

Suggested Cut Settings for Various Materials on the KNK Force¹

These suggested settings are for initial test cut purposes. Other factors can influence settings such as dullness of the blade, condition of the mat, exposure to humidity, dye color, etc. Adjust settings, as needed.

BT – Blade Tension; P – Passes; SD – Start Depth; CD/ED: Cut Depth/End Depth; CS – Cut Speed

Unless otherwise noted under Comments - Up Speed = 40, Lift Speed = 40; Plunge Speed = 40; Blade Offset and Closed Path Overcut = recommendations from Sections 3.02.9 and 3.02.10

<u>Material</u>	<u>Color(s) Tested</u>	<u>Blade Type</u>	<u>BT</u>	<u>P</u>	<u>SD</u>	<u>CD / ED</u>	<u>CS</u>	<u>Other Comments</u>
Acetate - 5 mil Grafix	Clear	R	2	1		40	25	
Adhesive Foil - Cricut	Copper, Alum	R	1.5	1		25	25	
Aluminum 36 gauge	Aluminum	R	2.5	3	15	35	15	PS = 25; If not well adhered to mat, it will pick up the aluminum in corners
Art Paper - Borden & Riley #234 Paris Paper for Pens	White	R	2.5	1		90	25	Great paper for print & cuts
Balsa - 0.03" (0.75 mm)		B	1	2	25	50	15	Taped to an extra sticky mat; PS = 10
Balsa - 0.06" (1.5 mm)		B	1	3	20	75	10	Taped to an extra sticky mat; PS = 10
Balsa - 0.08" (2.0 mm)		B	1	5	15	100	10	Taped to an extra sticky mat; PS = 10
Candle Wax	Silver	R	1	1		12	15	Stockmar brand wax sheets, U.S. dealer is aToyGarden.com
Candle Wax - Rayher	Pale Green	R	0.5	1		20	15	Leave on backing sheet for cutting. Place in a freezer for 1 minute after cutting and before weeding
Candle Wax - Stockmar	Burgandy	R	0.5	1		35	15	Leave on backing sheet for cutting. Place in a freezer for 1 minute after cutting and before weeding
Cardstock - AC Textured 80lb	Hot Pink	R	2	2	70	70	25	Tendency to tear at corners, so 2 passes at ED 70 cleaner than 1 pass at higher CD
Cardstock - Bazzill Linen	Pink	R	2	2		80	25	
Cardstock - Bazzill Linen	Red	R	1.5	1		70	25	
Cardstock - Core'dinations Black Magic	Yellow	B	3.5	1		55	25	Painted' side down on mat. This prevents it from peeling at corners, since it is a very thin layer.
Cardstock - C&C Pastel Blush and Glitter Pastel Blush: 250 gsm		R	2	2		20	20	C&C: Create & Craft; sold in UK; cut with "good side" face down thus mirror images if needed; PS = 30
Cardstock - C&C Mirror Board: 250 gm	Gold mirror	R	2	1		60	20	C&C: Create & Craft; sold in UK

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Cardstock - C&C Pearlescent Bright Burst : 250 gsm	Dark pink and blue green	R	2	2		40	20	C&C: Create & Craft; sold in UK; cut with "good side" face down thus mirror images if needed; PS = 30
Cardstock - DCWV Metallic	Lavendar	R	3	1		90	25	
Cardstock - DCWV Patterned	Whimsical World	R	2	2	65	70	25	
Cardstock - Docrrafts Solid Premium: 216 gm	Varied	R	2	1		86	20	Sold in UK
Cardstock - First Edition: 216 gm	Premium Dyed Textured	R	2	1		86	20	Sold in UK
Cardstock - Fotokarton: 300 gm (sold in Europe)	Yellow	R	2	2	50	100	15	PS of 20
Cardstock - Georgia Pacific - 110lb	White	R	2	1		60	25	
Cardstock - K&Company Designer Paper	Ancestry.com	R	2.5	2	80	80	30	
Cardstock - My Mind's Eye Designer	My Girl	R	2.5	1		90	25	
Cardstock - Neenah 65lb	White	R	1	2	40	80	25	Alt: 1 pass at 120
Cardstock - Neenah 65lb	White	R	2	1		60	25	
Cardstock - Neenah 80lb	Solar White; smooth	R	2	2	50	50	25	2 passes at a lower CD gave cleaner cutting than 1 pass at a higher CD.
Cardstock - Neenah Classic Linen 80 lb Cover 216 g/m2	Solar White	R	2	1		90	25	All time favourite paper, been using and cutting since early 1998 (by hand at first)
Cardstock - Neena Exact Index 90lb / 163 g/m2	White	R	2.5	1		65	25	http://amzn.to/1PLQo1Y
Cardstock - Papermania		R	2	2		45	25	Sold in UK
Cardstock - Paper Studio	White, heavy wt, #227041	R	1.5	2		50	25	
Cardstock - Prismatics 85lb	Bazzill Light nautical blue	R	2	1		90	25	
Cardstock - Recollections 65 lb	Black	R	2	1		60	25	
Cardstock - Recollections 65 lb -Shimmer	White Gold	R	2	2		20	40	
Cardstock - Recollections Printed Cardstock	Cupcake Cuties	R	2.5	1		90	25	
Cardstock - Stampin Up	Real Red	R	2.5	2	70	70	30	

