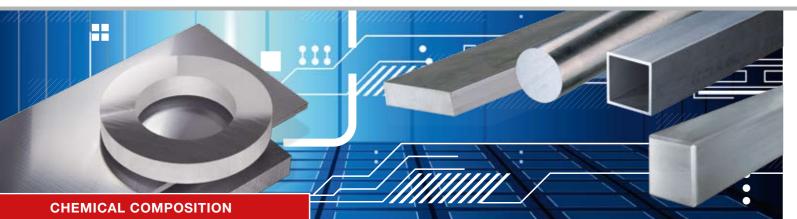
## **EN AW-6082**

## WORLD OF METALS



## Aluminium and aluminium alloys

#### Alloy designation:

EN AW	Al Si1 Mg Mn
Old designation	Al Mg Si1
Material no. according to DIN	3.2315
Great Britain BS	H30
Italy UNI	9006/4
Spain	L-3453
Sweden	144212
Norway	
France AFNOR	A-SGM0,7
Colour code	RAL 5010 Gentian Blue

#### Typical physical properties:

Density [g/cm <sup>3</sup> ]	2,70	
Elastic modulus [GPa]	70,0	
Thermal conductivity [	W/m*K]	170 – 220
	-50°C – 20°C	
Thermal expansion	20°C – 100°C	23,4
coefficient[K-1*10-6]	20°C – 200°C	
Specific heat J/(kg * K)	)	896
Electrical conductivity	24 – 32	
Shear modulus [GPa]		26,4

### Chemical composition<sup>x</sup> (EN 573-3):

Specifications in % Remainder: Aluminium								Oth	ier				
Si Fe Cu Mn Mg Cr Ni Zn Ti Ga V Note							Individual	Total <sup>2</sup>					
0,70 - 1,3	0,50	0,10	0,40 - 1,0	0,60 - 1,2	0,25	-	0,20	0,10	-	-	-	0,05	0,15

X Chemical specifications as perc. of weight. If no ranges are specified, the alloy content has the maximum value.

<sup>2</sup> Includes all items listed for which no limit values are specified.

## Special features of this material:

- Good corrosion resistance
- Curable alloy
- Good machinability

Good welding properties

## **Applications:**

- Shipbuilding
- Railed vehicles
- Boiler and container construction
- Aerospace
- Military technology

#### **Available forms:**

Sheets · Plates · Cuttings · Circular blanks · Rings · Bars · Tubes · Wires · Parts from drawings

#### Heat treatment:

Soft annealing / recrystallisation annealing						
Annealing temperature 380°C - 420°C						
Heating-up time	1 – 2 hours					
Cooling conditions	≤ 30°C/h to 250°C, below 250°C in air					

#### Other data:

Processing / machinability		
Soft annealed	4	
Work-hardened	-	
Heat-treated	2	
Dimensional stability	3 –	4
Erosion	1	
Surface treatment		
Anodising - (protective anodisation)	1	
Special anodising quality (EQ)EQ	-	
Anodising - decorative	3	
Painting / coating	2	
Polishing	1 – 1	2
Polishing Welding	1-3	2 Filler metal
-	1 – : 3	Filler metal
Welding		Filler metal SG-Al Mg4
Welding Gas	3	Filler metal
Welding Gas WIG	3 2	Filler metal SG-Al Mg4 SG-Al Mg4,5 Mn
Welding Gas WIG MIG	3 2 1	Filler metal SG-Al Mg4 SG-Al Mg4,5 Mn
Welding Gas WIG MIG Resistance welding	3 2 1	Filler metal SG-Al Mg4 SG-Al Mg4,5 Mn SG-Al Si5
Welding Gas WIG MIG Resistance welding Solder	3 2 1 3	Filler metal SG-AI Mg4 SG-AI Mg4,5 Mn SG-AI Si5
Welding Gas WIG MIG Resistance welding Solder Brazing with flux	3 2 1 3 3-	Filler metal SG-AI Mg4 SG-AI Mg4,5 Mn SG-AI Si5

