



## King Hy-Pact® FAQ

### What is King Hy-Pact®?

King Hy-Pact® is the super tough industrial polymer sheet that is environmentally stabilized with excellent physical properties. Tests have shown after 2,000 hours of UV exposure, King Hy-Pact® outperforms both UV stabilized HDPE and UHMW with superior toughness in wear resistance, flexibility and high-impact strength.

King Hy-Pact® has a clean white color with a smooth, non-skived finish for better material flow. King Hy-Pact® is produced in K-Stran™, our advanced proprietary manufacturing process of quality sheets with tight tolerances and custom widths up to 60". Applications include, but are not limited to, food processing chutes, star wheels, fabricated parts, snowplow blades and dock fenders. King Hy-Pact® is the smart choice for many high abuse applications requiring superior properties, outstanding flatness and a smooth surface while providing significant cost savings compared to UHMW.

### How does King Hy-Pact® compare to HDPE and UHMW?

Tests have shown after 2,000 hours of UV exposure, King Hy-Pact® outperforms both UV stabilized HDPE and UHMW with superior toughness in wear resistance, flexibility and high-impact strength. King Hy-Pact® is the smart choice for many high abuse applications requiring superior properties, outstanding flatness and a smooth surface while providing significant cost savings compared to UHMW.

QUV Accelerated Weathering Tester	King StarBoard® UV Protected		King Hy-Pact® UV Protected		UHMW UV Protected		ASTM
	Unexposed	2,000 hours of exposure	Unexposed	2,000 hours of exposure	Unexposed	2,000 hours of exposure	
Tensile @ yield 70 F (psi)	4,260	4,250	<b>4,100</b>	<b>4,100</b>	3,010	2,970	D638
Elongation @ yield 70 F (%)	9.2	9.1	<b>9.6</b>	<b>9.6</b>	16	3.2	D638
Tensile @ Break 70 F (psi)	690	680	<b>1,930</b>	<b>1,440</b>	No Break	2,940	D638
Elongation @ Break 70 F (%)	160	155	<b>260%</b>	<b>210%</b>	No Break	3.4%	D638
Taber Index	21	45	<b>5</b>	<b>12</b>	2	182	D4060
IZOD notch 70 F (ft lbs/sq in)	4.1	3.9	<b>16.6</b>	<b>15.7</b>	20.02	0.84	D256
Coefficient of Friction - Kinetic	0.0888	0.0888	<b>0.107</b>	<b>0.107</b>	0.129	0.129	D1894
Coefficient of Friction - Static	0.0832	0.0832	<b>0.102</b>	<b>0.102</b>	0.102	0.102	D1894



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## **How can the material be fabricated and finished?**

Use standard woodworking tools: table saws, table routers, drills, blades and bits. Carbide router bits with two to four flutes are recommended.

## **Can a CNC machine be used?**

Yes.

## **Will the material produce dust when fabricating?**

No, only small shavings that can be recycled.

## **Can glue or paint be used?**

No. Gluing is not recommended. Because King Hy-Pact® sheet products are designed to resist water and grime, they cannot be painted and use of adhesives is not recommended. Specialized welding equipment and rods designed for use with polymer sheets are available.

## **Does King Hy-Pact® Expand and Contract?**

Yes. A thermal expansion and contraction rate of one, thirty-second (1/32) of an inch for 40°F temperature change per linear foot.

## **What type of finish?**

King Hy-Pact® has a clean white color with a smooth, non-skived finish for better material flow.

## **What colors are available?**

King Hy-Pact® is available in white and in black.

## **What sizes are available?**

King Hy-Pact® standard sheet size is 48" x 120". Standard gauges are 1/8", 1/4", 3/8", 1/2", 3/4" and 1". Custom sheet sizes and gauges available upon request. Please call Customer Service at 941.493.5502.

## **What are the key properties of King Hy-Pact®?**

- UV Protection
- Wear Resistance
- Impact Resistance



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- Chemical Resistance
- Low Coefficient of Friction
- No Moisture Absorption

### **Why use King Hy-Pact®?**

King Hy-Pact® is the smart choice for many high abuse applications requiring superior properties, outstanding flatness and a smooth surface while providing significant cost savings.

### **Where is King Hy-Pact® used?**

King Hy-Pact® is a super tough industrial polymer utilized in food processing, packaging, handling and many more markets.

### **What are common applications?**

Applications for King Hy-Pact® include, but are not limited to food processing guides, star wheels, machine parts, snowplow blades, and dock fenders.

### **Is King Hy-Pact® FDA approved?**

Yes.

### **How does the environment affect King Hy-Pact®?**

King Hy-Pact® is environmentally stabilized and it will outlast outdoor UHMW applications.

### **What is the flammability of King Hy-Pact®?**

UL94 HB.

### **Can you add any additive to King Hy-Pact®?**

Yes. Upgrade to King MicroShield®, the Antimicrobial Polymer Sheet and/or Anti-Static.

### **Is King Hy-Pact® UV stable?**

Yes.