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Cardstock - Worldwin Cutmates	Candied Violets	R	2	1		60	25	
Cardstock - Worldwin Doublemates 90lb	Brown, red	R	2	1		70	40	
Cardstock - Worldwin Doublemates 90lb	Gold	R	3	1		90	25	
Cardstock - Worldwin Smooth & Silky	Pistachio	R	2	2	50	50	25	2 passes at a lower CD gave cleaner cutting than 1 pass at a higher CD.
Cardstock - Worldwin Treasures	Heirloom Dark 90#	R	3	1		70	25	
Cardstock ~ 90 lb (unknown brand)	Blue, Black, both w/white backing	R	2.5	2	90	90	25	This paper is fantastic for popup cards, place cards, etc. any project that want to stand.
Cardstock - Worldwin Smooth & Silky	Light Pretty Pink	R	2.5	1		90	25	Start and stop points visible with PS at 40 and CD at 80. Dropped PS to 30 and increased CD to 90 made a perfect cut
Chipboard - 0.02" Cereal Box	Corn Chex Box	R	3	2	100	110	15	Printed side face down; taped to mat with blue painter"s tape; Z axis origin set based on mat
Chipboard - 0.02" Cereal Box	Cracker box	B	2	1		120	15	Printed side face down; Z axis origin set based on mat
Chipboard - 0.02" Cereal Box	NesQuick Family Size	B	4	1		125	25	Printed side up
Chipboard - 0.02" White		B	3	2	130	170	20	White side down
Chipboard - 0.03"		B	2.5	2	120	140	25	Tried with the red blade, it required P=2 and BT= 4 and had rough outside corners. Blue blade cuts beautifully.
Chipboard - 0.055" - black		B	4	4	25	120	15	Cut relatively simple shapes with these settings.
Coated Cover: 18 pt Tango	White	R	1.5	3	60	180	25	PS = 20
Construction Paper - Creatology	Pink	R	1	1		35	20	
Construction Paper - Pacon Tru-Ray	Yellow	R	1	2	20	20	20	Did not cut as cleanly as the Creatology brand
Contact Paper	White	R	1	1		12	25	PS = 25
Craft Foam - 0.07"	Orange	B	1	1		40	25	Used a BO = 0.002 due to thickness of the material.
Craft Foam - Foamiran		R	2	1		50	20	
Craft Plastic 0.040" PET-G	Clear	B	4.5	5	85	125	25	

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Double Sided Adhesive Sheets - Sookwang		R	2	2	5	5	25	Cuts through the white backing sheet and the adhesive, leaving the brown backing sheet intact.
Double Sided Adhesive Sheets - Sookwang		R	2	2	5	25	25	Cuts through both top and bottom sheets and the adhesive.
Duck Tape	Mustache	R	2	1		70	25	
Dura-Lar - 5 mil	Mirrored on both sides	R	1	2	100	200	25	PS = 20
Fabric - Cotton (quilting)	Patterned	Y	1	2	20	40	25	
Fabric - Cotton (quilting)	White (Kona)	Y	2.5	2	10	10	25	
Fabric - Cork		Y	1	2	25	55	20	PS = 20; Material available at embroiderygarden.com
Fabric - Denim		Y	3	2	15	15	25	Stonewash, medium weight, very sticky mat
Fabric - Twill		Y	2.5	2	15	15	25	
Felt - 35%Wool/Dacron Blend		Y	1	3	30	90	25	
Felt - Stiffened		Y	1	3	20	60	25	PS = 20
Foam Sheets - 1mm	CraftersSquare - Blue	R	2	2	50	70	25	
Foil	Your Story	R	2	1		20	25	Colored side down
Foil Board, Grafix Brand	Red, Blue, Green, Gold, Silver	R	2	1		90	30	color side up
Freezer Paper - Reynolds		R	1	1		7	25	mat sprayed with 404 ruler grip adhesive
Glitter Cardstock (chipboard wt) - Fabrique	Red	R	3	2	47	95	20	PS = 30 This is sold at Joann's and is 0.023" thick
Glitter Paper (chipboard wt)	American Crafts	R	5	2	70	90	20	PS = 20
Grungepaper, Tim Holtz Brand		R	2.5	2	40	50	25	With these settings - it slightly marked the mat but didn't cut it
HTV - Cricut Glitter Iron-On (on mat)	White	R	1.5	1		35	25	
HTV - Marea Premium	Black	R	1.5	1		30	25	Slight cut lines on backing but weeded easily