## Legend:

1	very	good

2 good

3 moderate 4 poor

- 5 unsuited
- EQ anodising quality must be ordered separately and confirmed

BIKAR-METALLE GmbH Industriestrasse • D-57319 Bad Berleburg

phone: +49(0)2751/9551 111 e-mail:info@bikar.com fax: +49(0)2751/9551 555 web: www.bikar.com

Hardening	
Solution annealing	525°C – 540°C
Quenching	water · air
Natural ageing treatment	5 – 8 days
Artificial ageing treatment	155°C – 190°C · 4 – 16 hours

#### Corrosion resistance

In a normal atmosphere/ weather conditions	1
Sea water atmosphere	2

#### Metal forming

Cold forming		Delivery condition
Bending	3	T3 · T4
Pressure forming	2	0
Deep drawing (condition-based)	2	0
Upsetting (condition-based)	2	0
Impact extrusion	2	0
Hot forming		
Drop forging	2	
Extrusion moulding	2	
Hammer forging	2	

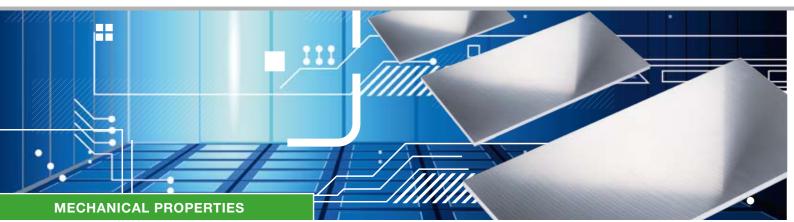
Suitable for food industry according to DIN EN 602	yes
Working temperatures	Long-term approx. 120°C – 135°C, Short-term approx. 155°C – 170°C

The specifications in our data sheets are subject to correction and are only valid as references. Liability is excluded in this regard. We reserve the right to make changes to the standards and informative values. The agreements of our order confirmation are always authoritative. With regard to anodic oxidisability, we point out that we accept no liability for the anodisation result and the colour formation for decorative applications. The same applies to the corrosion resistance. Special arrangements must be made in writing.



## **Sheets / Plates**

WORLD OF METALS



Aluminium and aluminium alloys

## EN AW-6082 AI Si1 Mg Mn

## EN 485-2 Mechanical properties:

Delivery condition <sup>5</sup>	Nominal thickness mm		Tensile strength R <sub>m</sub> MPa		Elastic limit R <sub>p0.2</sub> MPa		Elongation % min.		Bending radius <sup>9</sup>		Hardness <sup>9</sup> HBW
	over	to	min.	max.	min.	max.	A50 mm	А	180°	90°	
	0,4	1,5	310	-	260	-	6	-	-	2,5 t <sup>8</sup>	94
	1,5	3,0	310	-	260	-	7	-	-	3,5 t <sup>8</sup>	94
	3,0	6,0	310	-	260	-	10	-	-	4,5 t <sup>8</sup>	94
T6	6,0	12,5	300	-	255	-	9	-	-	6,0 t <sup>8</sup>	91
T62 T651	12,5	60,0	295	-	240	-	-	8	-	-	89
1001	60,0	100,0	295	-	240	-	-	7	-	-	89
	100,0	150,0	275	-	240	-	-	6	-	-	84
	150,0	175,0	275	-	230	-	-	4	-	-	83
	175,0	350,0	260	-	220	-	-	2	-	-	-
5	Other pos	sible delivery	/ conditions f	or this alloy:	0 · T4 · T42	· T451 · T6	1 · T6151				
8	Considera	bly lower be	nding radii ca	an be obtaine	d immediate	ly after solu	tion annealin	g.			
9	For inform	ation only									

## We supply aluminium sheets and plates of alloy EN AW-6082 · AI Si1 Mg Mn in the following dimensions:

Thickness mm	Length x Width mm	Length x Width mm	Length x Width mm
0,5 - 4	2.000 x 1.000		
5 – 6	2.000 x 1.000	2.500 x 1.250	3.000 x 1.500
8 – 200	2.020 x 1.020	2.520 x 1.270	3.020 x 1.520

