

Table 5.3: Alloys with low resistance to stress-corrosion cracking

(a) Steel Alloy	Condition
Carbon steel (1000 series)	Above 1 370 MPa
Low-alloy steel (4130, 4340, etc.)	Above 1 370 MPa
(E) D6AC, H-11 steel	Above 1 450 MPa
440C stainless steel	All
18 Ni Maraging steel, 200 grade	Aged at 900 °F
18 Ni Maraging steel, 250 grade	Aged at 900 °F
18 Ni Maraging steel, 300 grade	Aged at 900 °F
18 Ni Maraging steel, 350 grade	Aged at 900 °F
AM 350 stainless steel	Below SCT 1000
AM 355 stainless steel	Below SCT 1000
Custom 455 stainless steel	Below H1000
PH 15-7 Mo stainless steel	All except CH900
17-7 PH stainless steel	All except CH900
(E) Kovar	All
(E) ESA classification not in NASA MSFC-SPEC-522A.	

(b) Aluminium Alloys^{1,2}			
Wrought		Cast	
Alloy	Condition	Alloy	Condition
2011	T3, T4	295.0 (195)	T6
2014	All	B295.0 (B195)	T6
2017	All	520.0 (220)	T4
2024	T3, T4	707.0 (607, tern-alloy 7)	T6
2024 Forgings	T6, T62, T8	D712.0 (D612,40E)	As cast
2024 Plate	T62		
(E) Al-Li 2080	T8		
(E) 2618	T3, T4		
7001	T6		
7005	All		
(E) 7020	Weldments		
7039	All		
7075	T6		
7175	T6		
7079	T6		
7178	T6		
7475	T6		
(E) Al-Li 8090	All		
(E) BS L93	T6		
(E) Russian Al-Li 1441 and 1460	All		
1. Mechanically stress-relieved products (TX5X or TX5XX) should be specified where possible 2. Sheet, unmachined extrusions and unmachined plate are the least susceptible (E) ESA classification - not in NASA MSFC-SPEC-522A.forms			

(c) Copper alloys	
CDA no.¹	Condition (% cold rolled)²
260	50
353	50
443	40
672	50, annealed
687	10, 40
762	A, 25, 50
766	38
770	38, 50, annealed
782	50
1. Copper Development Association alloy number. 2. Rating based on listed conditions only.	

(d) Magnesium Alloy	Condition
AZ61A	All
AZ80A	All
WE54	All
ZCM711	All