INTERNATIONAL STANDARD

ISO 6362-2

Fifth edition
2022-07

Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles —

Part 2: Mechanical properties

Aluminium et alliages d'aluminium corroyés — Barres, tubes et profilés filés —

Partie 2: Caractéristiques mécaniques

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 6, *Wrought aluminium and aluminium alloys*.

This fifth edition cancels and replaces the fourth edition (ISO 6362-2:2014), which has been technically revised. The main changes are as follows:

— in Clause 5, ISO 6362-7 and ISO 2107 have been added as references for the alloys and tempers listed in this document;

— in Clause 5, alloys 2033, 3021 and 6026 have been added in Table 1;

— in Clause 5, tensile strength and 0,2 % proof stress of alloy 6061 have been aligned between Tables 1 and 3;

— in Clause 5, 0,2 % proof stress of alloy 6063 has been aligned between Tables 1 and 3;

— errors have been corrected and expressions modified throughout.

A list of all parts in the ISO 6362 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles —

Part 2: Mechanical properties

1 Scope

This document specifies the mechanical properties of wrought aluminium and aluminium alloy extruded rods/bars, tubes, and profiles for general engineering applications.

It is applicable to extruded products.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6362-1, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 1: Technical conditions for inspection and delivery*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ASTM B557M, *Standard Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6362-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Tensile testing

The selection of the specimens and tensile testing shall be in accordance with ISO 6892-1 or ASTM B557M.

5 Mechanical properties

Values for mechanical properties of aluminium and aluminium alloys are given in Tables 1 to 3.

For elongation, two different gauge lengths are used. The choice of the gauge length for elongation measurements (A or A_{50mm}) is at the discretion of the producer, unless otherwise agreed.

NOTE A is the percentage elongation on a gauge length of $5{,}65\sqrt{S_o}$. A_{50mm} is the percentage elongation on a gauge length of 50 mm.

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Alloys mentioned in this document are listed in ISO 6362-7.

Temper designations used in this document are in accordance with ISO 2107. Test results shall be rounded in accordance with the rules given in Annex A.

A list of tempers used in Tables 1 to 3 is given in Annex B.

Table 1 — Mechanical properties of rods/bars

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
1070	H112	All	55	—	15	—	—	—
1070A	H112	All	60	—	20	—	25	23
1060	H112	$3 \leq D$ or $S \leq 30$	60	—	30	—	—	25
1050	H112	All	65	—	20	—	—	—
1050A	H112	$D < 35$ or $S < 30$	65	—	20	—	25	23
	O H111	All	60	95	20	—	25	23
1350[b]	H112	All	60	—	—	—	25	23
1100	H112	$D < 35$ or $S < 30$	75	—	20	—	18	18
		$35 \leq D$ or $30 \leq S$	75	—	20	—	—	—
1200	H112	$D < 35$ or $S < 30$	75	—	25	—	20	18
		$35 \leq D$ or $30 \leq S$	75		20	—	—	—
2007	T4	D or $S \leq 80$	370	—	250	—	8	6
	T4510	$80 < D$ or $S \leq 200$	340	—	220	—	8	—
	T4511	$200 < D$ or $S \leq 250$	330	—	210	—	7	—
2011	T4[f]	$3 \leq D$ or $S \leq 200$	275	—	125	—	14	16
	T6[f]	$3 < D$ or $S \leq 75$	310	—	230	—	8	10
		$75 < D$ or $S \leq 160$	295	—	195	—	6	8
2011A	T4	$D \leq 200$, $S \leq 60$	275	—	125	—	14	12
	T6	$D \leq 75$, $S \leq 60$	310	—	230	—	8	6
		$75 < D \leq 200$	295	—	195	—	6	—
2014	O[c]	All	—	250	—	135	10	12
	T4 T4510 T4511	All	345	—	240	—	10	12
	T42[d]	All	345	—	205	—	—	12
	T6 T6510 T6511	D or $S \leq 12$	410	—	365	—	—	7
		$12 < D$ or $S \leq 19$	440	—	400	—	6	7
		$19 < D$ or S, $A \leq 16\,000$	470	—	410	—	6	7
		$19 < D$ or S, $16\,000 < A \leq 20\,000$	470	—	400	—	6	6
		$19 < D$ or S, $20\,000 < A \leq 25\,000$	450	—	380	—	6	6
		$19 < D$ or S, $25\,000 < A \leq 30\,000$	430	—	365	—	6	6
	T62[e]	D or $S \leq 19$	410	—	365	—	—	7
		$19 < D$ or S, $A \leq 16\,000$	410	—	365	—	—	7
		$19 < D$ or S, $16\,000 < A \leq 20\,000$	410	—	365	—	—	6

