



adhesives, sealants & coatings for harsh environments

BONiT Adhesive Lapshear Test Matrix

Substrate #1	Substrate #2	Primer	Adhesive	No. Primer Coats	Cure	Peak Stress PSI	Hi/Lo Peak Stress PSI	Std Dev PSI	Strain Pk Ld %	Energy Pk Load In-Lb	Mean Break Stress PSI	Break Elog %	Mean Yield Stress PSI	Yield Std Dev PSI	Yield StDv % of Mean	Yield Elog %	Modulus
UHMW	UHMW	A-3	B-5	3	280	590	610/562	23.1	5.39	18.92	589	5.4	578	35.8	6.2%	5.2	16367
UHMW	UHMW	A-3	B-5	4	200	533	595/476	44.1	4.73	15.78	531	4.8	517	51.8	10.0%	4.4	15855
UHMW	UHMW	A-3	B-5	4	200	489	560/466	40.3	3.77	11.76	484	3.9	478	39.1	8.2%	3.6	17413
UHMW	UHMW	A-32	B-5	1	200	512	566/476	36.9	4.95	16.38	460	4.6	494	33.9	6.9%	4.7	13795
UHMW	UHMW	A-4X1	B-5	1	280	551	574/530	23.5	5.02	17.17	550	5.1	529	34.8	6.6%	4.5	16219
UHMW	UHMW	A-4X3	B-5	1	280	553	581/506	33.6	5	16.17	551	5	548	29.4	5.4%	4.9	16656
UHMW	UHMW	A-4X3	B-5	1	200	487	534/452	35	4.79	15.33	487	4.8	455	29.8	6.5%	4.1	14153
UHMW	UHMW	---	B-42	0	150	312	312/312	0	3.16	5.81	307	3.3	308	0	0	2.7	14184
UHMW	UHMW	---	B-93	0	150	233	233/232	0.8	2.25	3.24	233	2.3	225	10.8	4.8%	2.1	13459
UHMW	UHMW	---	B-45TH	0	Amb	283	308/246	27	2.2	3.69	282	2.2	279	28	10.0%	2.1	15760
UHMW	UHMW	---	B-45TH	0	150	273	325/246	30.2	2.38	4.1	273	2.4	266	35.4	13.3%	2.3	14457
UHMW	UHMW	---	B-93	0	150	163	160/163	5	---	---	163	---	---	---	---	---	---
UHMW	UHMW	---	B-93	0	150	177	177/177	0	---	---	177	---	---	---	---	---	---
UHMW	Steel	---	B-45TH	0	Amb	361	401/326	31	1.68	3.7	361	1.7	361	31	8.6%	1.7	27291
UHMW	Steel	---	B-45TH	0	150	424	484/364	50	1.57	3.7	424	1.6	424	50	11.8%	1.6	33556
UHMW	4130	A-3	B-5	2	200	859	898/843		4.66	26.37	859	4.7	859			4.7	33648
UHMW	SS	A-3	B-5	2	200	623	775/439	125	3.15	14.11	621	3.2	617	135.8	22.0%	3.1	30658
HDPE	HDPE	A-3	B-5	2	200	490	553/382	---	---	---	---	---	---	---	---	---	---
HDPE	HDPE	A-3	B-5	2	200	568	592/536	26	4.57	17.56	558	4.6	563	35	6.2%	4.5	17833
HDPE	HDPE	A-3	B-5	2	200	443	465/422	30.5	2.74	8.89	443	2.7	434	16.7	3.8%	2.6	22314
HDPE	HDPE	A-3	B-2	1	200	423	459/401	18	---	---	418	---	---	---	---	---	---
HDPE	HDPE	A-3	B-2	1	200	432	456/386	28	---	---	428	---	---	---	---	---	---
HDPE	HDPE	A-3	B-2	1	200	483	503/457	19	---	---	478	---	---	---	---	---	---
HDPE	HDPE	---	B-42	0	150	295	299/290	4.9	1.65	2.96	290	1.7	295	4.9	1.7%	1.7	22882
HDPE	HDPE	A-3	B-42	2	150	258	292/224	48.8	1.61	2.63	256	1.7	258	48.8	18.9%	1.6	20366
HDPE	HDPE	A-3	B-1	1	150	309	356/263	27	---	---	309	---	---	---	---	---	---

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CPVC	HDPE	A-3	B-5	2	200	560	601/518	58	---	---	547	---	560	6.7	1.2%	6.7	13875
PPS	SS	---	B-45TH	0	150	812	812/812	0	1.05	4.61	813	1	813	0	0	1	82478
PPS	SS	---	B-45TH	0	Amb	492	492/492	0	0.77	2.25	490	0.8	492	0	0	0.8	77347
PP	4130	A-3	B-5	2	200	543	580/506	52.6	1.12	3.95	543	1.1	543	52.6	9.7%	1.1	57741
Acetal	Acetal	A-3	B-5	1	200	625	671/594	40	---	---	617	---	---	---	---	---	---
Acetal	Acetal	A-3	B-45TH	1	150	410	449/348	54	1.77	4.68	410	1.8	387	35	9.0%	1.6	26506
Acetal	Acetal	FLM	B-45TH	0	150	624	726/578	69	2.71	10.37	624	2.7	575	57	9.9%	2.4	24201
MDPE	SS	A-3	B-5	1	200	541	589/493	68	---	---	541	---	---	---	---	---	---
ABS	PVC	A-4X1	B-93	2	Amb	988	1046/915	50.2	3.61	20.2	975	3.7	975	76.5	7.8%	3.5	32231
ABS	PVC	---	B-45TH	0	150	677	677/677	0	2.68	10.39	676	2.8	677	0	0	2.8	27247
PVDF	PVDF	A-3	B-5	2	200	888	888/888	0	3.7	26.23	887.8	3.7	888	0	0.0%	3.7	27698
Nylon 66	Nylon 66	A-3	B-5	2	200	637	722/553	---	---	---	716	---	---	---	---	---	---
Ti	Glass	A-3	B-1	1	150	958	958/958	0	---	---	942	---	---	---	---	---	---
NiCu	Glass	A-3	B-1	1	150	873	873/873	0	---	---	873	---	---	---	---	---	---
NiCu	NiCu	---	B-1	0	150	1499	1538/1447	47	---	---	1495	---	---	---	---	---	---
PET	PET	A-43	B-45TH	1	150	983.4	893/1071	89	2.99	17.28	983	3	924	36.0	3.9%	3.7	35979
PET	PET	---	B-45TH	0	150	892	8.02/952	80	3.03	19.13	891	3.1	840	71.8	8.5%	2.7	33862
Ultem 1000	SS	---	B-45TH	0	150	444	519/371	64	2.38	5.78	440	2.5	444	64	14.4%	2	37300
Ultem 1000	SS	A-43	B-45TH	1	150	764	908/628	122	2.67	11.6	762	2.4	879	111	12.6%	2.2	44809