

# OK Flux 10.92

## [Features Specifications](#)

**SAW**Type Calcium silicate

It operates well on DC current for single and multi-layer welding of unlimited plate thicknesses and has good welding characteristics with easy slag removal. If used for strip cladding with austenitic stainless welding strips, OK Flux 10.92 gives a smooth bead appearance. The Cr

content in the flux produces a higher ferrite content in the weld metal, thereby reducing the risk of hot cracking.

Application areas for this flux include chemical and petrochemical plants, offshore constructions, pressure vessels, storage tanks, chemical tankers, power generation, nuclear, pulp and paper, civil constructions and transport industries.

**Density** ≈ 1,0 kg/dm<sup>3</sup>

**Basicity index** 1,0

Classifications	
EN 760	SA CS 2 Cr DC

OK Band 347

Classifications	
SFA/AWS A5.9	S 19 9 Nb
EN 12072	ER347

Approvals	
VdTÜV	02481

Typical all weld metal composition, %	
C	0,040
Si	0,75
Mn	0,9
Cr	19,8
Ni	9,7
Nb	0,5
P	0,03
S	0,02

Typical mech. properties all weld metal	
Yield stress, MPa	470
Tensile strength, MPa	640

Test temps, °C	Impact values, J
+20	65
-60	55
-110	40

OK Autrod 309MoL

Classifications	
SFA/AWS A5.9	S 23 12 L
EN 12072	(309MoL)

Typical all weld metal composition, %	
C	0,02
Si	0,5
Mn	1,5
Cr	21,0
Ni	15,0
Mo	3,0

Typical mech. properties all weld metal	
Yield stress, MPa	400
Tensile strength, MPa	600

Test temps, °C	Impact values, J
+20	120

OK Autrod 309L

Classifications	
SFA/AWS A5.9	S 23 12 L
EN 12072	ER309L

Approvals	
LR	SS/CMn

Typical all weld metal composition, %	
C	0,02
Si	0,8
Mn	1,1
Cr	24,0
Ni	13,0

Typical mech. properties all weld metal	
Yield stress, MPa	410
Tensile strength, MPa	575

Test temps, °C	Impact values, J
-20	50

OK Band 316L

Classifications	
SFA/AWS A5.9	S 19 12 3 L
EN 12072	EQ316L

Approvals
VdTÜV

Typical all weld metal composition, %	
C	0,02
Si	0,9
Mn	0,7
Cr	18,5
Ni	12,3
Mo	2,7

OK Band 309L

Classifications	
SFA/AWS A5.9	S 23 12 L
EN 12072	EQ309L

Typical all weld metal composition, %	
C	<0,03
Si	0,5
Mn	1,8
Cr	24,0
Ni	13,0
Mo	<0,3
Cu	<0,3

OK Autrod 316L

Classifications	
SFA/AWS A5.9	S 19 12 3 L
EN 12072	ER316L

Approvals	
VdTÜV	02477
DNV	316L

Typical all weld metal composition, %	
C	0,02
Si	0,8
Mn	1,0
Cr	19,1
Ni	11,9
Mo	2,7
P	0,03
S	0,02

Typical mech. properties all weld metal	
Yield stress, MPa	385
Tensile strength, MPa	590

Test temps, °C	Impact values, J
-70	55

OK Autrod 308L

Classifications	
SFA/AWS A5.9	S 19 9 L
EN 12072	ER308L

Approvals	
CL	
VdTÜV	02480

Typical all weld metal composition, %	
C	0,03
Si	0,95
Mn	1
Cr	20.25
Ni	10
Mo	0,5

Typical mech. properties all weld metal	
Yield stress, MPa	365
Tensile strength, MPa	580

Test temps, °C	Impact values, J
-60	60
-196	50

OK Band 308L

Classifications	
SFA/AWS A5.9	S 19 9 L
EN 12072	EQ308L

Approvals	
VdTÜV	

Typical all weld metal composition, %	
C	<0,03
Si	0,5
Mn	1,8
Cr	20,3
Ni	10,0
Mo	<0,3
Cu	<0,3

# OK Flux 10.93

## [Features Specifications](#)

### SAW Type Basic

OK Flux 10.93 is an agglomerated, fluoride basic flux for submerged arc welding of stainless steels. It is used for single run and multi-run welding of all plate thicknesses giving excellent welding characteristics. It can be combined with a wide range of stainless wires and is commonly used for butt and fillet welding of all standard austenitic and higher alloyed stainless steels.

