

OK Flux 10.40 (Low-alloyed steels)

Features Specifications

SAW Type Manganese-silicate

OK Flux 10.40 is a fused, lowbasicity flux for submerged arc welding. Its features include very high welding speeds with large or small wire diameters on clean plate. Normally it is used without re-drying even on hydrogen-crack sensitive steels, because the flux grains do not pick-up any moisture due to the manufacturing process used.

The flux alloys a high amount of Si and Mn to the weld metal making it well suited for fillet and butt welds with a limited number of passes. It can be used with single and multi-wire procedures and works equally well on DC and AC current.

OK Flux 10.40 is used in all kind of industries such as general construction, pressure vessels, shipbuilding, pipe mills, transport industries, etc. The lack of moisture pick-up makes it a very good flux for many customers, not just those in areas with severe climate conditions.

Density 1,5 kg/dm³

Basicity index 0,8

Classifications

| | |
|---------------|---------------|
| EN 760 | SF MS 1 88 AC |
|---------------|---------------|

OK Autrod 12.24

Classifications

| | |
|---------------|----------------|
| EN 756 | S 42 A MS S2Mo |
|---------------|----------------|

| | |
|----------------------|-------------|
| SFA/AWS A5.23 | F7AZ-EA2-A4 |
|----------------------|-------------|

| | |
|----------------------|-------------|
| SFA/AWS A5.23 | F7PZ-EA2-A4 |
|----------------------|-------------|

Approvals

| | |
|-----------|----------|
| CE | EN 13479 |
|-----------|----------|

| | |
|--------------|-------|
| VdTÜV | 07058 |
|--------------|-------|

Typical all weld metal composition, %

| | |
|----------|------|
| C | 0,05 |
|----------|------|

| | |
|-----------|-----|
| Si | 0,6 |
|-----------|-----|

| | |
|-----------|-----|
| Mn | 1,5 |
|-----------|-----|

| | |
|-----------|-----|
| Mo | 0,5 |
|-----------|-----|

Typical mech. properties all weld metal

| | |
|--------------------------|-----|
| Yield stress, MPa | 470 |
|--------------------------|-----|

| | |
|------------------------------|-----|
| Tensile strength, MPa | 560 |
|------------------------------|-----|

Test temps, °C Impact values, J

| | |
|------------|----|
| +20 | 50 |
|------------|----|

| | |
|----------|----|
| 0 | 35 |
|----------|----|

OK Flux 10.61 (Low-alloyed steels)

Features Specifications

SAWType High-basic

OK Flux 10.61 is an agglomerated, high-basic flux for submerged arc welding. It is used for single and multi-run butt welding when demands on impact toughness values are high. This is a good alternative to other high basic fluxes when welding is done with single wire DC+.

The flux alloys very little Si and Mn to the weld metal and thus it is well suited for welding of unlimited plate thicknesses.

OK Flux 10.61 is used in general construction, pressure vessel onstruction, power generation and transport industries

Density 1,1 kg/dm³

Basicity index 2,6

Classifications

| | |
|---------------|---------------|
| EN 760 | SA FB 1 65 DC |
|---------------|---------------|

OK Autrod 13.20SC

Classifications

| | |
|----------------------|--------------|
| SFA/AWS A5.23 | F8P0-EB3R-B3 |
|----------------------|--------------|

Approvals

| |
|--------------|
| VdTÜV |
|--------------|

Typical all weld metal composition, %

| | |
|-----------|------|
| C | 0,08 |
| Si | 0,30 |
| Mn | 0,60 |
| Cr | 2,0 |
| Mo | 0,90 |

Typical mech. properties all weld metal

| | |
|------------------------------|-----|
| Yield stress, MPa | 540 |
| Tensile strength, MPa | 630 |

| Test temps, °C | Impact values, J |
|-----------------------|-------------------------|
| -18 | 80 |
| -29 | 30 |

