

Somaloy

Quick guide

BH-data

Somaloy 130i-1P		Somaloy 700-3P		Somaloy 700HR-5P	
H (A/m)	B (T)	H (A/m)	B (T)	H (A/m)	B (T)
0	0	0	0	0	0
138	0.04	57	0.02	63	0.03
244	0.07	96	0.05	119	0.06
446	0.15	159	0.11	214	0.14
626	0.22	218	0.18	306	0.21
1212	0.45	449	0.48	608	0.45
1808	0.62	624	0.64	899	0.65
2573	0.80	929	0.85	1344	0.86
3671	0.98	1466	1.06	1996	1.05
5514	1.16	2471	1.25	3285	1.24
8959	1.34	5041	1.45	6377	1.43
15579	1.53	11450	1.65	13228	1.63
29120	1.73	25469	1.85	27279	1.84
49706	1.88	49777	2.01	49771	1.99
74706	1.98	74777	2.09	74771	2.08
99706	2.05	99777	2.15	99771	2.14
124706	2.11	124777	2.20	124771	2.19
149706	2.16	149777	2.25	149771	2.23
189706	2.23	189777	2.32	189771	2.30
229706	2.30	229777	2.38	229771	2.36
279706	2.38	279777	2.46	279771	2.44
304706	2.42	304777	2.50	304771	2.47

Loss data

Total loss = Hysteresis loss + Eddy-current loss

Hysteresis loss

Hysteresis Loss = $K_h \times B^{1.75} \times F$ [T] [Hz] [W/kg]

	130i-1P	700-3P	700HR-5P
Density [g/cc]	7.35	7.57	7.50
K_h	0.118	0.099	0.063
TRS [MPa]	33	125	60

Data valid:

$0 < B < 1.5T$
 $0 < F < 5000 \text{ Hz}$

Eddy-current loss

Eddy-current loss = Factor $\times B^2 \times F^2$ [T] [Hz] [W/kg]

Smallest thickness	Somaloy 130i-1P	Somaloy 700-3P	Somaloy 700HR-5P
5 mm	0.0000143	0.0000343	0.0000286
10 mm	0.0000151	0.0000563	0.0000335
15 mm	0.0000165	0.0000929	0.0000417
20 mm	0.0000184	0.0001442	0.0000531
25 mm	0.0000209	0.0002101	0.0000677
30 mm	0.0000239	0.0002907	0.0000857



For more information on Somaloy,
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