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HTV - Premium Plus		R	1	1		20	25	
HTV - Siser EasyWeed direct from Roll	See Comments	R	2	1		10	40	Colors: Black, White, Orange, Dark Green, Navy Blue, Royal Blue, Red, Maroon, Gold
HTV - Siser EasyWeed on the mat	See Comments	R	2	1		3	40	Colors: Black, White, Orange, Dark Green, Navy Blue, Royal Blue, Red, Maroon, Gold
HTV-DecoSparkle	Spectrum	R	1	2	40	40	30	
HTV-Glitterflex Ultra- on the mat	Silver	R	1.75	1		70	25	Cuts beautifully!
Iron-On Foil Sheets, Jean Trix; June Tailor Brand	Silver	R	3	1		60	25	Similar to HTV style but is suppose to be "cut through" the backing with scissors and then adhered; These settings "cut through"
Iron-On Glitter Sheets, Jean Trix; June Tailor Brand	Teal, Gold	R	4	2	160	180	30	Similar to HTV style but is suppose to be "cut through" the backing with scissors and then adhered; These settings "cut through"
Iron-On Hologram Sheets, Jean Trix; June Tailor Brand	Red, Silver	R	2.5	1		115	30	Similar to HTV style but is suppose to be "cut through" the backing with scissors and then adhered; These settings "cut through"
Iron-On Vinyl: See HTV								
Label Sheets - LD Glossy Inkjet Photo Sticker	White	R	1.5	1		45	20	
Labels - Avery Paper	White	R	2	1		18	25	
Laminator Pouch	Your Story	R	2	1		20	25	Not heated
Leather - artific.	White	Y	2.5	2	15	15	25	Cuts like butter!
Leather - 0.065" (1.6 mm)	Dk Brown	B	1.5	3	20	60	15	PS = 10; Applied Contact shelf liner on the back to protect the mat. The leather was purchased at Hobby Lobby.
Magnet - 0.035"	Sticky backed	B	4	2	130	140	25	Magnet side up
Magnetic Vent Cover - 0.22mm	Home Depot	R	3	2	70	120	20	
Magnetic Vent Cover w/ chipboard - 0.66mm	Dollar Tree ("as seen on TV")	R	5	4	70	110	20	Black (magnetic) side down; PS = 20
Magnet - 1 mm - 0.04"	Sticky backed	B	4	3	90	140	20	
Metallic Film, Lightweight, Adhesive-backed - Graftix Brand	Gold, Silver	R	1	1		50	15	Very thin metallic film with card backing; this cuts film but not through the backing
Mylar - 0.005"		R	2.5	1		50	25	PS of 20

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Mylar - 0.007"	Clear	R	3	2	75	75	30	Or use BT = 4, P = 1, SD = 90
Mylar - 0.0075 (from KNK USA)	Clear	R	4	2	80	80	30	
Mylar - 0.010" transparent	Clear	R	4.5	3	50	65	25	
Oil Board	Beige	R	2.5	2	90	90	25	Didn't cut through on single pass, cut again, and perfect!
Paper - Copy/Printer HP 20lb	White	R	1	1		18	25	
Paper - Copy/Printer Georgia Pacific 20lb	Red	R	1	1		70	40	
Paper - Drawing - 70 lb	Extra white sulfite	R	2.5	1		20	23	
Paper - Patterned - heavy wt	Pads from Michaels	R	2	1		70	25	
Paper - Testors Decal Paper	White	R	1	1		18	25	
Paper - Tracing - Mead Academie	Transparent; 0.003"	R	1	1		35	25	Great substitute for cutting tissue paper
PET-G Plastic: see Craft Plastic								
Photo Paper - HP 66lb		R	2	2		20	20	
Plastic File Folders		R	4	1		95	25	Requires an extra sticky mat to stabilize the plastic
Plastic File Folders - Staples 8 mil	Transparent purple	R	4	1		70	25	Requires an extra sticky mat to stabilize the plastic
Plastic Sheets, Clear-Lay Colors Translucent; Graftix Brand	Red, Blue, Green, Yellow	R	2	1		80	30	Package with Stained Glass and Clear-Lay Colors Translucent Plastic Sheets
Posterboard	Orange	B	2	1		95	25	Poster board can vary in thickness by quite a bit. Expect variations in settings and 2 passes will often be advisable.
Posterboard	Orange, red, black,	R	1	2	30 - 55	60 - 110	25	Poster board can vary in both thickness and density. Start with conservative settings and move up until a clean cut is attained. May require even higher SD/ED.
Rhinestone- Hartco 425 -w/o the mat	Green	B	3	2	80	80	25	Cut clean; slight lines in sheet, weeded well when pressed to sticky mat.
Rhinestone-Hartco 425-on the mat	Green	B	3	2	50	50	25	Removed sheet before cutting - pressed sticky side to sticky mat. Weeded easily
Rhinestone-Rock It-on the mat	Blue	B	2	2	50	50	25	Removed sheet before cutting - pressed sticky side to sticky mat. Weeded easily