OK Autrod 13.10SC

| Classifications | |
|-----------------|--------------|
| SFA/AWS A5.23 | F8P2-EB2R-B2 |

| Approvals | |
|-----------|---------------------|
| DB | 51.039.03-52.039.09 |
| VdTÜV | |
| Ü | 51.039-52.039/3 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,08 |
| Si | 0,30 |
| Mn | 0,7 |
| Cr | 1,1 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 510 |
| Tensile strength, MPa | 600 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -18 | 100 |
| -29 | 70 |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 42 2 FB S2Mo |
| SFA/AWS A5.23 | F7A4-EA2-A2 |
| SFA/AWS A5.23 | F7P2-EA2-A2 |

| Approvals | |
|-----------|--------|
| UDT | EN 756 |
| VdTÜV | |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,06 |
| Si | 0,25 |
| Mn | 1,0 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 470 |
| Tensile strength, MPa | 560 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 130 |
| 0 | 120 |
| -20 | 80 |
| -29 | 45 |
| -40 | 35 |

OK Flux 10.62 (Low-alloyed steels)

Features Specifications

SAWType Basic

OK Flux 10.62 is an agglomerated, high-basic flux for submerged arc welding. It is used for multi-run welding of thick section materials. When high demands on impact toughness values are required, OK Flux 10.62 is the flux to use. The flux is neutral on Si and Mn alloying. It can be used for single and multi-wire procedures, for butt and fillet welds and works equally well on DC and AC current. Since no alloying takes place, it is perfect for multilayer welding of unlimited plate thickness. OK Flux 10.62 is especially suited for narrow gap welding due to good slag detachability and smooth sidewall blending. It operates optimally at the lower end of the voltage range. The weld metal produced has a low oxygen content; approx. 300ppm and hydrogen levels lower than 5ml/100g.

OK Flux 10.62 is used when high demands on low temperature toughness, strength and CTOD-values are required. Many offshore constructions, drilling rigs, platforms, etc. are welded with OK Flux 10.62. It is used for all kinds of pressure vessel productions, including those for nuclear applications. In power generation it can be welded with applicable wires on creep resistant steels. Other applications include shipbuilding steels up to EH69 with various wires and approvals. It is also used on multi-run welded pipes, e.g. for special applications at low temperatures, or on high strength steels, structural steels, and fine-grained steels, including in civil construction and transport industries.

Density : 1,1 kg/dm³

Basicity index 3,2

| Classifications | |
|-----------------|------------------|
| EN 760 | SA FB 1 55 AC H5 |

OK Autrod 13.40

| Classifications | |
|-----------------|-------------------|
| EN 14295 | S 62 6 FB S3Ni1Mo |
| SFA/AWS A5.23 | F10A8-EG-F3 |
| SFA/AWS A5.23 | F9P6-EG-F3 |

| Approvals | |
|-----------|-----------|
| VdTÜV | 03569 |
| CE | EN 13479 |
| ABS | 4YQ620M |
| BV | 4Y62M |
| DNV | IV Y62M |
| GL | 4Y62M |
| LR | 4Y62M H10 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,26 |
| Mn | 1,50 |
| Ni | 0,9 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 650 |
| Tensile strength, MPa | 730 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -40 | 70 |
| -50 | 60 |
| -62 | 50 |

OK Autrod 13.20SC

| Classifications | |
|------------------------|--------------|
| SFA/AWS A5.23 | F8P2-EB3R-B3 |

| Typical all weld metal composition, % | |
|--|------|
| C | 0,08 |
| Si | 0,20 |
| Mn | 0,60 |
| Cr | 2,0 |
| Mo | 0,85 |

| Typical mech. properties all weld metal | |
|--|-----|
| Yield stress, MPa | 525 |
| Tensile strength, MPa | 620 |

| Test temps, °C | Impact values, J |
|-----------------------|-------------------------|
| -18 | 120 |
| -29 | 80 |

OK Autrod 13.10SC

| Classifications | |
|-----------------|--------------|
| SFA/AWS A5.23 | F8P2-EB2R-B2 |

| Approvals | |
|-----------|---------------------|
| DB | 51.039.07-52.039.09 |
| VdTÜV | |
| Ü | 51.039-52.039/3 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,08 |
| Si | 0,22 |
| Mn | 0,7 |
| Cr | 1,1 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 500 |
| Tensile strength, MPa | 610 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -18 | 110 |
| -29 | 80 |