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
2014A	O	$10 < D$ or $S \leq 200$	—	250	—	135	10	12
	T4 T4510 T4511	$10 < D$ or $S \leq 200$	345	—	240	—	10	12
	T6	$12,5 < D$ or $S \leq 100$	440	—	400	—	6	—
	T6510	$100 < D$ or $S \leq 120$	430	—	350	—	6	—
	T6511	$120 < D$ or $S \leq 200$	430	—	350	—	6	—
2017	O[c]	All	—	245	—	125	—-	16
	T4[f]	$A \leq 70\,000$	345	—	215	—	—	12
	T42[d]	$70\,000 < A \leq 100\,000$	345		195		—	12
2017A	O	$10 < D$ or $S \leq 100$	—	250	—	150	10	—
	T4[f] T4510[f]	$10 < D$ or $S \leq 80$	390	—	265	—	10	—
	T4511[f]	$80 < D$ or $S \leq 200$	360	—	220	—	7	—
2024	O[c]	All	—	245	—	125	10	12
	T3510 T3511	D or $S \leq 6$	390	—	295	—	—	12
		$6 < D$ or $S \leq 19$	410	—	300	—	10	12
		$19 < D$ or $S \leq 38$	450	—	310	—	8	10
		$38 < D$ or S, $A \leq 16\,000$	480	—	365	—	7	10
		$38 < D$ or S, $16\,000 < A \leq 20\,000$	470	—	335	—	7	8
	T3 T4	D or $S \leq 6$	390	—	295	—	—	12
		$6 < D$ or $S \leq 19$	410	—	305	—	—	12
		$19 < D$ or $S \leq 38$	450	—	315	—	—	10
		$38 < D$ or $S \leq 100$, $A \leq 16\,000$	480	—	365	—	8	10
		$38 < D$ or $S \leq 100$, $16\,000 < A \leq 20\,000$	470	—	335	—	8	8
		$38 < D$ or $S \leq 100$, $20\,000 < A \leq 30\,000$	460	—	315	—	8	8
		$100 < D$ or $S \leq 200$, $A \leq 16\,000$	480	—	365	—	6	10
		$100 < D$ or $S \leq 200$, $16\,000 < A \leq 20\,000$	470	—	335	—	6	8
		$100 < D$ or $S \leq 200$, $20\,000 < A \leq 30\,000$	460	—	315	—	6	8
	T42[d]	D or $S \leq 19$	390	—	265	—	—	12
		$19 < D$ or $S \leq 38$	390	—	265	—	—	10
		$38 < D$ or S, $A \leq 16\,000$	390	—	265	—	—	10
		$38 < D$ or S, $16\,000 < A \leq 20\,000$	390	—	265	—	—	8
	T8510 T8511 T81	$10 < D$ or $S \leq 150$	455	—	400	—	4	—
2030	T4	D or $S \leq 80$	370	—	250	—	8	6
	T4510	$80 < D$ or $S \leq 200$	340	—	220	—	8	—
	T4511	$200 < D$ or $S \leq 250$	330	—	210	—	7	—
2033	T6	D or $S \leq 80$	370		250		8	
		$80 < D$ or $S \leq 200$	340		220		8	

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
3102	H112	All	80	—	30	—	25	23
3003	H112	All	95	—	35	—	—	—
	O H111	All	95	135	35	—	25	20
3103	H112	All	95	—	35	—	25	20
	O H111	All	95	135	35	—	25	20
5005 5005A	H112	All	100	—	40	—	18	16
	O H111	$D \leq 80, S \leq 60$	100	150	40	—	18	16
5019	H112	D or $S \leq 200$	250	—	110	—	14	12
	O H111	D or $S \leq 200$	250	320	110	—	15	13
5049	H112	All	180	—	80	—	15	13
5051A	H112	All	150	—	50	—	16	14
	O H111	All	150	200	50	—	18	16
5251	H112	All	160	—	60	—	16	14
	O H111	All	160	220	60	—	17	15
5052	H112	All	175	—	70	—	—	—
	O	All	175	245	70	—	—	20
5154A	H112	D or $S \leq 200$	200	—	85	—	16	14
	O H111	D or $S \leq 200$	200	275	85	—	18	16
5454	H112	All	215	—	100	—	—	12
	O H111	D or $S \leq 200$	200	275	85	—	18	16
5754	H112	D or $S \leq 150$	180	—	80	—	14	12
		$150 < D$ or $S \leq 250$	180	—	70	—	13	—
	O H111	D or $S \leq 150$	180	250	80	—	17	15
5056	H112	$A \leq 30\,000$	245	—	100	—	—	—
		$30\,000 < A \leq 70\,000$	225	—	80	—	—	—
		$70\,000 < A \leq 100\,000$	215	—	70	—	—	—
5083	H112	D or $S \leq 130, A \leq 20\,000$	275	—	140	—	12	12
	O	D or $S \leq 130, A \leq 20\,000$	275	355	110	—	—	14
5086	H112	D or $S \leq 250$	240	—	95	—	12	10
	O	D or $S \leq 200$	240	320	95	—	18	15

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6101	T6[f]	$3 \le D$ or $S \le 7$	195	—	165	—	—	10
		$7 < D$ or $S \le 17$	195	—	165	—	—	12
		$17 < D$ or $S \le 30$	175	—	145	—	—	14
	T7[f]	$3 \le D$ or $S \le 17$	135	—	110	—	—	10
6101A	T6[f]	D or $S \le 150$	200	—	170	—	10	8
6101B	T6[f,g]	$S \le 15$	215	—	160	—	8	6
	T7[f,h]	$S \le 15$	170	—	120	—	12	10
6005 6005A	T6[f]	D or $S \le 25$	270	—	225	—	10	8
		$25 < D$ or $S \le 50$	270	—	225	—	8	—
		$50 < D$ or $S \le 100$	260	—	215	—	8	—
6005C	T5	D or $S \le 6$	245	—	205	—	—	8
		$6 < D$ or $S \le 12$	225	—	175	—	—	8
	T6[f]	D or $S \le 6$	265	—	235	—	—	8
6110A	T5[f]	D or $S \le 120$	380	—	360	—	10	8
	T6[f]	$D \le 120$ or $S \le 150$	410	—	380	—	10	8
6012	T6[f] T6510[f] T6511[f]	D or $S \le 150$	310	—	260	—	8	6
		$150 < D$ or $S \le 200$	260	—	200	—	8	—
6018	T6[f] T6510[f] T6511[f]	D or $S \le 150$	310	—	260	—	8	6
		$150 < D$ or $S \le 200$	260	—	200	—	8	—
6023	T6[f] T6510[f] T6511[f]	D or $S \le 150$	320	—	270	—	10	8
6026	T6[f]	D or $S \le 140$	370		300		8	
		$140 < D$ or $S \le 200$	340	—	250	—	8	—
		$200 < D$ or $S \le 250$	300		200		8	
6351	O H111	D or $S \le 200$	—	160	—	110	14	12
	T4[f]	D or $S \le 200$	205	—	110	—	14	12
	T6[f]	D or $S \le 20$	295	—	250	—	8	6
		$20 < D$ or $S \le 75$	300	—	255	—	8	—
		$75 < D$ or $S \le 150$	310	—	260	—	8	—
		$150 < D$ or $S \le 200$	280	—	240	—	6	—
		$200 < D$ or $S \le 250$	270	—	200	—	6	—
6060	T4[f]	D or $S \le 150$	120	—	60	—	16	14
	T5	D or $S \le 150$	160	—	120	—	8	6
	T6[f]	D or $S \le 100$	190	—	150	—	10	8
	T64[f]	D or $S \le 50$	180	—	120	—	12	10
	T66[f]	D or $S \le 150$	215	—	160	—	8	6