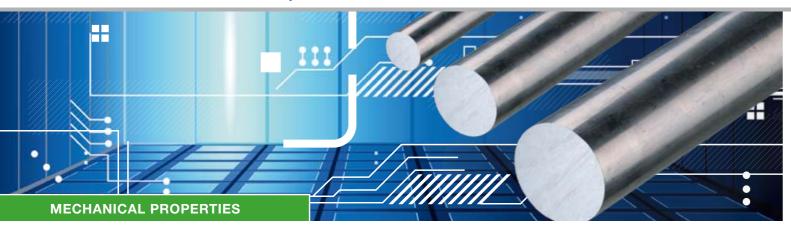


The specifications in our data sheets are subject to correction and are only valid as references. Liability is excluded in this regard. We reserve the right to make changes to the standards and informative values. The agreements of our order confirmation are always authoritative. With regard to anodic oxidisability, we point out that we accept no liability for the anodisation result and the colour formation for decorative applications. The same applies to the corrosion resistance. Special arrangements must be made in writing.

BIKAR-METALLE GmbH Industriestrasse • D-57319 Bad Berleburg e-mail:info@bikar.com phone: +49(0)2751/9551 111 web: www.bikar.com fax: +49(0)2751/9551 555



## Bars - round drawn · pressed



Aluminium and aluminium alloys

## EN AW-6082 AI Si1 Mg Mn

#### EN 754-2 Mechanical properties: round bars - drawn

Delivery condition <sup>5</sup>	Dia. mm.	Tensile strength <i>R<sub>m</sub></i> MPa		Elastic limit R <sub>p0.2</sub> MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 80	205	-	110	-	12	14	70
T6	≤ 80	310	-	255	-	9	10	95
5	Other possible delivery conditions for this alloy: O, H111							
9	For information only							

## EN 755-2 Mechanical properties: round bars – pressed

Delivery condition <sup>5</sup>	Dia. mm.	Tensile strength R <sub>m</sub> MPa		Elastic limit <i>R</i> <sub>ρ0.2</sub> MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 200	205	-	110	-	12	14	70
	≤ 20	295	-	250	-	6	8	95
T6	> 20 to <150	310	-	260	-	-	8	95
10	$> 150$ to $\leq 200$	280	-	240	-	-	6	95
	$> 200$ to $\leq 250$	270	-	200	-	-	6	95
5	Other possible delivery	conditions for t	his alloy: O, H1	11				
9	For information only	For information only						

## We supply aluminium round bars of alloy 6082 in the following dimensions:

Thickness mm	drawn: 2 - 60

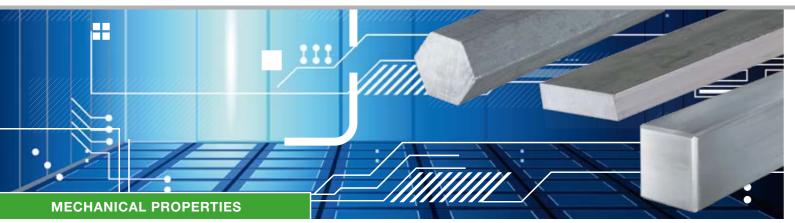
The specifications in our data sheets are subject to correction and are only valid as references. Liability is excluded in this regard. We reserve the right to make changes to the standards and informative values. The agreements of our order confirmation are always authoritative. With regard to anodic oxidisability, we point out that we accept no liability for the anodisation result and the colour formation for decorative applications. The same applies to the corrosion resistance. Special arrangements must be made in writing.

