

# Somaloy<sup>®</sup> quick guide

## BH-data

Somaloy 130i-1P	
H [A/m]	B [T]
0	0
138	0.04
244	0.07
446	0.15
626	0.22
1212	0.45
1808	0.62
2573	0.80
3671	0.98
5514	1.16
8959	1.34
15579	1.53
29120	1.73
49706	1.88
74706	1.98
99706	2.05
124706	2.11
149706	2.16
189706	2.23
229706	2.30
279706	2.38
304706	2.42

Somaloy 700-3P	
H [A/m]	B [T]
0	0
57	0.02
96	0.05
159	0.11
218	0.18
449	0.48
624	0.64
929	0.85
1466	1.06
2471	1.25
5041	1.45
11450	1.65
25469	1.85
49777	2.01
74777	2.09
99777	2.15
124777	2.20
149777	2.25
189777	2.32
229777	2.38
279777	2.46
304777	2.50

Somaloy 700HR-5P	
H [A/m]	B [T]
0	0
63	0.03
119	0.06
214	0.14
306	0.21
608	0.45
899	0.65
1344	0.86
1996	1.05
3285	1.24
6377	1.43
13228	1.63
27279	1.84
49771	1.99
74771	2.08
99771	2.14
124771	2.19
149771	2.23
189771	2.30
229771	2.36
279771	2.44
304771	2.47

For more information, please contact  
your local sales representative.



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