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6360	T4[f]	D or $S \leq 150$	110	—	50	—	16	14
	T5	D or $S \leq 150$	150	—	110	—	8	6
	T6[f]	D or $S \leq 150$	185	—	140	—	8	6
	T66[f]	D or $S \leq 150$	195	—	150	—	8	6
6061	O[c]	All	—	145	—	110	—	16
	T4[f] T4511	All	180	—	110	—	14	16
	T42[d]	All	175	—	85	—	—	16
	T6[f] T62[e] T6511[f]	D or $S \leq 6$ $6 < D$ or S	260 260	— —	240 240	— —	7 9	8 10
6261	O H111	D or $S \leq 100$	—	170	—	120	14	12
	T4[f]	D or $S \leq 100$	180	—	100	—	14	12
	T6[f]	D or $S \leq 20$ $20 < D$ or $S \leq 100$	290 290	— —	245 245	— —	8 8	7 —
6262	T6[f]	D or $S \leq 200$	260	—	240	—	10	8
6262A	T6[f]	$D \leq 220$ or $S \leq 155$	260	—	240	—	10	8
6063	O H111	D or $S \leq 200$	—	130	—	—	18	16
	T1	D or $S \leq 12$ $12 < D$ or $S \leq 25$	120 110	— —	60 55	— —	— —	12 12
	T4[f]	D or $S \leq 150$ $150 < D$ or $S \leq 200$	130 120	— —	65 65	— —	14 12	12 —
	T5	D or $S \leq 12$ $12 < D$ or $S \leq 25$	150 145	— —	110 105	— —	7 7	8 8
	T6[f]	D or $S \leq 3$ $3 < D$ or $S \leq 25$	205 205	— —	170 170	— —	— 9	8 10
	T66[f]	D or $S \leq 200$	245	—	200	—	10	8
6063A	O H111	D or $S \leq 200$	—	150	—	—	16	14
	T4[f]	D or $S \leq 150$ $150 < D$ or $S \leq 200$	150 140	— —	90 90	— —	12 10	10 —
	T5	D or $S \leq 200$	200	—	160	—	7	5
	T6[f]	D or $S \leq 150$ $150 < D$ or $S \leq 200$	230 220	— —	190 160	— —	7 7	5 —
6463	T4[f]	D or $S \leq 150$	125	—	75	—	14	12
	T5	D or $S \leq 150$	150	—	110	—	8	6
	T6[f]	D or $S \leq 150$	195	—	160	—	10	8
6065	T6[f]	$D \leq 220$ or $S \leq 155$	260	—	240	—	10	8
6081	T6[f]	D or $S \leq 250$	275	—	240	—	8	6

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6082	O H111	D or $S \leq 200$	—	160	—	110	14	12
	T4[f]	$10 \leq D$ or $S \leq 80$	205	—	110	—	14	14
	T6[f]	$10 \leq D \leq 60$ or $10 \leq S \leq 50$	310	—	260	—	8	7
		$60 < D \leq 150$ or $50 < S \leq 150$	300	—	240	—	8	—
6182	T4[f]	$D \leq 220$ or $S \leq 155$	205	—	110	—	12	10
	T6[f,i]	$9 < D$ or $S \leq 100$	360	—	330	—	9	7
		$100 < D$ or $S \leq 150$	330	—	300	—	8	6
		$150 < D$ or $S \leq 220$	280	—	240	—	6	4
7003	T5	D or $S \leq 12$	285	—	245	—	—	10
		$12 < D$ or $S \leq 25$	275	—	235	—	—	10
	T6[f]	D or $S \leq 50$	350	—	290	—	10	8
		$50 < D$ or $S \leq 150$	340	—	280	—	10	8
7204	O	All	—	245	—	145	—	12
	T4[j]	All	315	—	195	—	—	11
	T6	All	335	—	275	—	—	10
7005	T6[f]	D or $S \leq 50$	350	—	290	—	10	8
		$50 < D$ or $S \leq 200$	340	—	270	—	10	—
7108	T6[f]	D or $S \leq 100$	310	—	260	—	10	8
7108A	T6[f]	D or $S \leq 200$	310	—	260	—	12	10
	T66[f]	D or $S \leq 50$	350	—	290	—	10	8
		$50 < D$ or $S \leq 200$	340	—	275	—	10	—
7020	T6[f]	D or $S \leq 50$	350	—	290	—	10	8
		$50 < D$ or $S \leq 200$	340	—	275	—	10	—
7021	T6[f]	D or $S \leq 40$	410	—	350	—	10	8
7022	T6[f] T6510[f] T6511[f]	D or $S \leq 80$	490	—	420	—	7	5
		$80 < D$ or $S \leq 200$	470	—	400	—	7	—
7049A	T6 T6510 T6511	D or $S \leq 100$	610	—	530	—	5	4
		$100 < D$ or $S \leq 125$	560	—	500	—	5	—
		$125 < D$ or $S \leq 150$	520	—	430	—	5	—
		$150 < D$ or $S \leq 180$	450	—	400	—	3	—
7050	T73511	D or $S \leq 125$, $A \leq 20\,000$	485	—	415	—	7	8
	T74511	D or $S \leq 76$	505	—	435	—	—	7
	T76510	D or $S \leq 127$	545	—	475	—	—	7

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Table 1 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
7075	O[c]	$A \leq 20\,000$	—	275	—	165	9	10
	T6 T62[e] T6510 T6511	D or $S \leq 6$	540	—	480	—	—	7
		$6 \leq D$ or $S \leq 75$	560	—	500	—	6	7
		$75 < D$ or $S \leq 110$, $A \leq 13\,000$	560	—	490	—	5	7
		$75 < D$ or $S \leq 110$, $13\,000 < A \leq 20\,000$	540	—	480	—	5	7
		$110 < D$ or $S \leq 130$, $A \leq 20\,000$	540	—	470	—	5	6
		$130 < D$ or $S \leq 150$	500	—	440	—	5	—
	T73[k]	$10 < D$ or $S \leq 25$	485	—	420	—	7	—
		$25 < D$ or $S \leq 50$	475	—	405	—	7	—
		$50 < D$ or $S \leq 70$	475	—	405	—	7	—
		$70 < D$ or $S \leq 100$	470	—	390	—	6	—
	T73510[k] T73511[k]	D or $S \leq 25$	485	—	420	—	7	5
		$25 < D$ or $S \leq 75$	475	—	405	—	7	—
		$75 < D$ or $S \leq 100$	470	—	390	—	6	—
		$100 < D$ or $S \leq 150$	440	—	360	—	6	—

[a] D (mm) = diameter for round bar.