pressed: 8 - 530

n phone: +49(0)2751/9551 111 n fax: +49(0)2751/9551 555



## Bars square / flat / hexagonal drawn · pressed



Aluminium and aluminium alloys

## EN AW-6082 AI Si1 Mg Mn

## EN 754-2 Mechanical properties: Bars - drawn square · flat · hexagonal

Delivery condition <sup>5</sup>	Thickness for flat 4 + 6 pt: wrench size	Tensile strength R <sub>m</sub> MPa		Elastic limit <i>R</i> <sub>p0.2</sub> MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 80	205	-	110	-	12	14	70
Т6	≤ 80	310 - 255 - 9 10 95				95		
5	Other possible delivery conditions for this alloy: O, H111							
9	For information only							

#### EN 755-2 Mechanical properties: Bars - pressed square · flat · hexagonal

Delivery condition <sup>5</sup>	Thickness for flat 4 + 6 pt: wrench size		Tensile strength R <sub>m</sub> MPa		Elastic limit <i>R</i> <sub>p0.2</sub> MPa		Elongation % min.	
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 200	205	-	110	-	12	14	70
	≤ 20	295	-	250	-	6	8	95
T6	$> 20$ to $\le 150$	310	-	260	-	-	8	95
10	$> 150 \text{ to } \le 200$	280	-	240	-	-	6	95
	$>200$ to $\ \leq 250$	270	-	200	-	-	6	95
5	Other possible delivery conditions for this alloy: O, H111							
9	For information only	For information only						

## Aluminium – We supply bars of alloy 6082 in the following dimensions:

Thickness mm	Square pressed: 8 x 8 -
--------------	-------------------------

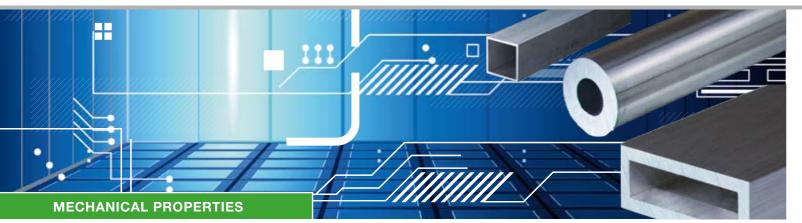
The specifications in our data sheets are subject to correction and are only valid as references. Liability is excluded in this regard. We reserve the right to make changes to the standards and informative values. The agreements of our order confirmation are always authoritative. With regard to anodic oxidisability, we point out that we accept no liability for the anodisation result and the colour formation for decorative applications. The same applies to the corrosion resistance. Special arrangements must be made in writing.

- 120 x 120

phone: +49(0)2751/9551 111 fax: +49(0)2751/9551 555



## Tubes drawn · pressed



Aluminium and aluminium alloys

# EN AW-6082 AI Si1 Mg Mn

## EN 754-2 Mechanical properties: tubes – drawn

Delivery condition <sup>5</sup>	Wall thickness mm	Tensile strength R <sub>m</sub> MPa		Elastic limit <i>R</i> <sub>p0.2</sub> MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 20	205	-	110	-	12	14	70
T6	≤ 5	310	-	255	-	7	8	95
10	$> 5$ to $\leq 20$	310	-	240	-	9	10	95
5	Other possible delivery conditions for this alloy: O, H111							
9	For information only							

## EN 755-2 Mechanical properties: tubes - pressed

Delivery condition <sup>5</sup>	Wall thickness mm	Tensile strength R <sub>m</sub> MPa		Elastic limit <i>R</i> <sub>p0.2</sub> MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	А	
T4	≤ 25	205	-	110	-	12	14	70
T6	≤ 5	290	-	250	-	6	8	95
10	$> 5$ to $\leq 25$	310	-	260	-	8	10	95
5	Other possible delivery conditions for this alloy: O, H111							
9	For information only							

The specifications in our data sheets are subject to correction and are only valid as references. Liability is excluded in this regard. We reserve the right to make changes to the standards and informative values. The agreements of our order confirmation are always authoritative. With regard to anodic oxidisability, we point out that we accept no liability for the anodisation result and the colour formation for decorative applications. The same applies to the corrosion resistance. Special arrangements must be made in writing.