The flux works very well on DC current and has good weldability in the 2G/PB position. It provides a very good slag detachability, a smooth surface finish and a nice bead appearance. The low Si addition during welding provides good mechanical properties with particularly good impact toughness properties.

OK Flux 10.93 is one of the most commonly used fluxes for welding stainless and corrosion resistant steels. It is well established in chemical and petrochemical plants, offshore construction, pressure vessels, storage tanks, chemical tankers, power generation, nuclear, pulp and paper, civil constructions and transport industries. This is a flux particularly well suited for the joining of duplex 2205 stainless steels, for example in chemical tankers.

**Density** ≈ 1,0 kg/dm<sup>3</sup>

**Basicity index** 1,0

Classifications	
EN 760	SA AF 2 DC

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### OK Autrod 309L

Classifications	
SFA/AWS A5.9	S 23 12 L
EN 12072	ER309L

Approvals	
DNV	
VdTÜV	

Typical all weld metal composition, %	
C	0,03
Si	0,6
Mn	1,5
Cr	24,0
Ni	12,5

**Typical mech. properties all weld metal**

<b>Yield stress, MPa</b>	430
<b>Tensile strength, MPa</b>	570

<b>Test temps, °C</b>	<b>Impact values, J</b>
<b>-60</b>	70
<b>-110</b>	60
<b>-196</b>	35

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**OK Autrod 19.82****Typical all weld metal composition, %**

<b>C</b>	0,02
<b>Si</b>	0,4
<b>Mn</b>	0,2
<b>P</b>	0,015
<b>S</b>	0,005
<b>Cr</b>	22
<b>Ni</b>	60
<b>Mo</b>	9
<b>Cu</b>	0,1
<b>Fe</b>	5

**Typical mech. properties all weld metal**

<b>Yield stress, MPa</b>	340
<b>Tensile strength, MPa</b>	570

<b>Test temps, °C</b>	<b>Impact values, J</b>
<b>+20</b>	85
<b>-20</b>	80
<b>-60</b>	70
<b>-196</b>	60

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**OK Autrod 316L****Classifications**

<b>SFA/AWS A5.9</b>	S 19 12 3 L
<b>EN 12072</b>	ER316L

**Approvals**

<b>VdTÜV</b>	
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Typical all weld metal composition, %	
<b>C</b>	0,03
<b>Si</b>	0,6
<b>Mn</b>	1,4
<b>Cr</b>	18,5
<b>Ni</b>	11,5
<b>Mo</b>	2,7

Typical mech. properties all weld metal	
<b>Yield stress, MPa</b>	390
<b>Tensile strength, MPa</b>	565

Test temps, °C	Impact values, J
<b>-40</b>	95
<b>-60</b>	90
<b>-110</b>	75
<b>-196</b>	40

OK Autrod 308L

Classifications	
<b>SFA/AWS A5.9</b>	S 19 9 L
<b>EN 12072</b>	ER308L

Approvals	
<b>ABS</b>	Stainless
<b>DNV</b>	308L M
<b>VdTÜV</b>	

Typical all weld metal composition, %	
<b>C</b>	0,03
<b>Si</b>	0,6
<b>Mn</b>	1,4
<b>Cr</b>	20,0
<b>Ni</b>	10,0

Typical mech. properties all weld metal	
<b>Yield stress, MPa</b>	400
<b>Tensile strength, MPa</b>	560

Test temps, °C	Impact values, J
<b>-40</b>	75
<b>-60</b>	65
<b>-110</b>	55
<b>-196</b>	40



**OK Autrod 2209**

<b>Classifications</b>	
<b>SFA/AWS A5.9</b>	ER2209
<b>EN ISO 14343</b>	S 22 9 3 NL

<b>Approvals</b>	
<b>CL</b>	
<b>DNV</b>	
<b>GL</b>	4462M
<b>VdTÜV</b>	

<b>Typical all weld metal composition, %</b>	
<b>C</b>	0,02
<b>Si</b>	0,8
<b>Mn</b>	1,3
<b>Cr</b>	22,0
<b>Ni</b>	9,0
<b>N</b>	0,5

<b>Typical mech. properties all weld metal</b>	
<b>Yield stress, MPa</b>	630
<b>Tensile strength, MPa</b>	780

<b>Test temps, °C</b>	<b>Impact values, J</b>
<b>-20</b>	125
<b>-40</b>	110
<b>-60</b>	80