

SUPERCORE 2205 & SUPERCORE 2205P

FCAW

FLAT AND ALL-POSITIONAL FLUX CORED WIRES FOR 22%CR DUPLEX STEELS

PRODUCT DESCRIPTION

High performance rutile flux cored wires produced in the most versatile size of 1.2mm.

Supercore 2205 is suited to welding in the flat and horizontal-vertical positions (material > 6mm).

Made with an austenitic stainless steel sheath and rutile flux system.

Weld metal carbon content is typically <0.03% when using either 80%Ar-20%CO₂ or 100% CO₂ shielding gas.

Metal recovery about 90% with respect to the wire.

CLASSIFICATIONS

	Supercore 2205	Supercore 2205P
AWS A5.22M	E2209T0-1/4	E2209T1-1/4
EN ISO 17633-A	T 22 9 3 N L R C/M 3	T 22 9 3 N L P C/M 2
EN ISO 17633-B	TS2209-F C1/M21 0	TS2209-F C1/M21 1
Approvals	DNV	LR5, DNV

ASME IX QUALIFICATION

QW432	F-No 6
QW442	A-No 8

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N	PRE*
Min.	--	0.5	--	--	--	21.5	8.5	2.8	--	0.08	34
Max.	0.04	2.0	1.00	0.02	0.030	24.0	10.0	4.0	0.3	0.20	38
Typical	0.03	1.2	0.7	<0.01	0.02	23	9.2	3.1	0.1	0.12	35

* PRE (pitting resistance equivalent) = Cr + 3.3Mo + 16N

ALL-WELD MECHANICAL PROPERTIES

Typical values as welded	Min.	Supercore 2205	Supercore 2205P
Tensile strength (MPa)	690	800	800
0.2% proof strength (MPa)	480	610	630
Elongation [%] 4d	20	30	32
5d	20	26	29
Reduction of area [%]	--	36	45
Impact ISO-V[J] - 20°C	--	50	65
- 50°C	--	40	45
- 75°C	--	-	30
Hardness (HV)	--	270	270

OPERATING PARAMETERS

Shielding gas: Either 80%Ar-20%CO₂ or 100% CO₂ shielding gas at 20-25l/min. Proprietary gases may be used but argon should not exceed 85%. Gas mixtures without oxygen additions can be helpful for optimum weld metal toughness.

Fillet weld penetration and profile will be related to the skill level of the operator.

Current: DC+ve ranges as below for Ar-20%CO₂. Welding with 100%CO₂ requires approx 3V higher:

Diameter (mm)	amp-volt range	typical	stickout
1.2	150A-25V to 280A-34V	200A-30V	15-20mm
1.6	200A-28V to 330A-34V	230A-30V	15-25mm
1.2 P	120A-22V to 250A-34V	150A-25V	15-20mm

PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
1.2	15	S300	SC2205-12
1.2	15	S300	SC2205P-12
1.6	15	S300	SC2205-16

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr ³	Cr ⁶	Cu	F	OES (mg/m ³)
11	6	1	9	1.5	0.1	12	0.9