OK Autrod 12.34

| Classifications | |
|-----------------|----------------|
| EN 756 | S 50 4 FB S3Mo |
| SFA/AWS A5.23 | F8A6-EA4-A4 |
| SFA/AWS A5.23 | F8P6-EA4-A4 |

| Approvals | |
|-----------|---------|
| ABS | 4YQ500M |
| BV | A4Y50M |
| DNV | III YM |
| GL | 4Y50M |
| LR | 3M, 3YM |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,10 |
| Si | 0,21 |
| Mn | 1,45 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 540 |
| Tensile strength, MPa | 620 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 170 |
| 0 | 160 |
| -20 | 140 |
| -40 | 115 |
| -51 | 45 |

OK Autrod 13.43

| Classifications | |
|-----------------|-----------------------|
| EN 14295 | S 69 6 FB S3Ni2,5CrMo |
| SFA/AWS A5.23 | F11A8-EG-G |
| SFA/AWS A5.23 | F11P8-EG-G |

| Approvals | |
|-----------|----------|
| ABS | 4YQ690M |
| BV | 4Y69M |
| DNV | IV Y69M |
| GL | 4Y69M |
| LR | 4Y69M |
| CE | EN 13479 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,11 |
| Si | 0,25 |
| Mn | 1,5 |
| Cr | 0,6 |
| Ni | 2,2 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 700 |
| Tensile strength, MPa | 800 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -20 | 100 |
| -40 | 75 |
| -50 | 65 |
| -60 | |
| -62 | 50 |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 46 4 FB S2Mo |
| SFA/AWS A5.23 | F8A6-EA2-A2 |
| SFA/AWS A5.23 | F7P6-EA2-A2 |

| Approvals | |
|-----------|----------|
| BV | A3, 3YM |
| CE | EN 13479 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,22 |
| Mn | 1,0 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 500 |
| Tensile strength, MPa | 580 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 140 |
| 0 | 115 |
| -20 | 80 |
| -40 | 60 |
| -51 | 45 |

OK Flux 10.63

Features
SAWType Fluoride-basic

OK Flux 10.63 is an agglomerated, high-basic flux for submerged arc welding. It is used for multi-run welding of creep resistant Cr-Mo-alloyed steels when high toughness values are required, even after step cooling heat treatment.

It can be used for single and multi-wire procedures, for butt and fillet welds and works equally well on DC and AC current. The flux is neutral in terms of Si and Mn alloying and thus it is perfect for multi-layer welding of unlimited plate thicknesses. It is well suited for narrow gap welding, due to good slag detachability and smooth sidewall blending. The optimum voltage is at the lower end of the voltage range. The weld metal produced has a very low level of impurities with a maximum X-factor value of 15 with various wires. It has a low oxygen content, approx. 300ppm and hydrogen levels lower than 5ml/100g.

OK Flux 10.63 is used in the petrochemical, chemical, power generation and pressure vessels industries, mainly for creep resistant steels when the requirements on toughness values are high. Due to the very clean weld metal, it is especially suited when stringent requirements after a step cooling treatment need to be fulfilled.

Density : 1,1 kg/dm³

Basicity index 3,0

| Classifications | |
|-----------------|------------------|
| EN 760 | SA FB 1 55 AC H5 |

OK Autrod 13.20SC

| Classifications | |
|-----------------|---------------|
| SFA/AWS A5.23 | F8P8-EB3R-B3R |
| EN ISO 24598-A | |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,2 |
| Mn | 0,6 |
| Cr | 2,1 |
| Mo | 1,0 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 530 |
| Tensile strength, MPa | 630 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 180 |
| -20 | 150 |
| -40 | 110 |
| -62 | 50 |

OK Autrod 13.10SC

| Classifications | |
|-----------------|---------------|
| SFA/AWS A5.23 | F8P4-EB2R-B2R |
| EN ISO 24598-A | |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,08 |
| Si | 0,2 |
| Mn | 0,8 |
| Cr | 1,2 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 480 |
| Tensile strength, MPa | 590 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -29 | 110 |
| -40 | 80 |

OK Flux 10.71 (Low-alloyed steels)

Features Specifications

SAWType Basic

OK Flux 10.71 is an agglomerated, basic flux for submerged arc welding. It is used for single and multi-run welding of all plate thicknesses. It can be combined with a wide range of solid wires and cored wires and thus it is suitable for all kinds of steels. OK Flux 10.71 combines good toughness values with excellent weldability.

