up until the rope snagged under the rock managed to dislodge the limestone rock and catapult it over the edge into the water. I was concerned with the condition of the rope and guard but after inspection notice only the limestone dust on the Chafe-Pro fabric and no damage whatsoever to the heavy external webbing.

I could talk all day, but in summary the Chafe-Pro really is the best option for built to suit, application after fabri-cation and all problems solved chafe guard on the market.” - **TAMS Group, West Australia, June 2014**



Chafe-Pro®

Don't Dock Without It !

Testimonials

"We tried other chafing gear made from HMPE type materials and found them unsatisfactory for protecting our mooring lines from chafe. Our Chafe-Pro® units have lasted more than two years and still have not shown any signs of significant wear."

***Capt. J.P. Friedman, Master
F/V Pacific Breeze***

"My crew finds the use of Chafe-Pro® easy to install on our mooring lines. We have cruised extensively throughout the South Pacific islands this past year where many of our moorings were made to rough edged cement piers. We relied on Chafe-Pro® to protect our mooring lines - it never let us down."

***Capt. Al McClennaghan, Unlimited Master - Oceans
R/V Thompson***

"Over the past few months, we have used your Ship Tow units numerous times while towing ships and barges. We also used your Chafe-Pro® Commercial Grade units to protect our nylon anchor lines. During each use, the crew was able to apply the unit quickly and easily, without much effort or delay. The units are flexible enough for the crew to easily adjust its position along the line as needed. When the line was taken to the capstan, the unit accompanied the line around the capstan without jamming. The fabric of the unit held up very well during repeated use on rough surfaces. Seaward Services is very pleased with the quality of your product. The units have saved our equipment a significant amount of wear and tear."

***Capt. Gerold Cooper, Port Captain
Seaward Services Ocean Towing Operations***

"I think this is an excellent product which, when used properly, can save the user a tremendous amount of wear and tear & money."

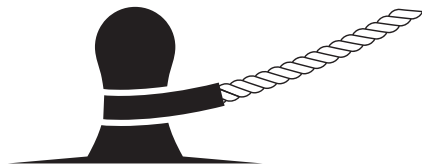
***Capt. G. Cooper Unlimited Master - Oceans
Tug Janet Catherine***

"We tried Chafe-Pro® in various applications and found them to be flexible, abrasion resistant, and easy to use...we found this to be an excellent product that conformed tightly to the bends and resisted chafe well."

Practical Sailor April 2009

"Gone through 2 hurricanes, Great on my 39ft sailboat. Have four and they went through Irene and Sandy without any indication of wear or tear. They fit both my diameter lines and are easily adjusted up or down on the lines."

***December 28, 2012
Steve K., St. Louis, MO, USA***



Chafe-Pro[®]

Don't Dock Without It !

1-844-NO-CHAFE
P.O. Box 823
Graham, NC 27253
www.ChafePro.com