BIKAR-METALLE GmbH e-m Industriestrasse • D-57319 Bad Berleburg web

e-mail:info@bikar.com phone: +49(0)2751/9551 111 web: www.bikar.com fax: +49(0)2751/9551 555



## **Delivery conditions**

# 

F	Production state (no limit values for mechanical properties defined).
H111	Annealed and slightly work-hardened by subsequent operations, e.g. stretching or adjustment (less than H11).
H112	Slightly work-hardened by hot forming or limited cold forming (with defined limit values of the mechanical properties).
H116	Applies to aluminium-magnesium alloys with a magnesium content $> = 4\%$ for which the limit values of the mechanical properties and the resistance to exfoliation corrosion are defined.
H12	Work-hardened - 1/4 hard.
H14	Work-hardened - 1/2 hard.
H16	Work-hardened - 3/4 hard.
H18	Work-hardened - 4/4 hard (fully through-hardened).
H19	Work-hardened - extra hard.
H22	Work-hardened and re-annealed - 1/4 hard.
H24	Work-hardened and re-annealed - 1/2 hard.
H26	Work-hardened and re-annealed - 3/4 hard.
H28	Work-hardened and re-annealed - 4/4 hard (fully through-hardened).
H32	Work-hardened and stabilised - 1/4 hard.
H34	Work-hardened and stabilised - 1/2 hard.
H36	Work-hardened and stabilised - 3/4 hard.
H38	Work-hardened and stabilised - 4/4 hard (fully through-hardened).
H42	Work-hardened and enamelled - 1/4 hard.
H44	Work-hardened and enamelled - 1/2 hard.
H46	Work-hardened and enamelled - 3/4 hard.
H48	Work-hardened and enamelled - 4/4 hard (fully through-hardened).
Hxx4	Applies to embossed or stamped metal sheets or strips, which are produced from the corresponding Hxx state.
Hxx5	Work-hardened - Applies for welded tubes.
0	Soft annealed - With the O state, products can be designated for which the required properties for the soft annealed state are achieved by the hot-forming process.
01	Thermally treated almost at the solution annealing temperature and time and cooled slowly to room temperature (formerly known as T41).
O2	Thermomechanically treated to improve formability as required for Superplastic Forming (SPF), for example.
O3	Homogenised.
T1	Quenched from the hot forming temperature and naturally aged.
T2	Quenched from the hot forming temperature, cold formed and naturally aged.
T3	Solution annealed, cold formed and naturally aged.
T31	Solution annealed, about 1% cold formed and naturally aged.

T351	Solution annealed, stress relief by controlled stretching (str 3% for rolled or cold reshaped bars, 1% to 5% for forgings readjusted after stretching.
T3510	Solution annealed, stress relief by controlled stretching (str to 3 % for drawn tubes) and naturally aged. The products
T3511	As T3510, but slight subsequent readjustment to comply w
T352	Solution annealed, stress relief by 1% to 5% permanent up
T354	Solution annealed, stress relief by cold readjustment in the
T36	Solution annealed, about 6% cold formed and naturally age
T37	Solution annealed, about 7% cold formed and naturally age
T39	Solution annealed and a certain degree of cold forming to a done before or after the natural ageing treatment.
T4	Solution annealed and naturally aged.
T42	Solution annealed and naturally aged. Applies to test mater products that are heat-treated from any state by the consu
T451	Solution annealed, stress relief by controlled stretching (str 3% for rolled or cold reshaped bars, 1% to 5% for forgings readjusted after stretching.
T4510	Solution annealed, stress relief by controlled stretching (str 0.5% to 3 % for drawn tubes) and naturally aged. The prod
T4511	As T4510, but slight subsequent readjustment to comply w
T452	Solution annealed, stress relief by 1% to 5% permanent up
T454	Solution annealed, stress relief by cold readjustment in the
<i>T</i> 5	Quenched from the hot forming temperature and artificially
T51	Quenched from the hot forming temperature and not fully arti
<i>T56</i>	Quenched from the hot forming temperature and artificially a (alloy of 6000 series).
<i>T</i> 6	Solution annealed and artificially aged.
T61	Solution annealed and not fully artificially aged to improve r
T6151	Solution annealed, stress relief by controlled stretching (stretc fully artificially aged to improve malleability. The products are r
T62	Solution annealed and artificially aged. Applies to test materia that are heat-treated from any state by the consumer.
T64	Solution annealed and then not fully artificially aged to impr
T651	Solution annealed, stress relief by controlled stretching (str 3% for rolled or cold reshaped bars, 1% to 5% for forgings readjusted after stretching.
T6510	Solution annealed, stress relief by controlled stretching (str to 3 % for drawn tubes) and artificially aged. The products
T6511	As T6510, but slight subsequent readjustment to comply w
T652	Solution annealed, stress relief by 1% to 5% permanent up
T654	Solution annealed, stress relief by cold readjustment in the

