OK Autrod 4043

FeaturesSpecifications

OK Autrod 4043

GMAW

OK Autrod 4043 is one of the most widely used welding and brazing alloys and can be classified as a general-purpose filler alloy. The silicon addition results in improved fluidity (wetting action), making the alloy the preferred choice of welders. The alloy is not sensitive to weld cracking and produces bright, almost smut-free welds. Not recommended for anodising. Non-heat treatable.

Welding current
DC(+)

Classifications	Approvals	Typical all weld metal composition, %	Typical mech. properties all weld metal
SFA/AWS A5.10 ER4043 EN ISO 18273 S Al 4043 (AlSi5) EN ISO 18273 S Al 4043A (AlSi5(A))	CWB AWS A5.10 (Item number ending with A) DB 61.039.05 CE EN 13479	Si 5,0 Mn <0,05 Cr <0,05 Cu <0,05 Ti <0,15 Zn 0,10 Fe <0,6 Wire composition	Yield stress, MPa 55 Tensile strength, MPa 165 Elongation, % 18 Elongation, % 18

Diameter, mm	0,8	0,9	1,0	1,2	1,6	2,4
Arc voltage, V	13-24	13-24	15-26	20-29	25-30	26-31
Welding current, A	60-170	60-170	90-210	140-260	190-350	280-400
Wire feed, m/min	5-13	5-13	7-14	6-13	4,5-7,5	3,5-5
Deposition rate kg weld metal/hour	0,4-1,1	0,5-1,3	0,9-1,8	1,2-2,4	1,5-2,5	2,5-3,7

OK Autrod 4047

FeaturesSpecifications

OK Autrod 4047

GMAW

OK Autrod 4047 was originally developed as a brazing alloy to take advantage of its low melting point and narrow freezing range. In addition, it has a higher silicon content than OK Autrod 4043, which provides increased fluidity and reduced shrinkage. The alloy produces bright, almost smut-free welds. Hot cracking is significantly reduced when using OK Autrod 4047 as a filler alloy. The alloy can be used in applications with sustained elevated temperatures. Non-heat treatable.

Welding current

DC(+)

Classifications	Approvals	Typical all weld metal composition, %	Typical mech. properties all weld metal
SFA/AWS A5.10 ER4047 EN ISO 18273 S Al 4047 (AlSi12)	CWB AWS A5.10 (Item number ending with A)	Si 12,0 Mn <0,15 Cu <0,05 Ti <0,15 Zn <0,20 Fe <0,6 Wire composition	Yield stress, MPa 80 Tensile strength, MPa 170 Elongation, % 12 Elongation, % 12

Diameter, mm	0,9	1,2	1,6
Arc voltage, V	13-24	20-29	25-30
Welding current, A	60-170	140-260	190-350
Wire feed, m/min	-	6-13	4,5-7,5
Deposition rate kg weld metal/hour	-	1,1-2,4	1,5-2,5

OK Autrod 5087

FeaturesSpecifications

OK Autrod 5087
GMAW

Continuous solid wire suitable for welding aluminium alloys with up to 5% Mg and alloys where a higher tensile strength is required. The alloying element Zr produces improved resistance to hot cracking during solidification.

Welding current
DC(+)

Classifications	Approvals		Typical all weld metal composition, %		Typical mech. properties all weld metal	
EN ISO 18273 S Al 5087 (AlMg4,5MnZr)	DB	61.039.07	Si	<0,25	Yield stress, MPa 130	
	VdTÜV	05816	Mn	0,9	Tensile strength, MPa 280	
	CE	EN 13479	Cr	0,15	Elongation, % 30	
	DNV	for welding of aluminium alloys	Cu	<0,05	Elongation, % 30	
			Ti	<0,15	Charpy V	
			Zr	0,15	Test temps, °C	Impact values, J
			Zn	<0,25	+20	35
			Fe	<0,40		
			Mg	4,9		
			Wire composition			

Diameter, mm	1,0	1,2	1,6
Arc voltage, V	15-26	20-29	25-30
Welding current, A	90-210	140-260	190-350
Wire feed, m/min	7-14	6-13	4,5-7,5
Deposition rate kg weld metal/hour	0,9-1,8	1,1-2,4	1,5-2,5

OK Autrod 5183

FeaturesSpecifications

OK Autrod 5183
GMAW

OK Autrod 5183

OK Autrod 5183 is designed to provide the highest possible strength in the as-welded condition of alloy AA 5083 and similar high-magnesium alloys. The more common OK Autrod 5356 typically fails to meet the as-welded tensile requirements of AA 5083. The alloy is typically used in marine and structural applications where high strength, high fracture toughness for impact resistance and exposure to corrosive elements are important. The alloy is not recommended for elevated temperature applications due to its susceptibility to stress corrosion cracking. The alloy is non-heat treatable.

