

magnet bonding

BLOCKSHEAR AND IMPACT STUDY

SUBSTRATE (BLOCK)	MAGNET	BLOCKSHEAR BOND STRENGTH, PSI, PER ASTM D4501		IMPACT BOND STRENGTH PER ASTM D950 UP TO 10 FT.-LB.	
		Avg.	Predominant Failure Mode	Impact Value	Predominant Failure Mode
Product 392/7387					
Mild Steel	Ferrite	2749	Adhesive Failure to Magnet	>10	Magnet
Mild Steel	Alnico	2951	Adhesive Failure to Magnet	>10	None
Mild Steel	Neodymium	2998	Adhesive Failure to Magnet	>10	Adhesive
E-coat	Ferrite	2698	Magnet Substrate Failure	>10	Magnet
E-coat	Alnico	2926	Block Substrate Failure	5.9	Adhesive
E-coat	Neodymium	2467	Block Substrate Failure	>10	Magnet
Zn. dichr.	Ferrite	1497	Adhesive Failure to Block	>2.6	Adhesive
Zn. dichr.	Alnico	1993	Block Substrate Failure	6.6	Adhesive
Zn. dichr.	Neodymium	2071	Block Substrate Failure	>7.3	Magnet
Product 332/7387					
Mild Steel	Ferrite	1440	Adhesive Failure to Magnet	>10	Magnet
Mild Steel	Alnico	2651	Adhesive Failure to Magnet	>10	None
Mild Steel	Neodymium	3183	Cohesive Failure	>10	Magnet
E-coat	Ferrite	1239	Adhesive Failure to Block	6.5	Adhesive
E-coat	Alnico	2180	Cohesive Failure	8.7	Adhesive
E-coat	Neodymium	1695	Cohesive Failure	>6.8	Mixed
Zn. dichr.	Ferrite	668	Adhesive Failure to Block	>1.1	Adhesive
Zn. dichr.	Alnico	729	Adhesive Failure to Block	5.6	Adhesive
Zn. dichr.	Neodymium	964	Adhesive Failure to Block	>6.6	Mixed
Product 326/7649					
Mild Steel	Ferrite	1455	Mixed Mode	>10	Magnet
Mild Steel	Alnico	1574	Adhesive Failure to Block	>10	None
Mild Steel	Neodymium	1418	Adhesive Failure to Block	>10	Mixed
E-coat	Ferrite	901	Adhesive Failure to Block	>7.0	Magnet
E-coat	Alnico	2643	Block Substrate Failure	8.1	Adhesive
E-coat	Neodymium	908	Adhesive Failure to Block	>9.9	Magnet/Adhesive
Zn. dichr.	Ferrite	1292	Adhesive Failure to Magnet	>10	Magnet
Zn. dichr.	Alnico	1590	Block Substrate Failure	7.0	Adhesive
Zn. dichr.	Neodymium	1590	Block Substrate Failure	>7.1	Mixed
Product E-214HP					
Mild Steel	Ferrite	4774	Magnet Substrate Failure	>10	Magnet
Mild Steel	Alnico	7775	Adhesive Failure to Block	>10	None
Mild Steel	Neodymium	5891	Adhesive Failure to Magnet	>10	Magnet
E-coat	Ferrite	4616	Block Substrate Failure	>10	Magnet
E-coat	Alnico	5930	Block Substrate Failure	>10	None
E-coat	Neodymium	4638	Block Substrate Failure	>10	Magnet
Zn. dichr.	Ferrite	4462	Block Substrate Failure	>9.8	Magnet
Zn. dichr.	Alnico	4574	Block Substrate Failure	9.3	Adhesive
Zn. dichr.	Neodymium	4918	Block Substrate Failure	>8.6	Mixed
Product 380					
Mild Steel	Ferrite	1987	Adhesive Failure to Block	>9.2	Magnet
Mild Steel	Alnico	2656	Adhesive Failure to Block	>10	None
Mild Steel	Neodymium	1515	Adhesive Failure to Block	>10	Magnet
E-coat	Ferrite	2406	Magnet Substrate Failure	>8.9	Adhesive
E-coat	Alnico	3593	Block Substrate Failure	>9.8	None
E-coat	Neodymium	3077	Block Substrate Failure	>10	Magnet
Zn. dichr.	Ferrite	1410	Adhesive Failure to Block	>8.5	Magnet
Zn. dichr.	Alnico	1615	Block Substrate Failure	4.9	Adhesive
Zn. dichr.	Neodymium	2508	Adhesive Failure to Block	>10	Magnet

Note: If only a value is given, it represents an average. If ">" and a value is given, it represents a minimum sample group value.