

Table 5.2: Alloys with moderate resistance to stress-corrosion cracking

(a) Steel Alloy	Condition
Carbon steel (1000 series)	1 225 to 1 370 MPa
Low-alloy steel (4130, 4340, etc.)	1 225 to 1 370 MPa
Nitronic 32	All
Nitronic 60	All
403, 410, 416, 431 stainless steel	(see footnote 1)
PH 13-8 Mo stainless steel	All
15-5PH stainless steel	Below H1000 ²
17-4PH stainless steel	All
1. Tempering between 370 °C and 600 °C should be avoided because corrosion and stress-corrosion resistance is lowered. 2. H1000 = hardened above 538 °C (1 000 °F).	

(b) Miscellaneous Alloy	Condition
Magnesium, AZ31B	All
Magnesium, ZK60A	All
Magnesium (E) ZW3	
(E) ESA classification not in NASA MSFC-SPEC-522A.	

(c) Aluminium alloys^{1,2}			
Wrought		Cast	
Alloy	Condition	Alloy	Condition
2024 rod, bar, extrusion	T6, T62	319.0, A319.0	As cast
2024 plate, extrusions	T8	333.0, A333.0	As cast
2124 plate	T8		
2048 plate	T8		
4032	T6		
5083	All ³		
5086	All ³		
5456	All ³		
7001	T75, T76		
(E) 7010	T736		
7049	T76		
7050	T736, T76		
7075	T76		
7175	T736, T76		

7475	T76		
7178	T76		
(E) Russian Al-Li 1420 and 1421	soln. treat + age		
1. Mechanically stress relieved products (TX5X or TX5XX) should be specified where possible. 2. Sheet, unmachined extrusions and unmachined plate are the most resistant forms. 3. Except for controlled tempers listed in footnote 3 of Table I (c), aluminium alloys. These alloys are not recommended for high-temperature application, 66 °C (150 °F) and above. (E) ESA classification - not in NASA MSFC-SPEC-522A.			