

Sheet: Recommended Xaloy® Screw and Barrel Solutions

Resin	Screw performance/design options			Base Material [Note 2]	Screw Cooling	Hardfacing options		Coating Options	Barrel Options	
	★★★	★★	★			★★★	★★		★★★	★★
ABS, vented	2-stage w/SB II	2-stage w/blister		4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
ABS, non-vented	Fusion™	EF w/SB	SS w/SB	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Acrylic	2-stage w/SB II			4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
HIPS	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Lexan® (PC), vented	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
Lexan®, non-vented	EF w/ SB II	SS w/SB II		4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
Nylon (PA, polyamide)	EF w/ SB II		SS	4140 HT or SM59	None	X-830	X-183	CP-O	X-800	X-102
PBT	EF w/ SB II									
PET	EF w/ SB II			4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
PC, polycarbonate- see Lexan										
PE										
HDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830		CP-O	X-800	
LDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
LLDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830		CP-O	X-800	
MDPE	Fusion™ (note 1)	EF w/NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
Polyamide (see Nylon)										
PP, non-vented	Fusion™ (note 1)	EF w/ NM	EF w/Spiral UCC	4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
PP, vented	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-1	X-800	X-102
PS (GPPS)	2-stage w/SB II	2-stage w/blister	2-stage	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102
PVC (pellet)										
CPVC	SS w/SB			Note 4	Note 5	X-183	X-830	CP-2	X-306	
Flexible PVC	EF w/SB II	EF w/Spiral UCC		4140 HT or SM59	Full length	X-183	X-830	CP-1	X-800	X102
Rigid PVC	SS w/SB			Note 4	Note 5	X-183	X-830	CP-2	X-306	
PUR (Polyurethane)	EF w/SB II	SS w/Spiral UCC		4140 HT or SM59	Feed	X-183	X-830	CP-1	X-800	X-102
Surlyn® ionomer	EF w/SB II	SS w/Spiral UCC	SS	4140 HT or SM59	Feed	X-830	X-183	CP-O	X-800	X-102

Other materials

Please contact your Xaloy representative for recommendations

KEY:

Performance ratings



★★★ Premium performance, our best solution
 ★★ Excellent balance of performance and cost
 ★ Good performance at economical cost

EF = [Efficient™ Barrier Screw](#)

NM = [Nano™-Mixer](#)

SB = StrataBlend® Mixer

SB II = [StrataBlend® II Mixer](#)

SS = Single-stage screw

Coatings: CP-O = Chrome plating is optional

CP-1 = Chrome-plated, thickness 0.001" (25 µm)

CP-2 = Chrome-plated, thickness 0.002" (51 µm)

More hot links: [X-830](#), [X-183](#), [X-800](#), [X-102](#), [X-306](#)

NOTES:

1. Fusion™ Screws must be 24:1 L/D or longer.
2. Any screw of 40 mm (1.575") diameter or smaller is made of CPM-9V.
3. When the X-830 screw flight hardsurfacing is used, then the X-800 barrel liner must be used.
4. Recommended materials for rigid PVC and CPVC extrusion screws are AISI 4140 or SM59 microalloy with chrome plating, or 17-4 stainless steel, which eliminates the need for chrome plating.
5. Screws for processing CPVC and rigid PVC need to be cored for cooling along their entire length and have removable offset noses. The removable noses are cored to within 1/2" (13 mm) from the very end and tapped with an NPT tap to attach a pipe fitting, so that isolated tip heating can be used.