S (mm) = width across flats for square and hexagonal bar, thickness for rectangular bar.

A (mm^2) = cross-section area.

[b] Electrical conductivity $\gamma \geq 35{,}4$ MS/m.

[c] The material of temper grade O shall be a basis for materials of temper grades T42 or T62. When requested by the purchaser, the capability to achieve T42 or T62 properties after appropriate heat treatment is demonstrated.

[d] The mechanical properties of temper grade T42 shall be applied only when the material of temper grade O has been naturally age-hardened after solution treatment by the purchaser. If the material is cold or hot worked prior to solution treatment by the purchaser, its mechanical properties can be lower than the specified values.

[e] The mechanical properties of temper grade T62 shall be applied only when the material of temper grade O has been artificially age-hardened after solution treatment by the purchaser. If the material is cold or hot worked prior to solution treatment by the purchaser, its mechanical properties can be lower than the specified values.

[f] Applicable for those after extrusion followed by controlled cooling at a rate rapid enough to hold constituents in solution.

[g] Electrical conductivity $\gamma \geq 30$ MS/m.

[h] Electrical conductivity $\gamma \geq 32$ MS/m.

[i] Properties obtained by the user, however, can be lower than those listed if the material has been formed or otherwise cold or hot worked, particularly in the annealed temper, prior to normal solution heat treatment.

[j] The mechanical properties of temper grade T4 are the values specified, based on reference values obtained by one month of natural ageing at room temperature (approximately 20 °C) after solution treatment.

In the case of the tensile test made before completion of one month of natural ageing, the tensile performance of temper grade T4 can be deemed as guaranteed if the test result of the test piece which has been artificially aged after solution treatment is confirmed to satisfy the tensile performance of temper grade T6.

[k] For materials of thickness 20 mm or above, see ISO 6362-1, with respect to stress corrosion cracking resistance.

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Table 2 — Mechanical properties of tubes

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
1070	H112	All	55	—	15	—	—	—
1050	H112	All	65	—	20	—	—	—
1050A	H112	All	60	—	20	—	25	23
	O,H111	All	60	95	20	—	25	23
1350	H112	All	60	—	—	—	25	23
1100 1200	H112	All	75	—	20	—	—	25
2007	T4 T4510 T4511	$t \leq 25$	370	—	250	—	8	6
2011 2011A	T6[e]	$t \leq 25$	310	—	230	—	6	4
2014	O[b]	All	—	245	—	125	—	12
	T4	All	345	—	245	—	—	12
	T42[c]	All	345	—	205	—	—	12
	T4510 T4511	$t \leq 20$	370	—	230	—	11	10
	T6	$t \leq 12$	410	—	365	—	—	7
		$12 < t \leq 19$	440	—	400	—	—	7
		$19 < t$, $A \leq 16\,000$	470	—	410	—	—	7
		$19 < t$, $16\,000 < A \leq 20\,000$	470	—	400	—	—	6
		$19 < t$, $20\,000 < A \leq 25\,000$	450	—	380	—	—	6
		$19 < t$, $25\,000 < A \leq 30\,000$	430	—	365	—	—	6
	T62[d]	$t \leq 19$	410	—	365	—	—	7
		$19 < t$, $A \leq 16\,000$	410	—	365	—	—	7
		$19 < t$, $16\,000 < A \leq 20\,000$	410	—	365	—	—	6
	T6510 T6511	$t \leq 10$	415	—	370	—	7	5
		$10 < t \leq 40$	450	—	400	—	6	4
2014A	O H111	$t \leq 20$	—	250	—	135	12	10
	T4 T4510 T4511	$t \leq 20$	370	—	230	—	11	10
	T6 T6510 T6511	$t \leq 10$	415	—	370	—	7	5
		$10 < t \leq 40$	450	—	400	—	6	4
2017	O[b]	All	—	245	—	125	—	16
	T4[e]	$A \leq 70\,000$	345	—	215	—	—	12
	T42[c]	$70\,000 < A \leq 100\,000$	335	—	195	—	—	12

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Table 2 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
2017A	O H111	$t \leq 20$	—	250	—	135	12	10
	T4 [e] T4510 [e] T4511 [e]	$t \leq 10$ $10 < t \leq 75$	380 400	— —	260 270	— —	12 10	10 8
2024	O[b]	All	—	245	—	125	—	12
	T3 T3510 T3511	$t \leq 30$	420	—	290	—	8	6
	T4	$t \leq 6$	390	—	295	—	—	10
		$6 < t \leq 19$	410	—	305	—	—	10
		$19 < t \leq 38$	450	—	315	—	—	10
		$38 < t, A \leq 16\,000$	480	—	335	—	—	10
		$38 < t, 16\,000 < A \leq 20\,000$	470	—	315	—	—	8
		$38 < t, 20\,000 < A \leq 30\,000$	460	—	315	—	—	8
	T42[c]	$t \leq 19$	390	—	265	—	—	12
		$19 < t \leq 38$	390	—	265	—	—	10
		$38 < t, A \leq 16\,000$	390	—	265	—	—	10
		$38 < t, 16\,000 < A \leq 20\,000$	390	—	265	—	—	8
	T8 T8510 T8511	$t \leq 30$	455	—	380	—	5	4
2030	T4 T4510 T4511	$t \leq 25$	370	—	250	—	8	6
3021	H112	All	80	—	20	—	—	25
3102	H112	All	80	—	30	—	25	23
3003 3203	H112	All	95	—	35	—	—	—
3103	H112	All	95	—	35	—	25	20
	O H111	All	95	135	35	—	25	20
5005 5005A	H112	All	100	—	40	—	18	16
	O H111	$t \leq 20$	100	150	40	—	20	18
5019	H112	$t \leq 30$	250	—	110	—	14	12
	O H111	$t \leq 30$	250	320	110	—	15	13
5049	H112	All	180	—	80	—	15	13