It is used for single and multiwire procedures such as tandem, twin-arc, tandem-twin welding and many more, for butt, overlap and fillet welds. It works equally well on DC and AC current. The good slag detachability and limited alloying of Si and Mn makes it well suited for multi-pass thick section welding. High welding speeds can be achieved producing a finely rippled weld metal, all this in combination with very good impact values.

In general construction, OK Flux 10.71 is one of the most used SAW fluxes. Not just for structural steels and fine-grained steels, but also for weather resistant steels e.g. for bridges. Pressure vessels are welded with this flux, because it can be used for a wide range of steels including low temperature steels. This reduces the number of different fluxes a customer needs to have in stock. Wind tower production with plate thicknesses of greater than 50mm require not only excellent slag detachability, particularly in the first run, and high deposition rates in all following runs, but also excellent toughness values. Since OK Flux 10.71 offers all this it is well established in this market segment. Other applications are in shipbuilding with approvals or in the production of pipes with steels up to X70 strength level. OK Flux 10.71 can also be combined with a number of SAW cored wires in order to increase the productivity and the mechanical properties of the weld metal.

Density : 1,2 kg/dm³

Basicity index 1,5

| Classifications | |
|-----------------|------------------|
| EN 760 | SA AB 1 67 AC H5 |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 46 2 AB S2Mo |
| SFA/AWS A5.23 | F8A2-EA2-A4 |
| EN ISO 24598-A | S Mo |

| Approvals | |
|-----------|---------------------|
| ABS | 3TM 3YTM |
| BV | A3, A3YTM |
| DB | 51.039.05-52.039.06 |
| DNV | IIIYTM |
| GL | 3YTM |
| LR | 3T, 3YM, 3YT |
| RINA | 3YT 3YM |
| RS | 3YTM |
| VdTÜV | 02554 |
| CE | EN 13479 |
| PRS | 3YTM |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,05 |
| Si | 0,4 |
| Mn | 1,4 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 500 |
| Tensile strength, MPa | 580 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 125 |
| 0 | 100 |
| -20 | 60 |
| -40 | 30 |

OK Autrod 12.34

| Classifications | |
|-----------------|----------------|
| EN 756 | S 50 3 AB S3Mo |
| SFA/AWS A5.23 | F8A4-EA4-A3 |
| SFA/AWS A5.23 | F8P2-EA4-A3 |

| Approvals | |
|-----------|-------------------|
| Sepros | UNA 409821-347719 |
| UDT | EN 756 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,09 |
| Si | 0,4 |
| Mn | 1,6 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 535 |
| Tensile strength, MPa | 620 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 120 |
| 0 | 105 |
| -20 | 70 |
| -30 | 60 |
| -40 | 45 |

OK Flux 10.72 (Low-alloyed steels)

Features Specifications

SAWType Aluminate-basic

OK Flux 10.72 is an agglomerated, basic flux, designed for the production of wind towers. It combines the high demands for multi-layer thick section welding, using high deposition rates with respectable toughness values down to -50°C when combined with a standard non-alloyed SAW wire.

It is used for single and multi-wire procedures such as tandem, twinarc, tandem-twin welding and many more, for butt and fillet welds. It works equally well on DC and AC current. The excellent slag removal in narrow V-joints allows the included angle of the joint to be reduced. OK Flux 10.72 can be applied for unlimited plate thicknesses. In wind tower production, plate thicknesses of 50mm and above are common, generally welded with Y-joints. It is essential that the slag is easily removable on the first run. For the remaining filling passes the flux needs to offer a high current carrying capacity, to allow for high deposition rates, for example, 38kg/h with the tandemtwin process. Often toughness

values down to -500C are required throughout the thickness. This excellent flux can also be utilised in other market segments with similar welding requirements e.g. pressure vessels and general construction welding.

