

## Classifications

EN ISO 17633-A	AWS A5.22
T 22 9 3 N L R M21 3 / T 22 9 3 N L R C1 3	E2209T0-4 / E2209T0-1

## Characteristics and field of use

UTP AF 6808 Mo is a strip alloyed duplex steel rutile flux cored wire for gas shielded arc welding primarily in flat and horizontal welding positions. It can provide an economical and qualitatively advantageous alternative to MAG welding of duplex steels.

The easy handling and high deposition rate of UTP AF 6808 Mo result in high productivity with excellent welding performance, self-releasing slag, very low spatter formation and seam oxidisation, finely rippled weld pattern with good wetting behaviour and even, reliable fusion penetration. In addition to the significant savings in time and costs of processing techniques, including the lower requirement for cleaning and pickling, we guarantee a high level of quality and highly reliable avoidance of welding defects.

The structure of the weld metal consists of austenite and ferrite (FN 30-50). The pitting resistance equivalent is  $PRE_N \geq 35$  ( $\%Cr + 3.3\%Mo + 16\%N$ ). In the welded and pickled condition, the weld metal is resistant, according to ASTM A262-93a, Pr.E, Pr.C, Pr.B and ASTM G48/Method A up to 22 °C, and according to ASTM G48/Method A (24 h) in the solution treated and pickled condition up to 30 °C. The welding consumable can be used in a temperature range from -40 °C up to +250 °C.

## Base materials

Same-type duplex steels and similar-alloy, ferritic-austenitic materials of increased strength, as well as for dissimilar joints between duplex steels and unalloyed or low-alloy, creep resistant and austenitic steels.

1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4,  
1.4462 X2CrNiMoN22-5-3 with 1.4583 X10CrNiMoNb18-12,  
1.4462 X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S460N, 16Mo3  
UNS S31803, S32205

## Typical analysis in %

C	Si	Mn	Cr	Ni	Mo	N	$PRE_N$	F <sub>n</sub>
≤0,03	0,8	0,9	22,7	9,0	3,2	0,13	35	30-50

## Mechanical properties of the weld metal

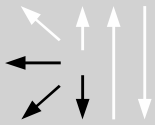
Welded condition	Yield strength $R_{P0,2}$	Tensile strength $R_m$	Elongation A	Impact strength $K_V$	
	MPa	MPa	%	J [RT]	- 40 °C
untreated	600	800	27	60	45

shielding gas Ar + 18% CO<sub>2</sub>

## Welding instruction

Welding with conventional MAG devices, slightly trailing torch position (angle of incidence about 80°); with 100% CO<sub>2</sub> the voltage must be 2 V higher. The gas quantity should be 15-18 l/min.

## Welding positions



Current type DC (+)  
Shielding gases: M1 – M3, C1

## Approvals

TÜV (07133.), ABS (E 2209 T0-4), CWB (E2209T0-4), DNV (Duplex (M21)), GL (4462S (M21,C1)), LR (X (M21)), RINA (2209S), SEPROZ, CE, DB (43.014.31)

## Recommended welding parameters

Wire diameter [mm]	Amperage [A]	Voltage [V]
1,2	125-280	22-36