BIKAR-METALLE GmbH	e-ma
Industriestrasse • D-57319 Bad Berleburg	web:

## WORLD OF METALS

tretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to is or forged and rolled rings) and naturally aged. The products are not

retching degree 1% to 3 % for extruded bars, profiles and tubes, 0.5% s are not readjusted after stretching.

with the specified limits of size allowed.

psetting and naturally aged.

e finisher and naturally aged.

ged.

ged.

achieve the specified mechanical properties. Cold forming can be

erials that are heat-treated from the soft annealed or F state or for sumer.

tretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to is or forged and rolled rings) and naturally aged. The products are not

tretching degree: 1% to 3 % for extruded bars, profiles and tubes, oducts are not readjusted after stretching.

with the specified limits of size allowed.

psetting and naturally aged.

e finisher and naturally aged.

ly aged.

tificially aged to improve malleability.

aged - better mechanical properties than T5 by special process control

malleability.

tching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates) and then not end readjusted after stretching.

ials that are heat-treated from the soft annealed or F state or for products

prove malleability (between T6 and T61).

tretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to s or forged and rolled rings) and artificially aged. The products are not

tretching degree 1% to 3 % for extruded bars, profiles and tubes, 0.5% s are not readjusted after stretching.

with the specified limits of size allowed .

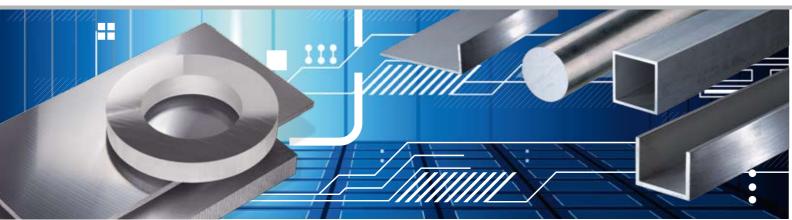
psetting and artificially aged.

e finisher and artificially aged.