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Table 2 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
5051A	H112	All	150	—	60	—	16	14
	O H111	All	150	200	60	—	18	16
5251	H112	All	160	—	60	—	16	14
	O H111	All	160	220	60	—	17	15
5052	H112	All	175	—	70	—	—	—
	O	All	175	245	70	—	—	20
5154	H112	All	205	—	75	—	—	—
	O	All	205	285	75	—	—	—
5154A	H112	$t \leq 25$	200	—	85	—	16	14
	O H111	$t \leq 25$	200	275	85	—	18	16
5454	H112	$t \leq 130, A \leq 20\,000$	215	—	85	—	—	12
	O	$t \leq 130, A \leq 20\,000$	215	285	85	—	—	14
5754	H112	$t \leq 25$	180	—	80	—	14	12
	O H111	$t \leq 25$	180	250	80	—	17	15
5056	H112	$A \leq 30\,000$	245	—	100	—	—	—
		$30\,000 < A \leq 70\,000$	225	—	80	—	—	—
		$70\,000 < A \leq 100\,000$	215	—	70	—	—	—
5083	H112	$A \leq 20\,000$	275	—	110	—	—	12
	O	$A \leq 20\,000$	275	355	110	—	—	14
5086	H112	All	240	—	95	—	12	10
	O H111	All	240	320	95	—	18	15
6101	T6[e]	$3 \leq t \leq 12$	195	—	165	—	—	10
		$12 < t \leq 16$	175	—	145	—	—	14
6101A	T6[e]	$t \leq 25$	200	—	170	—	10	8
6101B	T6[e,f]	$t \leq 15$	215	—	160	—	8	6
	T7[e,g]	$t \leq 15$	170	—	120	—	12	10
6005 6005A	T6[e]	$t \leq 5$	270	—	225	—	8	6
		$5 < t \leq 10$	260	—	215	—	8	6
6005C	T5	$t \leq 6$	245	—	205	—	—	8
		$6 < t \leq 12$	225	—	175	—	—	8
	T6[e]	$t \leq 6$	265	—	235	—	—	8
6008	T4	$t \leq 10$	180	—	90	—	15	13
	T6[e]	$t \leq 5$	270	—	225	—	8	6
		$5 < t \leq 10$	260	—	215	—	8	6
6110A	T4[e]	$t \leq 25$	320	—	220	—	16	14
	T6[e]	$t \leq 25$	380	—	360	—	10	8

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Table 2 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6012	T6[e] T6510[e] T6511[e]	$t \leq 30$	310	—	260	—	8	6
6014	T4[e]	$t \leq 10$	140	—	70	—	15	13
	T6[e]	$t \leq 5$	250	—	200	—	8	6
		$5 < t \leq 10$	225	—	180	—	8	6
6018	T6[e] T6510[e] T6511[e]	$t \leq 30$	310	—	260	—	8	6
6351	O H111	$t \leq 25$	—	160	—	110	14	12
	T4[e]	$t \leq 25$	205	—	110	—	14	12
	T6[e]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 25$	300	—	255	—	10	8
6060	T4[e]	$t \leq 15$	120	—	60	—	16	14
	T5	$t \leq 15$	160	—	120	—	8	6
	T6[e]	$t \leq 15$	190	—	150	—	8	6
	T64[e]	$t \leq 15$	180	—	120	—	12	10
	T66[e]	$t \leq 15$	215	—	160	—	8	6
6360	T4[e]	$t \leq 15$	110	—	50	—	16	14
	T5	$t \leq 15$	150	—	120	—	8	6
	T6[e]	$t \leq 15$	185	—	140	—	8	6
	T66[e]	$t \leq 15$	195	—	150	—	8	6
6061	O	All	—	145	—	110	—	16
	T4[e]	All	175	—	110	—	—	16
	T42[c]	All	175	—	85	—	—	16
	T6[e]	$t \leq 6$	260	—	240	—	—	8
	T62[d]	$6 < t$	260	—	240	—	—	10
6261	O H111	$t \leq 10$	—	170	—	120	14	12
	T4[e]	$t \leq 10$	180	—	100	—	14	12
	T5	$t \leq 5$	270	—	230	—	8	7
		$5 < t \leq 10$	260	—	220	—	9	8
	T6[e]	$t \leq 5$	290	—	245	—	8	7
		$5 < t \leq 10$	290	—	245	—	9	8
6262	T6[e]	$t \leq 25$	260	—	240	—	10	8

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Table 2 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6063	O H111	$t \leq 25$	—	130	—	—	18	16
	T1	$t \leq 12$	120	—	60	—	—	12
		$12 < t \leq 25$	110	—	55	—	—	12
	T4[e]	$t \leq 10$	130	—	65	—	14	12
		$10 < t \leq 25$	120	—	65	—	12	10
	T5	$t \leq 12$	155	—	110	—	—	8
		$12 < t \leq 25$	145	—	110	—	—	8
	T6[e]	$t \leq 3$	205	—	170	—	—	8
		$3 < t \leq 25$	205	—	170	—	—	10
	T66[e]	$t \leq 25$	245	—	200	—	10	8
6063A	O H111	$t \leq 25$	—	150	—	—	16	14
	T4[e]	$t \leq 10$	150	—	90	—	12	10
		$10 < t \leq 25$	140	—	90	—	10	8
	T5	$t \leq 25$	200	—	160	—	7	5
	T6[e]	$t \leq 25$	230	—	190	—	7	5
6463	T6[e]	$t \leq 25$	195	—	160	—	10	8
6081	T6[e]	$t \leq 25$	275	—	240	—	8	6
6082	O H111	$t \leq 25$	—	160	—	110	14	12
	T4[e]	$t \leq 25$	205	—	110	—	14	12
	T6[e]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 25$	310	—	260	—	10	8
7003	T5	≤ 12	285	—	245	—	—	10
		$12 < t \leq 25$	275	—	235	—	—	10
	T6[e]	$t \leq 10$	350	—	290	—	10	8
		$10 < t \leq 25$	340	—	280	—	10	8
7204	O	$1,6 \leq t \leq 12$	—	245	—	145	—	12
	T4[he]	$1,6 \leq t \leq 12$	315	—	195	—	—	11
	T6[e]	$1,6 \leq t \leq 6$	325	—	235	—	—	10
		$6 < t \leq 12$	335	—	255	—	-—	10
7005	T6[e]	$t \leq 15$	350	—	290	—	10	8
7108	T6[e]	$t \leq 20$	310	—	260	—	10	8
7108A	T6[e]	$t \leq 20$	310		260		12	10
	T66[e]	$t \leq 20$	350		290		10	8
7020	T6[e]	$t \leq 15$	350	—	290	—	10	8
7021	T6[e]	$t \leq 10$	410	—	350	—	10	8
7022	T6[e] T6510[e] T6511[e]	$t \leq 30$	490	—	420	—	7	5