Density 1,2 kg/dm³

Basicity index 1,9

| Classifications | |
|-----------------|------------------|
| EN 760 | SA AB 1 57 AC H5 |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 46 3 AB S2Mo |
| SFA/AWS A5.23 | F8A5-EA2-A3 |
| SFA/AWS A5.23 | F8P5-EA2-A3 |

| Approvals | |
|-----------|---------------------|
| DB | 51.039.12-52.039.06 |
| VdTÜV | |
| CE | EN 13479 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,05 |
| Si | 0,2 |
| Mn | 1,6 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 500 |
| Tensile strength, MPa | 590 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -30 | 60 |
| -40 | 40 |
| -46 | 35 |

OK Flux 10.74

FeaturesSpecifications

SAWType Aluminate-basic

OK Flux 10.74 is an agglomerated, basic flux designed primarily for multi-wire procedures in the production of longitudinal welded line pipes. The flux alloys some Si and Mn to the weld metal and works equally well on DC and AC current. It offers best weldability on SAW processes with at least 3 independent welding wires. OK Flux 10.74 produces a low bead profile in longitudinal line pipe welding at high welding speeds. A low profile without peaks means cost saving in the later pipe coating operation, since the coating thickness can be reduced. With various wires, OK Flux 10.74 is suited for all pipe steels. In combination with the Ti-B micro alloyed wire OK Autrod 13.64 toughness values are increased to an outstanding level. Due to the careful metallurgical design OK Flux 10.74 produces a weld metal free of hard spots.

Density 1,2 kg/dm³

Basicity index 1,4

| Classifications | |
|-----------------|------------------|
| EN 760 | SA AB 1 67 AC H5 |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 46 2 AB S2Mo |
| SFA/AWS A5.23 | F8A2-EA2-A4 |
| SFA/AWS A5.23 | F7P0-EA2-A4 |
| EN ISO 24598-A | |

| Approvals | |
|-----------|-------------------|
| Sepros | UNA 409821-347719 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,05 |
| Si | 0,4 |
| Mn | 1,4 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 520 |
| Tensile strength, MPa | 590 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| 0 | 100 |
| -20 | 65 |
| -29 | 50 |
| -40 | 30 |

OK Autrod 12.34

| Classifications | |
|-----------------|----------------|
| EN 756 | S 50 2 AB S3Mo |
| SFA/AWS A5.23 | F9A2-EA4-A3 |
| SFA/AWS A5.23 | F9P0-EA4-A3 |

| Approvals | |
|-----------|-------------------|
| Sepros | UNA 409821-347719 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,08 |
| Si | 0,4 |
| Mn | 1,6 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 590 |
| Tensile strength, MPa | 670 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| 0 | 90 |
| -18 | 60 |
| -20 | 55 |
| -29 | 40 |

Ok Autrod 12.22

| Classifications | |
|-----------------|----------------|
| EN 756 | S 42 4 AB S2Si |
| SFA/AWS A5.17 | F7A6-EM12K |
| SFA/AWS A5.17 | F6P6-EM12K |

| Approvals | |
|-----------|-------------------|
| Sepros | UNA 409821-347719 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,5 |
| Mn | 1,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 440 |
| Tensile strength, MPa | 540 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -40 | 55 |
| -51 | 35 |

OK Autrod 12.20

| Classifications | |
|-----------------|---------------|
| EN 756 | SA 42 4 AB S2 |
| SFA/AWS A5.17 | F7A6-EM12 |
| SFA/AWS A5.17 | F6P6-EN12 |

| Approvals | |
|-----------|-------------------|
| Sepros | UNA 409821-347719 |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,3 |
| Mn | 1,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 440 |
| Tensile strength, MPa | 540 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| -40 | 60 |
| -51 | 40 |

OK Flux 10.78

Features
SAWType Aluminate-basic

OK Flux 10.78 is an agglomerated neutral-basicity flux. It offers a high tolerance against rust and mill scale on the plates and can be used for unlimited plate thickness.