h phone: +49(0)2751/9551 111 fax: +49(0)2751/9551 555



## **Delivery conditions**



<i>T66</i>	Solution annealed and artificially aged - better mechanical properties than T6 by special control of the process (alloy of 6000 series).
<i>T7</i>	Solution annealed and overcured (artificially aged).
T73	Solution annealed and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking.
T732	Solution annealed and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking. Applies to test materials that are heat-treated from the soft annealed or F state or for products that are heat-treated from any state by the consumer.
T7351	Solution annealed, stress relief by controlled stretching (stretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to 3% for rolled or cold reshaped bars, 1% to 5% for forgings or forged and rolled rings) and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking. The products are not readjusted after stretching.
T73510	Solution annealed by stress relief by controlled stretching (stretching degree: 1% to 3% for extruded rods, profiles and pipes, 0.5% to 3% for drawn tubes) and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking. The products are not readjusted after stretching.
T73511	As T73510, but slight subsequent readjustment to comply with the specified limits of size allowed.
T7352	Solution annealed, stress relief by 1% to 5% permanent upsetting and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking.
T7354	Solution annealed, stress relief by cold readjustment in the finisher and overcured (artificially aged) to achieve an optimum resistance to stress corrosion cracking.
T74	Solution annealed and overcured (artificially aged) (between T73 and T76).
T7451	Solution annealed, stress relief by controlled stretching (stretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to 3% for rolled or cold reshaped bars, 1% to 5% for forgings or forged and rolled rings) and overcured (artificially aged) (between T73 and T76). The products are not readjusted after stretching.
T74510	Solution annealed, stress relief by controlled stretching (stretching degree; 1% to 3 % for extruded bars, profiles and tubes, 0.5% to 3 % for drawn tubes) and overcured (artificially aged) (between T73 and T76). The products are not readjusted after stretching.
T74511	As T74510, but slight subsequent readjustment to comply with the specified limits of size allowed.
T7452	Solution annealed, stress relief by 1% to 5% permanent upsetting and overcured (artificially aged) (between T73 and T76).
T7454	Solution annealed, stress relief by cold readjustment in finisher and overcured (artificially aged) (between T73 and T76).
T76	Solution annealed and overcured (artificially aged) to achieve a good resistance to exfoliation corrosion.
T761	Solution annealed and overcured (artificially aged) to achieve a good resistance to exfoliation corrosion (applies to sheets and strips made of material 7475).
	supprinted of material (4) of.
T762	Solution annealed and overcured (artificially aged) to achieve a good resistance to exfoliation corrosion. Applies to test materials that are heat-treated from the soft annealed or F state or for products that are heat-treated from any state by the consumer.

## WORLD OF METALS

	T76510	for drawn tubes) and overcured (artificially aged) to achieve a after stretching.
	T76511	As T76510, but slight subsequent readjustment to comply
	T7652	Solution annealed, stress relief by 1% to 5% permanent up to exfoliation corrosion.
	T7654	Solution annealed, stress relief by cold readjustment in the to exfoliation corrosion.
	T79	Solution annealed and (very limitedly) overcured (artificially
	T79510	Solution annealed, stress relief by controlled stretching (stretch for drawn tubes) and (very limitedly) overcured (artificially a
	T79511	As T79510, but slight subsequent readjustment to comply
	T8	Solution annealed, cold formed and artificially aged.
	T81	Solution annealed, about 1% cold formed and artificially ag
	T82	Solution annealed by the consumer stretched in a controlle
	T832	Solution annealed stretched in a controlled manner to a certain
	T841	Solution annealed, cold formed and not fully artificially age
	T84151	Solution annealed, stress relief by controlled stretching with (plates made of alloys 2091 and 8090).
	T851	Solution annealed, stress relief by controlled stretching (str 3% for rolled or cold reshaped bars, 1% to 5% for forgings readjusted after stretching.
	T8510	Solution annealed, stress relief by controlled stretching (stretch for drawn tubes) and artificially aged. The products are not read
	T8511	As T8510, but slight subsequent readjustment to comply w
	T852	Solution annealed, stress relief by 1% to 5% permanent up
	T854	Solution annealed, stress relief by cold readjustment in the
	T86	Solution annealed, about 6% cold formed and artificially ag
	T87	Solution annealed, about 7% cold formed and artificially ag
	T89	Solution annealed and cold formed to a certain degree to a
	T9	Solution annealed, cold formed and artificially aged.
	W	Solution annealed (unstable state). The time span of natur
	W51	Solution annealed (unstable state), stress relief by controlle for plates, 1% to 3% for rolled or cold reshaped bars, 1% t readjusted after stretching.
	W510	Solution annealed (unstable state) and stress relief by cont profiles and tubes, 0.5% to 3 % for drawn tubes). The proc
ĺ	W511	As W510, but slight subsequent readjustment to comply w
ĺ	W52	Solution annealed (unstable state) and stress relief by 1% t
ĺ	W54	Solution annealed (unstable state) and stress relief by cold

BIKAR-METALLE GmbH Industriestrasse • D-57319 Bad Berleburg e-mail:info@bikar.com phone:+49(0)2751/9551 111 web: www.bikar.com fax: +49(0)2751/9551 555

Solution annealed, stress relief by controlled stretching (stretching degree: 1% to 3% for extruded rods, profiles and pipes, 0.5% to 3% for drawn tubes) and overcured (artificially aged) to achieve a good resistance to exfoliation corrosion. The products are not readjusted

with the specified limits of size allowed.

psetting and overcured (artificially aged) to achieve a good resistance

he finisher and overcured (artificially aged) to achieve a good resistance

v aged).

hing degree 1% to 3 % for extruded bars, profiles and tubes, 0.5% to 3 % aged). The products are not readjusted after stretching.

y with the specified limits of size allowed.