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Table 2 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
7049A	T6 T6510 T6511	$t \leq 30$	610	—	530	—	5	4
7050	T73511	t or $D \leq 125$, $A \leq 20\,000$	485	—	415	—	7	8
	T74511	$t \leq 76$	505	—	435	—	—	7
	T76510	t or $D \leq 127$	545	—	475	—	—	7
7075	O[b]	All	—	275	—	165	—	10
	T6	$t \leq 6$	540	—	480	—	—	7
	T62[d]	$6 < t \leq 75$	560	—	500	—	—	7
	T6510 T6511	$t \leq 5$	540	—	485	—	8	6
		$5 < t \leq 10$	560	—	505	—	7	5
		$10 < t \leq 50$	560	—	495	—	6	4
	T73[i]	$t \leq 5$	470	—	400	—	7	5
	T73510[i]	$5 < t \leq 25$	485	—	420	—	8	6
	T73511[i]	$25 < t \leq 50$	475	—	405	—	8	—

[a] t (mm) = wall thickness.

D (mm) = outside diameter.

A (mm^2) = cross-section area.

[b] The material of temper grade O shall be a basis for materials of temper grades T42 or T62. When requested by the purchaser, the capability to achieve T42 and T62 properties after appropriate heat treatment is demonstrated.

[c] The mechanical properties of temper grade T42 shall be applied only when the material of temper grade O has been naturally age-hardened after solution treatment by the purchaser. If the material is cold or hot worked prior to solution treatment by the purchaser, its mechanical properties can be lower than the specified values.

[d] The mechanical properties of temper grade T62 shall be applied only when the material of temper grade O has been artificially age-hardened after solution treatment by the purchaser. If the material is cold or hot worked prior to solution treatment by the purchaser, its mechanical properties can be lower than the specified values.

[e] Applicable for those after extrusion followed by controlled cooling at a rate rapid enough to hold constituents in solution.

[f] Electrical conductivity $\gamma \geq 30$ MS/m.

[g] Electrical conductivity $\gamma \geq 32$ MS/m.

[h] The mechanical properties of temper grade T4 are the values specified, based on reference values obtained by one month of natural ageing at room temperature (approximately 20 °C) after solution treatment.

In the case of the tensile test made before completion of one month of natural ageing, the tensile performance of temper grade T4 can be deemed as guaranteed if the test result of the test piece which has been artificially aged after solution treatment is confirmed to satisfy the tensile performance of temper grade T6.

[i] For materials of thickness 20 mm or above, see ISO 6362-1, with respect to stress corrosion cracking resistance.

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Table 3 — Mechanical properties of profiles

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
1070	H112	All	55	—	15	—	—	—
1070A	H112	All	60		20		25	23
1060	H112	$3 \leq t \leq 30$	60	—	30	—	—	25
1050	H112	All	65	—	20	—	—	—
1050A	H112	All	60	—	20	—	25	23
1350[b]	H112	All	60	—	—	—	25	23
1100 1200	H112	All	75	—	20	—	—	—
2007	T4 T4510 T4511	$t \leq 30$	370	—	250	—	8	6
2014[c]	O[d]	All	—	245	—	125	—	12
	T4	All	345	—	245	—	—	12
	T42[e]	All	345	—	205	—	—	12
	T4510 T4511	$t \leq 25$ $25 < t \leq 75$	370 410	— —	230 270	— —	11 10	10 —
	T6	$t \leq 15$	415	—	365	—	6	7
		$15 < t \leq 30$	440	—	400	—	6	7
		$30 < t, A \leq 16\,000$	470	—	410	—	5	7
		$30 < t, 16\,000 < A \leq 20\,000$	470	—	400	—	5	6
		$30 < t, 20\,000 < A \leq 25\,000$	450	—	380	—	—	6
		$30 < t, 25\,000 < A \leq 30\,000$	430	—	365	—	—	6
	T62[f]	$t \leq 19$	410	—	365	—	—	7
		$19 < , t, A \leq 16\,000$	410	—	365	—	—	7
		$19 < t, 16\,000 < A \leq 20\,000$	410	—	365	—	—	6
	T6510	$t \leq 25$	415	—	370	—	7	5
	T6511	$25 < t \leq 75$	460	—	415	—	7	—
2014A[c]	O H111	All	—	250	—	135	12	10
	T4 T4510 T4511	$t \leq 25$ $25 < t \leq 75$	370 410	— —	230 270	— —	11 10	10 —
	T6 T6510 T6511	$t \leq 25$ $25 < t \leq 75$	415 460	— —	370 415	— —	7 7	5 —
2017	O[d]	All	—	245	—	125	—	16
	T4	$A \leq 70\,000$	345	—	215	—	—	12
	T42[e]	$70\,000 < A \leq 100\,000$	335	—	195	—	—	12