Welding current
DC(+)

Classifications	Approvals		Typical all weld metal composition, %		Typical mech. properties all weld metal	
SFA/AWS A5.10 ER5183 EN ISO 18273 S Al 5183 (AlMg4,5Mn0,7(A))	ABS	ER5183 for dim 1,2 and 1,6 mm	Si	0,40	Yield stress, MPa 140 Tensile strength, MPa 290 Elongation, % 25 Elongation, % 25 Charpy V	
	BV	WC	Mn	0,8		
	CWB	AWS A5.10 (Item number ending with A)	Cr	0,15		
			Cu	<0,10		
			Ti	<0,15		
			Zn	<0,25		
			Fe	<0,40		
			Mg	4,8		
	DB	61.039.03	wire composition		Test temps, °C	Impact values, J
	DNV	5183 (WC)			+20	30
	GL	RAlMg4.5				
	LR	WC/I-1				
	VdTÜV					

Diameter, mm	1,0	1,2	1,6	2,4
Arc voltage, V	15-26	20-29	25-30	26-31
Welding current, A	90-210	140-260	190-350	280-400
Wire feed, m/min	7-14	6-13	4,5-7,5	3,5-5
Deposition rate kg weld metal/hour	0,9-1,8	1,1-2,4	1,5-2,5	2,5-3,7

OK Autrod 5356

FeaturesSpecifications

OK Autrod 5356

GMAW

OK Autrod 5356 is the most widely used welding alloy and can be classified as a general-purpose type filler alloy. OK Autrod 5356 is typically chosen because of its relatively high shear strength. The 5XXX alloy base material, welded with OK Autrod 5356, with a weld pool chemistry greater than 3% Mg and service temperatures in excess of 65°C, is susceptible to stress corrosion cracking. The alloy is non-heat treatable.

Welding current

DC(+)

Classifications	Approvals		Typical all weld metal composition, %		Typical mech. properties all weld metal
SFA/AWS A5.10 ER5356 EN ISO 18273 S Al 5356 (AlMg5Cr(A))	ABS	ER 5356 for dim. 1,2 mm	Si	<0,25	Yield stress, MPa 120 Tensile strength, MPa 265 Elongation, % 26 Elongation, % 26
	CWB	AWS A5.10 (Item number ending with A)	Mn	0,15	
			Cr	0,1	
			Cu	0,10	
			Ti	0,1	
	DB	61.039.01	Zn	<0,10	
	DNV	5356 (WB)	Fe	<0,40	
	GL	S-AlMg 5	Mg	5,0	
	LR	WB/I-1	Fe	0,40	
	VdTÜV	04664	Wire composition		
	CE	EN 13479			
	RINA	WC			

Diameter, mm	0,8	0,9	1,0	1,2	1,6	2,4
Arc voltage, V	13-24	13-24	15-26	20-29	25-30	26-31
Welding current, A	60-170	60-170	90-210	140-260	190-350	280-400
Wire feed, m/min	5-13	5-13	7-14	6-13	4,5-7,5	3,5-5
Deposition rate kg weld metal/hour	0,4-1,1	0,5-1,3	0,9-1,8	1,2-2,4	1,5-2,5	2,5-3,7

OK Autrod 5554

FeaturesSpecifications

OK Autrod 5554

GMAW

OK Autrod 5554 is a solid aluminium wire with a content of 2.7% Mg. It is recommended for weld-ing AlMg alloys like 5454. Typical applications include chemical storage tanks, automotive components like wheels and frame sections. The weld metal is not sensitive to stress corrosion cracking at elevated temperatures.

Welding current

DC+

Classifications	Approvals		Typical all weld metal composition, %		Typical mech. properties all weld metal
SFA/AWS A5.10 ER5554 EN ISO 18273 S Al 5554 (AlMg2,7Mn)	CWB	AWS A5.10 (Item no ending of A only)	Si Mn Cr Cu Ti Zn Fe Mg Wire composition	<0,25 0,75 0,13 <0,10 0,13 <0,25 <0,40 2,7	Yield stress, MPa 110 Tensile strength, MPa 230 Elongation, % 17 Elongation, % 17

Diameter, mm	1,6	1,2
Arc voltage, V	25-30	20-29
Welding current, A	190-350	140-260
Wire feed, m/min	4,5-7,5	6-13
Deposition rate kg weld metal/hour	1,5-2,5	1,1-2,4

OK Autrod 5556

FeaturesSpecifications
OK Autrod 5556

GMAW

Continuous solid wire suitable for welding aluminium alloys with up to approx. 5% Mg that are not age hardenable and alloys where a higher tensile strength is required. The corrosion resistance in a marine atmosphere is high.

Welding current
DC(+)

Classifications	Approvals		Typical all weld metal composition, %		Typical mech. properties all weld metal
SFA/AWS A5.10 ER5556 EN ISO 18273 S Al 5556A (AlMg5Mn)	CWB	AWS A5.10 (Item number ending with A)	Si	<0,25	Yield stress, MPa 145 Tensile strength, MPa 295 Elongation, % 25 Elongation, % 25 Charpy V Test temps, °C Impact values, J +20 25
	VdTÜV	05794	Mn	0,8	
	ClassNK	KAl5WCG(I-1)(I-4)(only for lots beginnin	Cr	0,13	
			Cu	<0,10	
			Ti	0,13	
			Zn	<0,20	
			Fe	<0,40	
			Mg	5,3	
			Wire composition		

Diameter, mm	1,0	1,2	1,6
Arc voltage, V	15-26	20-29	25-30
Welding current, A	90-210	140-260	190-350
Wire feed, m/min	7-14	6-13	4,5-7,5
Deposition rate kg weld metal/hour	0,9-1,8	1,1-2,4	1,5-2,5