



# Secondary Release Liners

4987 • 4988 • 4994 • 4997 • 4998 • 4999 • 5002 • 5002D  
5051

**Technical Data**

**June 2023**

**Product Description** 3M™ Secondary Liners are available in a variety of constructions ranging from silicone coated densified kraft, polycoated paper and polyester liners. Some liners are available either silicone coated one side or both sides. Please see the chart for additional information.

## Secondary Liner Construction

3M Liner Number	Material / Color	Thickness = mils (Tolerance)	Release Coating 1 or 2 sides	Printable
4987	HDPE / Clear	3.0 (2.6 – 3.4)	2	No
4988	85# PCK (polycoated kraft)	6.4 (6.05 – 6.75)	1	Yes
4994	55# DK (densified kraft) white	3.2 (3.05 – 3.35)	2 outside = low; inside = medium	No
4997	70# DK (densified kraft)	4.0 (3.5 – 4.7)	1	No
4998	58# PCK (polycoated kraft)	4.2 (3.85 – 4.55)	2 Matte = low; gloss = medium	No
4999	55# DK (densified kraft)	3.2 (3.05 – 3.35)	1	Yes
5002	Polyester / Clear	1.97 (1.91 – 2.03)	1	No
5002D	Polyester / Clear	1.97 (1.91 – 2.03)	2	No
5051	58# PCK (polycoated kraft)	4.2 (3.85 – 4.55)	1	Yes

Always test liners by bonding a single coated tape to each side to determine low vs. medium release side in case material has been re-slit and sides have been reversed.

Chart is for reference purposes only. Testing with the actual adhesive and liner is highly recommended.