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Table 3 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
2017A	T4 T4510 T4511	$t \leq 30$	380	—	260	—	10	8
2024[c]	O[d]	All	—	245	—	125	—	12
	T3	$t \leq 5$	395	—	290	—	—	12
		$5 < t \leq 15$	395	—	290	—	—	12
		$15 < t \leq 30$	415	—	305	—	9	—
	T3510 T3511	$t \leq 15$	395	—	290	—	8	6
		$15 < t \leq 50$	420	—	290	—	8	—
	T4	$t \leq 6$	390	—	295	—	—	12
		$6 < t \leq 19$	410	—	305	—	—	12
		$19 < t \leq 38$	450	—	315	—	—	10
		$38 < t, A \leq 16\,000$	480	—	365	—	—	10
		$38 < t, 16\,000 < A \leq 20\,000$	470	—	335	—	—	8
		$38 < t, 20\,000 < A \leq 30\,000$	460	—	315	—	—	8
	T42[e]	$t \leq 19$	390	—	265	—	—	12
		$19 < t \leq 38$	390	—	265	—	—	10
		$38 < t, A \leq 16\,000$	390	—	265	—	—	10
		$38 < t, 16\,000 < A \leq 20\,000$	390	—	265	—	—	8
	T81	$t \leq 5$	440	—	385	—	—	4
		$5 < t \leq 15$	440	—	385	—	—	4
		$15 < t \leq 30$	450	—	400	—	4	—
	T8 T8510 T8511	$t \leq 50$	455	—	380	—	5	4
2030	T4 T4510 T4511	$t \leq 30$	370	—	250	—	8	6
3021	H112	All	80	—	20	—	25	—
3102	H112	All	80	—	30	—	25	23
3003 3203	H112	All	95	—	35	—	17	22
3103	H112	All	95	—	35	—	25	20
5005, 5005A	H112	All	100	—	40	—	18	16
	O H111	$t \leq 20$	100	150	40	—	20	18
5019	H112	$t \leq 30$	250	—	110	—	14	12
5049	H112	All	180	—	80	—	15	13
5051A	H112	All	150	—	60	—	16	14
5251	H112	All	160	—	60	—	16	14

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Table 3 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
5052	H112	All	175	—	70	—	—	—
	O	All	175	245	70	—	—	20
5154A	H112	$t \leq 25$	200	—	85	—	16	14
5454	H112	$t \leq 130, A \leq 20\,000$	215	—	85	—	—	12
	O	$t \leq 130, A \leq 20\,000$	215	285	85	—	—	14
5754	H112	$t \leq 25$	180	—	80	—	14	12
5083	H112	$t \leq 130, A \leq 20\,000$	270	—	140	—	12	12
	O	$t \leq 38, A \leq 20\,000$	275	355	120	—	—	14
		$38 < t \leq 130, A \leq 20\,000$	275	355	110	—	—	14
5086	H112	$t \leq 130, A \leq 20\,000$	240	—	95	—	—	12
	O	$t \leq 130, A \leq 20\,000$	240	315	95	—	—	14
6101	T6[g]	$3 \leq t \leq 7$	195	—	165	—	—	10
		$7 < t \leq 17$	195	—	165	—	—	12
		$17 < t \leq 30$	175	—	145	—	—	14
	T7	$3 \leq t \leq 17$	135	—	110	—	—	10
6101A	T6[g]	$t \leq 50$	200	—	170	—	10	8
6101B	T6[g,h]	$t \leq 15$	215	—	160	—	8	6
	T7[g,i]	$t \leq 15$	170	—	120	—	12	10
6005[c] 6005A[c]	T4[g] (OP)[j]	$t \leq 25$	180	—	90	—	15	13
	T4[g] (HP)[k]	$t \leq 10$	180	—	90	—	15	13
	T5	$t \leq 8$	250	—	200	—	8	—
	T6[g] (OP)[j]	$t \leq 5$	270	—	225	—	8	6
		$5 < t \leq 10$	260	—	215	—	8	6
		$10 < t \leq 25$	250	—	200	—	8	6
	T6[g] (HP)[k]	$t \leq 5$	255	—	215	—	8	6
		$5 < t \leq 15$	250	—	200	—	8	6
6005C	T5	$t \leq 6$	245	—	205	—	—	8
		$6 < t \leq 12$	225	—	175	—	—	8
	T6[g]	$t \leq 6$	265	—	235	—	—	8
6106	T6[g]	$t \leq 10$	250	—	200	—	8	6
6008[c]	T4[g] (OP)[j]	$t \leq 10$	180	—	90	—	15	13
	T4[g] (HP)[k]	$t \leq 10$	180	—	90	—	15	13
	T6[g] (OP)[j]	$t \leq 5$	270	—	225	—	8	6
		$5 < t \leq 10$	260	—	215	—	8	6
	T6[g] (HP)[k]	$t \leq 5$	255	—	215	—	8	6
		$5 < t \leq 10$	250	—	200	—	8	6
6110A	T4[g]	$t \leq 25$	320	—	220	—	16	14
	T6[g]	$t \leq 25$	380	—	360	—	10	8

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Table 3 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6012	T6[g] T6510[g] T6511[g]	$t \leq 30$	310	—	260	—	8	6
6014[c]	T4[g] (OP)[j]	$t \leq 10$	140	—	70	—	15	13
	T4[g] (HP)[k]	$t \leq 10$	140	—	70	—	15	13
	T6[g] (OP)[j]	$t \leq 5$	250	—	200	—	10	8
		$5 < t \leq 10$	225	—	180	—	8	6
	T6[g] (HP)[k]	$t \leq 5$	250	—	200	—	8	6
		$5 < t \leq 10$	225	—	180	—	8	6
6018	T6[g] T6510[g] T6511[g]	$t \leq 30$	310	—	260	—	8	6
6351[c]	O H111	All	—	160	—	110	14	12
	T4[g]	$t \leq 25$	205	—	110	—	14	12
	T5 (OP)[j]	$t \leq 5$	270	—	230	—	8	6
	T5 (HP)[k]	$t \leq 5$	270	—	230	—	8	6
	T6[g] (OP)[j]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 25$	300	—	255	—	10	8
	T6[g] (HP)[k]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 15$	300	—	255	—	10	8
6060[c]	T4[g]	$t \leq 25$	120	—	60	—	16	14
	T5	$t \leq 5$	160	—	120	—	8	6
		$5 < t \leq 25$	140	—	100	—	8	6
	T6[g]	$t \leq 3$	190	—	150	—	8	6
		$3 < t \leq 25$	170	—	140	—	8	6
	T64[g]	$t \leq 15$	180	—	120	—	12	10
	T66[g]	$t \leq 3$	215	—	160	—	8	6
		$3 < t \leq 25$	195	—	150	—	8	6
6360[c]	T4[g]	$t \leq 25$	110	—	50	—	16	14
	T5	$t \leq 25$	150	—	110	—	8	6
	T6[g]	$t \leq 25$	185	—	140	—	8	6
	T66[g]	$t \leq 25$	195	—	150	—	8	6
6061[c]	O[d]	All	—	145	—	110	—	16
	T4[g]	All	175	—	110	—	14	16
	T42[e]	All	175	—	85	—	—	16
	T6[g], T62[f]	$t \leq 6$	260	—	240	—	7	8
		$6 < t$	260	—	240	—	—	10
	O,H111	All	—	170	—	120	14	12