#### ged.

lled manner by at least 2% and artificially aged (alloy 8090).

in degree and artificially aged (applies to drawn tubes made of material 6063) ed (applies to sheets and strips made of alloys 2091 and 8090).

ith a stretching degree of 1.5% to 3% and not fully artificially aged

stretching degree: 0.5% to 3% for sheets, 1.5% to 3% for plates, 1% to gs or forged and rolled rings) and artificially aged. The products are not

hing degree 1% to 3 % for extruded bars, profiles and tubes, 0.5% to 3 % adjusted after stretching.

with the specified limits of size allowed.

psetting and artificially aged.

he finisher and artificially aged.

ged.

ged.

achieve the specified mechanical properties and artificially aged.

ral ageing can also be specified (W2H. . . ).

bled stretching (stretching degree: 0.5% to 3% for sheets, 1.5% to 3% for 5% for forgings or forged and rolled rings). The products are not

ntrolled stretching (stretching degree 1% to 3% for extruded bars, boducts are not readjusted after stretching.

with the specified limits of size allowed.

to 5% permanent upsetting.

ld readjustment in the finisher (forgings).





# **BIKAR METALLE** A COMPANY THAT CAN SIMPLY DO MORE!

Modern technologies make us powerful, flexible and allow us to provide the best quality!

## Computer-controlled high bay warehouse for

- Standard plates: Capacity 1,000 containers at 5,000 kg
- Super formats and plain milled plates: Capacity 800 containers at 3,500 kg

## Band saws

- Horizontal up to sizes of 6,020 x 3,020 x 1,150 mm
- Vertical up to sizes of 4,020 x 2,300 x 1,150 mm

## Buzz saws

• Up to sizes of 6,050 x 6,050 x 170 mm

## Blank saws and ring saws

• Up to a diameter of 2,500 mm

## **Deep hole drilling**

- Up to 1,100 mm depth
- Thread up to dia 70 mm

## Milling

- Precision surface cutter (portal milling machine) cutter head dia 2.700 mm
- Up to 6000 x 2,500 x 5-150 mm
- Surface cutter for individual depth up to 1,000 x 800 x 300 mm

## Chamfering

• 45° up to about 4 mm chamfer

## **Usual sawing tolerances**

- Band saws (sawing tolerance: +2 to 3/-0 mm)
- Circular blanks according to drawing (sawing tolerance: +8 to 10/-0 mm) depending on the type of pre-cut part
- of 170 mm

Other tolerances by arrangement



• Precision circular saws (sawing tolerance according to thickness: +-0.2 to +-0.5 mm) up to max. cutting height

# **OUR DELIVERY PROGRAM** DIVERSITY FROM A SINGLE SOURCE

BIKAR has learned over many decades to adapt to the needs of its customers. And that's reflected in the diversity of our stocked and available products. You can only win with a strong partner.

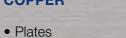


## ALUMINIUM

- Plates
- Sheets
- Bars
- Circular blanks
- Rings
- Profiles
- Cuttings
- Parts from drawings



## COPPER



- Sheets
- Bars
- Circular blanks
- Rings
- Profiles
- Cuttings
- Parts from drawings



## BRASS

- Plates
- Sheets
- Bars
- Circular blanks
- Rings
- Profiles
- Cuttings
- Parts from drawings



## BRONZE

- Bars
- Tubes
- Bushings
- Rings
- Circular blanks
- Cuttings
- Parts from drawings



- Bars
- Tubes
- Bushings
- Cuttings

WORLD OF METALS