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3M™ Secondary Release Liners: Liner Release Data (grams/inch)																												
Version 2022		Liner #	4987		4988		4994 (outside)		4994 (inside)		4997		4998 (outside)		4998 (inside)		4999		5002		5002D (outside)		5002D (inside)		5051			
		Liner Description	3.0 mil HDPE Film		83# Polycoated Kraft		55# Densified Kraft (Easy Side)		55# Densified Kraft (Tight Side)		70# Flatstock		58# Polycoated Kraft		58# Polycoated Kraft		55# Densified Kraft		1.97 mil Polyester Film		1.97 mil Polyester Film (Tight Side)		1.97 mil Polyester Film (Easy Side)		58# Polycoated Kraft			
			Coated 1 side		Coated 1 side		Coated 2 sides		Coated 2 sides		Coated 1 side		Coated 2 sides		Coated 2 sides		Coated 1 side		Coated 1 side		Coated 2 sides		Coated 2 sides		Coated 1 side			
		Liner Thickness (mil)	3.0 mil (0.07 mm)		6.4 mil (0.16 mm)		3.2 mil (0.08 mm)		3.2 mil (0.08 mm)		4.0 mil (0.10 mm)		4.2 mil (0.11 mm)		4.2 mil (0.11 mm)		3.2 mil (0.08 mm)		1.97 mil (0.05 mm)		1.97 mil (0.05 mm)		1.97 mil (0.05 mm)		4.2 mil (0.11 mm)			
Product Number	Adhesive Thickness (mil)	Adh. #	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C	3 day Room Temp	3 day 158°F / 70°C
965	2	300	ND	ND	15	21	4	14	10	20	7	34	7	ATTL	8	16	7	23	12	17	10	17	9	16	5	20		
966	2	300	ND	ND	15	11	4	7	14	28	7	11	5	7	8	8	9	20	10	10	9	9	8	7	4	9		
946P	1	300	ND	ND	3	8	3	7	6	24	5	7	4	4	5	4	4	5	24	7	8	5	5	5	2	9		
9462P	2	300	ND	ND	15	13	4	8	11	13	6	11	8	8	8	5	10	ATTL	10	ATTL	9	10	8	9	4	10		
9082/9082LV	2	304HT	ND	ND	28	23	4	8	12	22	9	17	10	13	10	19	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	11	10		
9082/9082LV	5	304HT	ND	ND	ATTL	ATTL	9	13	22	ATTL	19	27	10	19	20	17	9	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	11	10		
F9465PC	2	304MP VHB	ND	ND	16	12	4	6	10	25	3	14	7	8	9	6	3	25	12	13	8	9	8	9	5	8		
F9473PC	10	304MP VHB	ND	ND	26	32	13	16	20	37	24	36	22	20	20	13	17	23	18	19	25	23	19	16	12	16		
4874P	3	205MP	ND	ND	9	9	4	5	10	19	9	16	9	9	10	8	11	25	10	13	10	9	9	6	5	9		
4884P	5	205MP	ND	ND	33	20	6	8	9	18	19	22	14	12	14	11	14	14	14	14	14	14	14	11	9	10		
9902	2	320	ND	ND	20	14	5	6	15	23	10	15	8	8	11	8	10	21	12	12	10	9	8	6	9			
9905	5	320	ND	ND	32	20	7	7	22	31	20	28	10	10	19	10	17	30	15	16	14	13	12	9	11			
9471/927	2	300	ND	ND	ATTL	ATTL	4	8	17	19	10	12	8	9	15	12	11	15	10	18	ATTL	ATTL	ATTL	ATTL	7	9		
9472/950	5	300	ND	ND	ATTL	ATTL	7	19	25	15	15	23	18	20	22	20	25	15	24	20	38	ATTL	ATTL	ATTL	10	14		
9458	1	300	ND	ND	ATTL	ATTL	8	9	4	12	9	9	8	8	10	11	11	8	9	7	ATTL	ATTL	ATTL	ATTL	6	7		
9472LE	5	300LSE	ND	ND	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	28	37	50	30	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	23	20	26	
6035PC	5	300MP	ND	ND	49	34	12	10	ATTL	ATTL	ATTL	24	23	26	27	ATTL	ATTL	ATTL	ATTL	ATTL	20	21	17	20	14	20		
9772NL	2	300MP	ND	ND	63	ATTL	ATTL	ATTL	ATTL	ATTL	16	16	21	11	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	9	11		
9779NL	5	300MP	ND	ND	ATTL	ATTL	9	18	21	ATTL	19	ATTL	9	15	13	13	23	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	9	13		
9828HL	4 DC	340	ND	ND	35	20	5	11	17	19	12	17	10	14	11	12	12	19	7	10	12	12	11	13	8	12		
9442	2	350	ND	ND	3	ATTL	ND	9	8	ATTL	6	9	6	8	8	8	3	6	8	ATTL	ATTL	ATTL	ATTL	ATTL	11	7		
9485EK	5	350	ND	ND	47	39	12	16	19	20	45	20	30	41	18	23	28	12	14	31	38	37	44	35	31	20	19	
9626	2	360	ND	ND	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	
9629	4 DC	360	ND	ND	49	28	14	20	28	27	30	14	10	22	14	30	44	25	22	21	20	16	16	12	13			
9088	8.3 DC	375	ND	ND	96	59	12	21	68	ATTL	30	38	18	20	33	20	61	ATTL	42	49	44	47	31	29	16	24		
9088FL	8.3 DC	375	ND	ND	93	62	16	24	39	77	35	44	22	22	26	19	38	91	28	34	35	27	19	23	16	21		
9457	1	400	ND	ND	ATTL	ATTL	3	5	9	19	6	9	5	6	7	7	8	14	ATTL	ATTL	ATTL	ATTL	ATTL	8	4	5		
F9755PC	5	420	ND	ND	51	44	23	ATTL	ATTL	ATTL	47	69	36	21	22	21	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	12	27		
9497	2	430	ND	ND	11	11	1	3	4	10	4	5	5	8	6	4	3	5	12	18	22	20	14	11	3	6		
9851	3.5 DC	900R	ND	ND	36	24	21	14	25	20	19	19	19	19	19	19	27	19	4	20	16	25	16	23	11	13		
F9465PC	2	Plasticizer Resistant	ND	ND	ATTL	ATTL	6	7	19	12	12	21	16	19	13	21	12	21	12	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	
9902	5	500VHB	ND	ND	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	ATTL	
4952	45	VHB LSE	ND	ND	42	38	4	5	5	41	10	11	13	19	11	13	12	8	10	10	13	11	11	9	8	8		
55590K	5	Specialty	ND	ND	26	26	10	16	19	26	19	22	9	11	15	14	12	26	10	12	ATTL	ATTL	ATTL	ATTL	5	11		
VHB FOAM TAPES																												
4611	45	VHB G-P	ND	ND	41	37	9	6	17	12	28	17	19	20	19	17	14	3	5	21	18	19	19	24	14	5		
4941	45	VHB M-P	ND	ND	47	49	6	11	13	18	17	29	17	32	15	16	15	16	8	11	15	16	16	20	7	10		
4960	45	VHB G-P	ND	ND	42	49	7	11	21	42	22	22	19	19	ND	ND	24	31	8	8	11	12	11	13	5	5		
5925	25	VHB Modified	ND	ND	44	47	6	9	10	16	16	23	14	28	21	34	9	17	15	24	20	33	32	25	8	11		
5992	45	VHB Modified	ND	ND	45	49	10	10	4	20	13	28	16	41	6	15	8	27	7	11	13	16	12	16	5	10		
4951	45	VHB Low Temp Apply	ND	ND	38	40	6	10	13	25	17	21	11	19	22	14	13	12	18	15	14	16	17	16	17	11		
4952	45	VHB LSE	ND	ND	42	38	4	5	5	41	10	11	13	19	11	13	12	8	10	10	13	11	11	9	8	8		
RP45	45	VHB RP M-P	ND	ND	43	31	6	10	16	27	16	25	11	19	17	15	13	24	6	9	14	16	13	19	7	16		

Liner release test is 90 inches/minute rate of peel

DC = Double coated tape product with polyester or tissue carrier

When adding a secondary release liner to an adhesive, the secondary release liner will have a lower release than the original manufactured liner release. If the original release liner needs to be removed After a secondary release liner is laminated in, the secondary liner release must be higher than the original liner release.

ATTL
ND

- Liner release values increase over 100% with heat (USE CAUTION)
- Liner release values are over 50 grams / inch or liner confusion occurs (NOT RECOMMENDED)
- Adhesive transferred to Secondary Liner / Liner Confusion (NOT RECOMMENDED)
- No Data Available

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Available Sizes:

3M Liner Number	Minimum Width (inches)	Maximum Width (inches)	Standard Length (yards)
4987	3	50	360
4988	3	50	360
4994	1	54	180
4997	3	48	360
4998	3	50	360
4999	3	54	360
5002	3	54	360
5002D	3	54	360
5051	3	48	360

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## Typical Physical Properties and Performance Characteristics

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

When a 3M secondary liner is added to a pressure sensitive adhesive, in most cases the secondary liner will have lower liner release values than the original or primary liner as in most cases the adhesive will want to stay with the primary liner upon which it was manufactured. The chart on the preceding pages is for reference purposes only to provide some degree of information about the liner release values which may be expected when a given secondary liner is laminated to a selected adhesive family.

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