

PVC Sheet Technical Data Sheet

Rigid PVC Sheet for Card, Printing, Stationery, Forming, Packaging and Industrial Applications

PVC Sheet is a rigid thermoplastic sheet platform used for card production, playing cards, offset printing, name plates, stationery, forming, blister packaging and selected industrial applications.



Product Selection Guide

Application	Recommended Grade	Key Review Points
Credit / IC / ID Cards	Credit Card Grade	Printability, lamination stability, dimensional stability, heavy metal reference
Playing / Game Cards	Trump Card Grade	Impact strength, printability, cutting and handling stability
Pharmaceutical / Blister Packaging	Clear / Forming Grade by project	Transparency, forming behavior, compliance documents
Offset Printing	Offset Clear	Surface quality, transparency, print stability
File Covers / Stationery	File Clear / File Blue Clear / File Sky Blue	Transparency, color, flexibility, shrinkage
General Forming / Industrial	General Clear / Low-Whitening Grades	Formability, Vicat, HDT, shrinkage

Compliance Resources

Resource	Summary	Use
Heavy Metal Compliance Reference	Pb, Cd, Hg and Cr6+ reference reports available	Customer qualification and restricted substance review
UL94 V-0 Material Reference	Selected PVC sheet material designations have UL94 V-0 reference	Flame class review by grade and thickness
MSDS	Material Safety Data Sheet available upon request	Safety and regulatory document review

Test Methods & Units

Property	Unit	Test Method
Tensile Strength	kg/cm2	ASTM D638
Elongation	%	ASTM D638
Tear Strength	kg/cm2	ASTM D638
IZOD Impact Strength	kg.cm/cm	ASTM D256
Vicat Softening Point	deg C	ASTM D1525
HDT	deg C	ASTM D648
Transparency	%	ASTM D1003
Haze	%	ASTM D1003
Shrinkage	%	ASTM D1204

Physical Properties - Reference Table

MD = Machine Direction, TD = Transverse Direction. Values are reference data reorganized from the supplied PVC sheet property table.

Grade	Thk mm	Tensile MD	Tensile TD	Elong. MD	Elong. TD	Tear MD	Tear TD	IZOD	Vicat	HDT	Trans.	Haze	Shrink MD	Shrink TD
Low Heat MORY	0.50	513	494	126	155	144	137	9.25	80.5	58.8	-	-	-3.4	1.3
Name Plate Black	0.50	541	516	97	83	151	143	2.9	80.7	57.8	-	-	-3.5	1.2
Clear Non-Whitening	0.50	582	558	154	200	153	146	3.78	80.2	54.3	-	-	-3.7	2.4
Clear Low-Whitening	0.50	529	513	134	86	153	144	3.78	81.6	59.3	-	-	-3.5	2.2
General Clear	0.24	540	525	187	216	118	110	3.94	76.7	52.8	92.5	0.9	-2.2	0.3
General Clear	0.38	567	528	173	151	136	130	4.2	75.2	52.6	91.2	1.0	-2.0	0.2
General Clear	0.50	637	608	96	100	157	145	3.92	76.3	51.7	90.7	0.9	-1.5	0.1
General Clear	0.75	625	603	59	44	179	170	3.59	78.3	52.0	90.5	1.1	-1.0	0.1
Offset Clear	0.25	492	477	160	209	115	104	3.9	77.0	53.6	91.5	1.3	-3.0	0.2
Offset Clear	0.30	546	512	194	228	124	121	3.9	77.2	53.7	91.9	0.7	-2.5	0.5
Offset Clear	0.35	520	509	153	225	118	104	3.92	76.4	53.2	92.1	0.6	-2.4	0.5
File Clear	0.20	528	507	170	217	114	100	3.98	76.4	52.8	90.9	0.7	-3.8	1.4
File Blue Clear	0.23	521	493	183	216	115	116	3.9	77.0	52.7	-	-	-3.9	1.4
File Sky Blue	0.17	508	491	173	192	131	115	3.91	77.8	54.5	-	-	-2.8	0.7
Matte White	0.29	547	517	191	281	123	121	5.2	76.9	53.4	-	-	-2.1	0.4
Trump Card Grade	0.26	477	443	195	211	115	106	12.6	78.2	52.4	-	-	-2.1	0.4

Grade	Thk mm	Tensile MD	Tensile TD	Elong. MD	Elong. TD	Tear MD	Tear TD	IZOD	Vicat	HDT	Trans.	Haze	Shrink MD	Shrink TD
MP Binding Grade	0.50	551	534	143	134	150	143	3.77	75.4	51.8	-	-	-3.4	1.6
Credit Card Grade	0.28	452	424	201	226	108	103	10.1	80.5	57.3	-	-	-2.2	0.5
Credit Card Grade	0.31	441	417	194	223	115	106	11.04	80.4	57.3	-	-	-2.1	0.4

Note: Reference source states results are measured values and not guaranteed specifications. Crosshead speed for tensile and elongation test: 50 mm/min. Test specimen: 3 mm pressed sheet where applicable.

Application Notes

Area	Technical Positioning
Card Applications	Credit Card Grade and Trump Card Grade are positioned for credit cards, IC cards, ID cards, playing cards, game cards and specialty cards. Key review points include printability, lamination suitability, dimensional stability and restricted substance documents.
Pharmaceutical / Blister Packaging	Clear PVC sheet can support selected blister or packaging applications subject to project review. Key review points include transparency, forming behavior, compliance documents and customer-specific requirements.
Printing & Graphics	Offset Clear and name plate related grades are used for printed sheets, graphic panels and industrial name plates. Surface quality, punching/cutting behavior and printing stability are primary review points.
Stationery & File Applications	File Clear, File Blue Clear and File Sky Blue grades support file covers, folders, stationery and office products. Selection should consider transparency, color, thickness and shrinkage.
Forming & Industrial Applications	General Clear and low-whitening grades support selected forming, tray, protective packaging and fabricated industrial applications. Vicat, HDT, shrinkage and forming behavior should be reviewed by project.