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Rhinestone-Rock It-w/o the mat	Blue	B	3	2	60	60	25	Tiny lines in the backing sheet but circles were perfectly round and pattern weeded easily
Rubber-Fiber Gasket - 0.031"		B	4	3	50	160	25	
Shelf Liner: Con-Tact Quick Cover	Clear	R	1	1		10	20	Taped to mat as backing doesn't adhere well.
Shrink Film - Grafix - Sanded		R	4.5	1		50	23	
Shrinky Dink - Frost	Frost	R	2	2	45	55	40	
Stained Glass Plastic Sheets, Grafix .010" thick	Stained Glass	R	2	2	90	90	30	Package with Stained Glass and Clear-Lay Colors Translucent Plastic Sheets
Stamp Rubber - from Silhouette	Clear	B	1	1		15	15	Rubber placed on top of Silhouette stamp mat on top of Force mat
Stencil Board		B	3.5	1		60	30	
Stencil Film, Blue - Grafix Brand; Heavyweight	Blue Film	R	3	2	80	80	20	
Sticky Flock - on the mat		B	2	2	40	40	25	Backing sheet off, pressed to mat
Styrene - 0.03" sign blank	Green and Pink	R	3.5	3	120	160	30	This cut through the media and let you then "press and pop" the cut out. It is from Hillman Group and sold at Lowes in sign blanks
Tint Vinyl Film - self adhesive	Red	R	0.5	1		7	25	Sold by F&D LED Lights on Amazon
Tyvek mailer	White	R	2	1		80	25	
Vellum	Translucent	R	2	1		20	25	
Vellum - .0025" - Helix Technical	Translucent	R	1	1		30	25	100% cotton
Vellum - 0.003" - Worldwind	Grape	R	2	1		20	25	
Vellum - 0.0035	Lt. Yellow	R	2	1		20	30	
Vellum - 0.004"	Teal	R	2	1		25	25	
Vellum - 0.004" - The Paper Company	Translucent	R	2	1		25	25	
Vellum - 0.006"	Translucent	R	3	1		45	25	
Vellum - Core'dinations 0.005"	Translucent	R	2	1		20	30	

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Vinyl - 12 gauge 100% PVC	Clear	R	2	2	20	25	25	Purchased from Joann.com
Vinyl - 16 gauge 100% PVC	Clear	R	3	2	15	30	20	Purchased from Joann.com
Vinyl - Cricut (standard)	White, Red, Grey	R	1	1		15	25	
Vinyl - Decal - on the mat	Mactac red	R	1	1		20	25	
Vinyl - Decal - on the mat	Generic - Black	R	2	1		30	25	
Vinyl - Decal - w/o the mat	Mactac red	R	1	1		15	25	
Vinyl - Glitter	Cricut, gold	R	1	1		20	25	
Vinyl - Grafix Cling Vinyl	Clear	R	1	2	10	10	25	PS = 30
Vinyl - Intermediate Cal - with the mat	Oracal 651 - see Comments	R	1	1		10	25	Scraps on the KNK Mat. Colors tested: White, Orange, Lt Green, Dark Green, Royal Blue, Black
Vinyl - Intermediate Cal- no mat - direct from the roll	Oracal 651 - see Comments	R	1	1		15	25	Direct from a roll. Colors tested: White, Orange, Lt Green, Dark Green, Royal Blue, Black
Vinyl - Iron-on: See HTV								
Vinyl - Metal Fx	Contact, silver	R	1	1		20	25	
Vinyl - Premium	Oracal 951	R	1	1		20	25	
Vinyl - Printable - on the mat	White	R	1	1		25	25	
Vinyl - Printable - w/o the mat	White	R	1	1		25	25	
Vinyl - Wall - on the mat	Oracal 631 - Green, Blue	R	1	1		15	25	
Vinyl - Wall - on the mat	Oracal 631 - Brown	R	2	1		20	25	
Vinyl - Wall - w/o the mat	Oracal 631 - Brown	R	2	1		18	25	
Vinyl - Wall - w/o the mat	Oracal 631 - Yellow	R	1	1		25	25	Cut intricate design very clean.
Wax Paper		R	0.5	1		30	20	
Wood Veneer - 0.015"	Oak, Walnut	R	1.5	5	50	250	25	PS = 10; Used 5 passes so that a higher speed could be used