

Vandal-resistance of Interpretive Panel Materials

Average scores of 55 session participants at NAI conference in Wichita, Kansas; November 7, 2007

	High Pressure Laminate			Fiberglass Embedment			Porcelain Enamel			Color-Embed Anodized Aluminum			Etched Anodized Aluminum			Routed Wood			Laminated Prints		
Surface Graffiti	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F
Pen	3.3	4	4.3	3.5	4.5	3.8	4.3	3.9	4.5	2	4	3	3	3					2.7	3.6	3.3
Crayons	1.6	3.3	4.3	2.2	3.8	4.6	2.1	3.3	4.6	3	4	4	3	3					1.8	3.5	3.2
Lipstick	1.6	3	4.9	1.4	3.8	5	1.9	3	5	1	2	5	2	3					1.4	3	4.8
Permanent Marker	1.3	1.9	3.3	1.4	2.8	3.4	1.8	3.1	3.6	1	3	2	2	2					1.3	1.8	2.4
Spray Paint	1	1.4	2.3	1	1.3	2	1	1.4	3.1	1	1	2	1	1					1	1.4	2.2
Notes	Pen: Fantastik wiped, Crayon, Fantastik scrubbed, Marker: Goo Gone, little scrub, Lip stick: soap and water, Spray Paint: Goo Gone and lots of scrubbing. Most surface marks can be removed			Needs graffiti remover.			Fantasik works on markers. Smooth Max works on paint. Mineral Spirits works on paint. Everything cleaned off with no marks left. Soap and water works well on marks.			Marker came off with Smooth Max. Mineral Spirits works on paint.			Lip stick: soap and water, Crayon: Goo Gone wiped, Marker,: Goo Gone wiped, Pen: Smooth Max, Spray Paint: Smooth Max or Mineral Spirits						Smooth Max worked great on marker and pen, and somewhat tried to take off paint. Marks can be removed, but hard work removes the laminate.		
Burns	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F
Lighters	2.3	2.2	3	2.3	2	2.7	4.2	4.2	4	5	5	4	5	4	5	3	2	2	1.2	1	1.6
Notes	Did burn, but took effort.						Flame marks with carbon initially, but wipes right off.			Flame marks with carbon initially, but wipes right off.									Could have burned whole sign.		

R = Resistance. How resistant is the material to being marked, disfigured, burned, or broken? 5 (most resistant) to 1 (least resistant)

U = Usability. Can the sign still communicate its message with this type of vandalism? 5 (still communicates well) to 1 (doesn't communicate)

F = Fixable. How easy is it to fix the sign with cleaning or restoration agents? 5 (easy to fix-cleans quickly) to 1 (impossible to fix-needs replacement)

	High Pressure Laminate			Fiberglass Embedment			Porcelain Enamel			Color-Embed Anodized Aluminum			Etched Anodized Aluminum			Routed Wood			Laminated Prints		
Disfigurement	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F	R	U	F
Sandpaper	2.6	3.5	3.4	2.2	3	3	2.1	2.3	1.7	3	2	1	3.5	3	4	4	5	4	2.1	2	1.6
Keys	3.3	4.4	3.2	4.3	4	3.5	4.3	4	4	2	3	1	2	2	4	1	1	1	1	2	1
Razor Blades	1.5	2.8	2.3	1.7	2	2.5	3.9	3.6	4.2	1	3	1	1	2	4	1	1	1	1	1.3	1
Rocks/Brick	2.5	3.4	2.2	2		2	1.8	2	1.8	2	4	2	1	1	2				1.3	2	1
Hammer	2.3	3.2	2.3				1.8	2	2	2	4	2	2	1	2				2	3	1
Notes							Image is permanently removed														
Breakage	R	U	D	R	U	D	R	U	D	R	U	D	R	U	D	R	U	D	R	U	D
Hand/Foot	4.4	4.2	3.5	5	5	5	5	5	5				5	1		5	5	5	3.7	3.7	3.7
Hammer	2.3	2.5	2.3	4	5	5	3.5	1.5	2.5				5	1		4	4	4	2.8	4.7	3
Rock/Brick	3	3.3	3	4	5	5	3.5	1.5	2.5				5	1		4	4	4	2.3	3.7	3
Firearms	2.3	4.5	3.5	3	4	5	3.3	2	2.5				4	1		4.8	4	4.8	2.3	3	3
Notes	With a backing, much less likely to break.															Depends on thickness.			Can't truly break it. Pointed objects did more damage.		