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Table 3 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
6261[c]	T4[g]	$t \leq 25$	180	—	100	—	14	12
	T5 (OP)[j]	$t \leq 5$	270	—	230	—	8	7
		$5 < t \leq 25$	260	—	220	—	9	8
		$25 < t$	250	—	210	—	9	—
	T5 (HP)[k]	$t \leq 5$	270	—	230	—	8	7
		$5 < t \leq 10$	260	—	220	—	9	8
	T6[g] (OP)[j]	$t \leq 5$	290	—	245	—	8	7
		$5 < t \leq 25$	280	—	235	—	8	7
	T6[g] (HP) [k]	$t \leq 5$	290	—	245	—	8	7
		$5 < t \leq 10$	270	—	230	—	9	8
6262	T6[g]	$t \leq 25$	260	—	240	—	10	8
6262A	T6[g]	$t \leq 25$	260	—	240	—	10	8
6063[c]	T1	$t \leq 12$	120	—	60	—	—	12
		$12 < t \leq 25$	110	—	55	—	—	12
	T4[g]	$t \leq 25$	130	—	65	—	14	12
	T5[l]	$t \leq 12$	150	—	110	—	7	8
		$12 < t \leq 25$	145	—	105	—	7	8
	T6[g]	$t \leq 3$	205	—	170	—	—	8
		$3 < t \leq 25$	205	—	170	—	—	10
	T64[g]	$t \leq 15$	180	—	120	—	12	10
	T66[g]	$t \leq 10$	245	—	200	—	8	6
		$10 < t \leq 25$	225	—	180	—	8	6
6063A[c]	T4[g]	$t \leq 25$	150	—	90	—	12	10
	T5	$t \leq 10$	200	—	160	—	7	5
		$10 < t \leq 25$	190	—	150	—	6	4
	T6[g]	$t \leq 10$	230	—	190	—	7	5
		$10 < t \leq 25$	220	—	180	—	5	4
6463[c]	T4[g]	$t \leq 50$	125	—	75	—	14	12
	T5	$t \leq 50$	150	—	110	—	8	6
	T6[g]	$t \leq 50$	195	—	160	—	10	8
6065	T6[g]	$t \leq 25$	260	—	240	—	10	8
6081	T6[g] (OP)[j]	$t \leq 25$	275	—	240	—	8	6
	T6[g] (HP)[k]	$t \leq 15$	275	—	240	—	8	6
6082[c]	O H111	All	—	160	—	110	14	12
	T4[g]	$t \leq 15$	205	—	110	—	14	12
	T5 (OP)[j]	$t \leq 5$	270	—	230	—	8	6
	T5 (HP)[k]	$t \leq 5$	270	—	230	—	8	6

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Table 3 *(continued)*

Alloy	Temper	Dimensions[a]	Tensile strength R_m MPa		0,2 % proof stress $R_{p0,2}$ MPa		Elongation min.	
			min.	max.	min.	max.	A %	A_{50mm} %
	T6[g] (OP)[j]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 25$	310	—	260	—	10	8
	T6[g] (HP)[k]	$t \leq 5$	290	—	250	—	8	6
		$5 < t \leq 25$	310	—	260	—	10	8
7003[c]	T5	$t \leq 12$	285	—	245	—	—	10
		$12 < t \leq 25$	275	—	235	—	—	10
	T6[g]	$t \leq 10$	350	—	290	—	10	8
		$10 < t \leq 25$	340	—	280	—	10	8
7204	O	$A \leq 20\,000$	—	245	—	145	—	12
	T4[m]	$A \leq 20\,000$	315	—	195	—	—	11
	T5	$A \leq 20\,000$	325	—	245	—	—	10
	T6	$A \leq 20\,000$	335	—	275	—	—	10
7005	T53	$3 < t \leq 25, A \leq 16\,000$	345	—	305	—	9	10
	T6[g]	$t \leq 40$	350	—	290	—	10	8
7108	T6[g]	$t \leq 30$	310	—	260	—	10	8
7108A	T6[g]	$t \leq 40$	310	—	260	—	12	10
	T66[g]	$t \leq 40$	350	—	290	—	10	8
7020	T6[g]	$t \leq 40$	350	—	290	—	10	8
7021	T6[g]	$t \leq 20$	410	—	350	—	10	8
7022	T6 [g] T6510[g] T6511[g]	$t \leq 30$	490	—	420	—	7	5
7049A	T6 T6510 T6511	$t \leq 30$	610	—	530	—	5	4
7050	T73511	$t \leq 125, A \leq 20\,000$	485	—	415	—	7	8
	T74511	$t \leq 76$	505	—	435	—	—	7
	T76510	$t \leq 127$	545	—	475	—	—	7
7075[c]	O[d]	All	—	275	—	165	—	10
	T6 T62[f]	$t \leq 6$	540	—	480	—	6	7
		$6 < t \leq 75$	560	—	500	—	—	7
		$75 < t \leq 110, A \leq 13\,000$	560	—	490	—	—	7
		$75 < t \leq 110, 13\,000 < A \leq 20\,000$	540	—	480	—	—	6
		$110 < t \leq 130, A \leq 20\,000$	540	—	470	—	—	6
	T6510	$t \leq 25$	530	—	460	—	6	4
	T6511	$25 < t \leq 60$	540	—	470	—	6	—
	T73[n] T73510[n] T73511[n]	$t \leq 30$	470	—	400	—	7	—

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