Recommended Website Resource Structure

Website Resource Label	Recommended Description
PVC Sheet Technical Data Sheet	Application guide and physical property reference table for PVC sheet products.
PVC Sheet Heavy Metal Compliance Reference	Pb, Cd, Hg and Cr6+ reference report summary for customer qualification review.
PVC Sheet UL94 V-0 Material Reference	UL94 V-0 reference summary for selected PVC sheet material designations.
MSDS Available Upon Request	Safety and regulatory documentation can be provided upon request.

Important Notes

This document is provided for preliminary engineering and purchasing review. Actual specifications may vary by grade, thickness, color, formulation, processing condition and final customer application. For mass production, please request confirmation of the exact grade and specification.

Appendix - Source Property Table Images

Reference image 1

품명	두께	인장강도		인장신율		인열강도		ZCD	VOCAT	HDT	투명도	흐림도	수축율	
		MD	TD	MD	TD	MD	TD	충격강도	연화점				MD	TD
		ASTMD638	ASTMD638	ASTMD638	ASTMD638	ASTMD638	ASTMD638	ASTMD256	ASTMD1525	ASTMD648	ASTMD1003		ASTMD1204	
단위	mm	kg/cm ²		%		kg/cm ²		kgcm/cm	℃	℃	%	%	%	
저열MORY	0.5	513	494	126	155	144	137	92.5	80.5	58.8	-	-	-34	1.3
명판흑색	0.5	541	516	97	83	151	143	29	80.7	57.8	-	-	-35	1.2
투명 무백화	0.5	582	558	154	200	153	146	3.78	80.2	54.3	-	-	-37	24
투명 저백화	0.5	529	513	134	86	153	144	3.78	81.6	59.3	-	-	-35	22
일반투명	0.24	540	525	187	216	118	110	3.94	76.7	52.8	92.5	0.9	-22	0.3
일반투명	0.38	567	528	173	151	136	130	4.2	75.2	52.6	91.2	1	-2	0.2
일반투명	0.5	637	608	96	100	157	145	3.52	76.3	51.7	90.7	0.9	-1.5	0.1
일반투명	0.75	625	603	59	44	179	170	3.59	78.3	52	90.5	1.1	-1	0.1
옅은투명	0.25	492	477	160	209	115	104	3.9	77	53.6	91.5	1.3	-3	0.2
옅은투명	0.3	546	512	194	228	124	121	3.9	77.2	53.7	91.9	0.7	-25	0.5
옅은투명	0.35	520	509	153	225	118	104	3.92	76.4	53.2	92.1	0.6	-24	0.5
화일용 투명	0.2	528	507	170	217	114	100	3.98	76.4	52.8	90.9	0.7	-38	1.4
화일용 청투명	0.23	521	493	183	216	115	116	3.9	77.8	52.7	-	-	-39	1.4
화일용 하늘색	0.17	508	491	173	192	131	115	3.91	77.8	54.5	-	-	-28	0.7
무광백색	0.29	547	517	191	231	123	121	5.2	76.9	53.4	-	-	-21	0.4
트럼프용	0.26	477	443	195	211	115	106	12.6	78.2	52.4	-	-	-21	0.4
MP제우용	0.5	551	534	143	134	150	143	3.77	75.4	51.8	-	-	-34	1.6
신용카드용	0.28	452	424	201	226	108	103	101	80.5	57.3	-	-	-22	0.5
신용카드용	0.31	441	417	194	223	115	106	110.4	80.4	57.3	-	-	-21	0.4

Reference image 2

일반투명	0.24	540	525	187	216	118	110	394	593	-	-	-35	22	
일반투명	0.38	567	528	173	151	136	130	4.2	528	925	0.9	-22	0.3	
일반투명	0.5	637	608	96	100	157	145	3.52	526	91.2	1	-2	0.2	
일반투명	0.75	625	603	59	44	179	170	3.59	51.7	90.7	0.9	-1.5	0.1	
옵셋용 투명	0.25	492	477	160	209	115	104	3.9	52	90.5	1.1	-1	0.1	
옵셋용 투명	0.3	546	512	194	228	124	121	3.9	536	91.5	1.3	-3	0.2	
옵셋용 투명	0.35	520	509	153	225	118	104	3.92	53.7	91.9	0.7	-25	0.5	
화일용 투명	0.2	538	507	170	217	114	100	3.98	53.2	92.1	0.6	-24	0.5	
화일용 청투명	0.23	521	493	183	216	115	116	3.9	52.8	90.9	0.7	-38	1.4	
화일용 하늘색	0.17	508	491	173	192	131	115	3.91	52.7	-	-	-39	1.4	
무광백색	0.29	547	517	191	231	123	121	5.2	54.5	-	-	-28	0.7	
트럼프용	0.26	477	443	195	211	115	106	12.6	53.4	-	-	-21	0.4	
MP썬무용	0.5	551	534	143	134	150	143	3.77	52.4	-	-	-21	0.4	
신용카드용	0.28	452	424	201	226	108	103	101	51.8	-	-	-34	1.6	
신용카드용	0.31	441	417	194	223	115	106	110.4	57.3	-	-	-22	0.5	
									80.4	57.3	-	-	-21	0.4

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 ▪ 인장/인열강도 측정시 Crosshead speed는 50mm/min 임.
 ▪ Test 시편은 3mm pressed 시편을 사용하였습니다.

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