The flux alloys moderate amounts of Si and Mn to the weld metal and works equally well on DC and AC current. It is designed for butt and fillet welds and can be used for single layer and multi layer welding. The weld beads with OK Flux 10.78 have a smooth surface. The slag removal is excellent.

In all market segments where these severe surface conditions are found OK Flux 10.78 is used. These are segments such as general construction, beam fabrication, pressure vessels, shipbuilding, transport industries and others.

Density 1,2 kg/dm³

Basicity index 1,1

| Classifications | |
|-----------------|---------------|
| EN 760 | SA AB 1 67 AC |

OK Autrod 12.10

| Classifications | |
|-----------------|--------------|
| EN 756 | S 35 0 AB S1 |
| SFA/AWS A5.17 | F6A0-EL12 |

| Typical all weld metal composition, % | |
|---------------------------------------|-------|
| C | 0,04 |
| Si | 0,3 |
| Mn | 1,1 |
| P | <0,03 |
| S | <0,03 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 360 |
| Tensile strength, MPa | 440 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| 0 | 80 |
| -20 | 35 |

OK Autrod 12.20

| Classifications | |
|-----------------|--------------|
| EN 756 | S 38 2 AB S2 |

| Typical all weld metal composition, % | |
|---------------------------------------|-------|
| C | 0,05 |
| Si | 0,3 |
| Mn | 1,5 |
| P | <0,03 |
| S | <0,03 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 390 |
| Tensile strength, MPa | 480 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| 0 | 100 |
| -20 | 50 |

OK Autrod 12.22

| Classifications | |
|-----------------|----------------|
| EN 756 | S 38 2 AB S2Si |
| SFA/AWS A5.17 | F7A2-EM12K |

| Typical all weld metal composition, % | |
|---------------------------------------|-------|
| C | 0,05 |
| Si | 0,4 |
| Mn | 1,5 |
| P | <0,03 |
| S | <0,03 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 405 |
| Tensile strength, MPa | 485 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| 0 | 120 |
| -20 | 100 |
| -30 | 70 |

OK Flux 10.81 (Low-alloyed steels)

Features
SAWType Aluminate-rutile

OK Flux 10.81 is an agglomerated, low-basicity flux. The benefits of this flux are the smooth surface finish and excellent slag detachability. It is intended for a limited number of passes and plate thickness up to approx. 25mm.

It is used for single and multiwire procedures such as tandem and twin-arc welding. Concave fillet welds with an excellent washing on the sidewalls are created with this flux as well as attractive butt and overlap welds. It works equally well on DC and AC current and the high alloying of Si makes it well suited for high speed welding.

Due to its good weldability, OK Flux 10.81 is often used in the production of pressure vessels and spiral welded water pipes. The excellent sidewall wetting, which is preferred for dynamic loads in horizontal fillet welds is made use of in general construction, beam fabrication, the automotive industry and tube to fin welding in the production of membrane wall panels. In many applications where the appearance of the weld bead or the nice washing on the sidewalls in fillet welds are the main requirements, OK Flux 10.81 is chosen.

Density 1.2 kg/dm³

Basicity index 0.6

| Classifications | |
|-----------------|---------------|
| EN 760 | SA AR 1 97 AC |

OK Autrod 12.24

| Classifications | |
|-----------------|----------------|
| EN 756 | S 50 A AR S2Mo |
| SFA/AWS A5.23 | F9AZ-EA2-A4 |
| SFA/AWS A5.23 | F9PZ-EA2-A4 |

| Approvals | |
|-----------|-------|
| VdTÜV | 07329 |
| | |

| Typical all weld metal composition, % | |
|---------------------------------------|------|
| C | 0,07 |
| Si | 0,8 |
| Mn | 1,5 |
| Mo | 0,5 |

| Typical mech. properties all weld metal | |
|---|-----|
| Yield stress, MPa | 565 |
| Tensile strength, MPa | 660 |

| Test temps, °C | Impact values, J |
|----------------|------------------|
| +20 | 65 |
| 0 | 45 |

OK Flux 10.81 (Low-alloyed steels)

Features Specifications

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