

Knife Sheaths Using KYDEX® Thermoplastic Sheet

TB - 144

Advantages of KYDEX® Sheet Sheaths & Holsters

- Highly durable for continuous use
- Great color selection including custom color matching
- Easily molds to contours of the knife or gun
- Water, chemical, and stain resistant
- Can be remolded
- Easily cleaned off with household cleaners
- Can be used as a liner for leather sheaths and holsters

There are a number of different ways to construct a knife sheath or gun holster. Within this technical brief are some of the more common ideas in the construction of knife sheaths and gun holsters when using KYDEX sheet. It is generally used because the sheet is easily formed under the heat from a heat gun and it is also resistant to normal wear and tear from the knife blade. The most common thicknesses range from 1.52mm (0.060") to about 3.18mm (0.125").

Possible Tools for Sheath Construction

- Hair dryer or heat gun for heating KYDEX sheet
- Foam, neoprene, small towel, etc. to wrap around knife or gun before pressing sheet around knife or gun
- Masking tape to tape off towel, neoprene, etc.
- Sheath Press to form KYDEX sheet to the shape of the knife or gun
- Adhesive compatible with PVC (solvent cement, adhesive, hot gas weld)
- Rivet Press and rivets for seams of holster
- Drill and drill bits to pre-drill rivet holes
- Belt loop pre-molded or fabricated
- Screws to attach pre-molded belt loop to sheath or holster
- A type of saw to cut out the molded piece of KYDEX sheet
- Sandpaper or scotch brite pad to finish the sheath once constructed

Tips for Sheath or Holster Construction

- A 0.30m x 0.30m (1' x 1') sheet is a recommended size for making a sheath or holster
 - The sheet may be cut with a circular saw or band saw
- A heat gun is a much faster way to heat the KYDEX sheet, but with patience a hair dryer may be used.
 - It is important to keep the KYDEX sheet to about 166-193°C (330-380°F) while forming. The sheet will burn at a temperature greater than 204°C (400°F).
 - Cotton or heat-resistant gloves are recommended during the heating and forming.
 - Never use an open flame to heat KYDEX sheet because it will burn.
 - An area that is stress whitened may be reheated to bring the color back into the sheath being formed.
 - If a desired shape is not acquired, the KYDEX sheet may be reheated and reformed for desired results.
- To form the product, a sheath press is recommended when forming the KYDEX sheet to the knife/gun.
 - Sheath presses may be constructed out of wood & neoprene foam or may be purchased at www.knifekits.com.
 - A towel or neoprene can be wrapped around the blade to create space during molding so the knife/gun can be released from the sheath/holster and keep the blade from being scratched.
 - KYDEX sheet can be wrapped around the knife/gun like a common leather sheath/holster or be made into two pieces.

KYDEX, LLC

ISO 9001 and 14001 Certified

Customer Service

6685 Low St, Bloomsburg, PA 17815 USA
 Phone: 800.325.3133, +1.570.389.5810
 Outside the US: +1.570.389.5814
 Fax: 800.452.0155, +1.570.387.7786
 Email: info@kydex.com

Technical Service

Phone: 800.682.8758 ext. 581
 Fax: +1.570.387.8722
 Outside the US: +1.570.387.6997 ext. 581

www.kydex.com

Knife Sheaths Using KYDEX® Thermoplastic Sheet

TB - 144

Tips for Sheath or Holster Construction

- A band saw or another type of saw may be used to trim the edges of the formed KYDEX sheet.
 - Be careful to leave enough material to connect the edges of the sheath/holster for a strong bond by rivets and/or adhesive.
- Rivets are a good way to connect the edges of the knife sheath/gun holster.
 - A high strength adhesive is also recommended when using a bonding agent to connect seams of the sheath in conjunction with rivets. (see TB 103A)
- Leaving a small slot or hole at the bottom of the sheath/holster will allow for better drying when cleaning.
- Belt loops may be constructed with the extra material not used in the forming operation.
- Finishing of rough edges after sheath construction may be done with sandpaper, etc.

For supplies or more information, contact or visit the following websites:

Classic Knife Kits

Sales: 1.888.250.5650 (Toll Free)
Sales: 770.463.4881 (International)
Product Support: 740.965.9970
www.knifekits.com

Texas Knifemaker's Supply

Toll Free (Continental US) 888.461.8632 Orders Only
Information 713.461.8632
www.texasknife.com

Springfield Leather

Sales: 1.800.668.8518 (Toll Free)
Information: 417.881.0223
www.springfieldleather.com

KYDEX, LLC

ISO 9001 and 14001 Certified

Customer Service

6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Outside the US: +1.570.389.5814
Fax: 800.452.0155, +1.570.387.7786
Email: info@kydex.com

Technical Service

Phone: 800.682.8758 ext. 581
Fax: +1.570.387.8722
Outside the US: +1.570.387.6997 ext. 581

www.kydex.com

Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability of the accuracy of this information or the suitability of our products in any given situation. Users should conduct their own tests to determine the suitability of each product for their particular purposes. Data in the physical property table represents typical values and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal laboratory conditions. Right to change physical properties as a result of technical progress is reserved. THE PRODUCTS DISCUSSED ARE SOLD WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EITHER EXPRESSED OR IMPLIED, EXCEPT AS PROVIDED IN OUR STANDARD TERMS AND CONDITIONS OF SALE. Buyer assumes all responsibility for loss or damage arising from the handling and use of our products, whether done in accordance with directions or not. In no event shall the supplier or the manufacturer be liable for incidental or consequential damages. Also, statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. Consult local code and regulatory agencies for specific requirements regarding code compliance, transporting, processing, recycling and disposal of our product. Product not intended for use as a heat resistant surface. Texture, product grade and other conditions may cause variations in appearance.

This information supersedes all previously published data.