

DIN EN 515:2017-05 (E)

Aluminium and aluminium alloys - Wrought products - Temper designations

Contents		Page
European foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	4
4	Basis of codification	6
5	Basic temper designations	6
5.1	F - as fabricated	6
5.2	O - Annealed	6
5.3	H - Strain-hardened	6
5.4	W - Solution heat-treated	7
5.5	T - Thermally treated to produce stable tempers other than F, O or H (for heat-treatable alloys only)	7
6	Subdivision of O (annealed) temper designations	7
6.1	O1 - High temperature annealed and slow cooled	7
6.2	O2 - Thermo-mechanically processed	7
6.3	O3 - Homogenized	7
7	Subdivision of H (strain-hardened) temper designations	7
8	Subdivision of T (thermally treated to produce stable tempers other than F, O or H) temper designations	10
8.1	First digit after T	10
8.2	Additional digits added to designations T1 to T10	12
8.3	Assigned additional digits for stress-relieved T tempers	12
8.3.1	Stress-relieved by stretching	12
8.3.2	Stress-relieved by compressing	13
8.3.3	Stress-relieved by combined stretching and compressing	13
8.3.4	Assigned additional digits for stress-relieved W tempers	13
8.4	Assigned additional digits for variations of T7 type tempers	13
8.5	Demonstration of response to heat treatment	14
8.5.1	Temper designations for producer/supplier -- Laboratory demonstration of response to heat treatment	14
8.5.2	Temper designations for producer/supplier -- Demonstration of response to temper conversion	14
8.5.3	Temper designations for purchaser/user heat treatment	14
9	Summary	14
Annex A (informative) Recommendations for further T tempers extensions		23
A.1	Numeral 1 as a second digit after T	23
A.2	Numerals 1 and 3 to 9 as a second digit after T3, T8 or T9	23
A.3	Numerals 1 and 3 to 5 as a second digit after T5 or T6	23
A.4	Numeral 6 as a second digit after T5 or T6	23
A.5	Summary of possible uses of a second digit after T	23
Bibliography		25