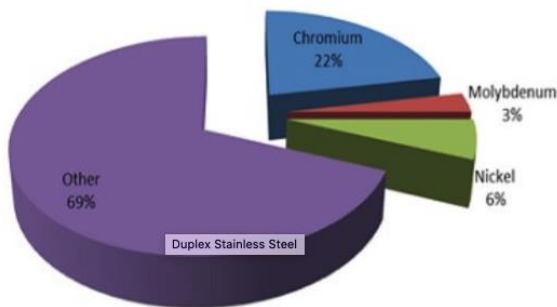
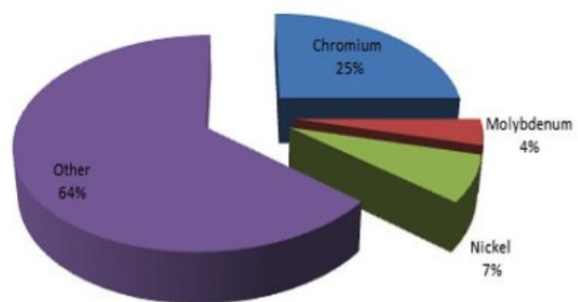


## DUPLEX AND SUPERDUPLEX STEEL TECHNICAL PROPERTIES

### 22Cr Duplex - X2CrNiMoN22 5 3



### 25Cr Duplex - X2CrNiMoN25 7 4



#### Duplex Stainless Steel – UNS S31803 / UNS S32205

**Duplex Steel** also known as Duplex 2205 Stainless Steel is a two-phase, ferritic and austenitic steel with 22% chromium (22cr Duplex) 3% molybdenum, 5 to 6% nickel alloyed stainless steel also known as x2crnimon22-5-3 used extensively in applications that require good corrosion resistance & strength. Heat treatment of Duplex SS 2205 is solution treatment (annealing), between 1020 – 1100°C, followed by rapid cooling. **22 Cr Duplex Stainless Steel** cannot be hardened by heat treatment. They can however be work hardened.

**1.4462 Stainless Steel Equivalent** – 1.4462 | 22Cr Duplex | [UNS S31803](#) (F51) | [UNS S32205](#) (F60) | Alloy 2205 | Sandvik – SAF 2205 | Duplex 2205 | x2crnimon22-5-3 | FALC223 | [URANUS 45N](#) (UR 45N) | [RA2205](#) | [Cronifer® 2205 LCN](#).

#### **SAF 2205 is Duplex (Austenitic-Ferritic) Stainless Steel characterized by –**

- High resistance to stress corrosion cracking (SCC) in chloride-bearing environments.
- High resistance to stress corrosion cracking (SCC) in environments containing hydrogen sulfide.
- High resistance to general corrosion, pitting, and crevice corrosion.
- High resistance to erosion corrosion and corrosion fatigue.
- High mechanical strength – roughly twice the proof strength of austenitic stainless steel.
- Physical properties that offer design advantages.
- Good weldability.

#### Super Duplex Stainless Steel – UNS S32750 / UNS S32760

**Super Duplex Steel** also is known as SAF 2507 or **Super Duplex 2507** with UNS S32750 and UNS S32760 (1.4410 / 1.4501 / F53 / F55 / 2507) is a high alloy duplex stainless steel with a PRE value of min.40\*. **Super Duplex S32750** and **Super Duplex S32760** has 25% chromium (25Cr Duplex), 4% molybdenum, and 7% nickel also known as X2CrNiMoN25 7 4. This high molybdenum, chromium and nitrogen content causes high resistance to chloride pitting and crevice corrosion attack and the duplex structure provides **2507** with exceptional resistance to chloride stress corrosion cracking.

**Super Duplex Equivalent names** – 25Cr Duplex | [2507](#) | UNS S32750 (F53) | UNS S32760 (F55) | [1.4410](#) | Alloy 2507 | SAF 2507 | Super Duplex S32750 | Super Duplex S32760 | [X2CrNiMoN25.7.4](#) | Stainless Steel Super Duplex | [2750](#) | Duplex 2507 | 1.4501 | Zeron 100 | Super Duplex 2507 | Duplex 2507.

#### **SAF 2507 is a Super Duplex (Austenitic-Ferritic) Stainless Steel is characterized by –**

- Excellent resistance to stress corrosion cracking (SCC) in chloride-bearing environments.
- Excellent resistance to pitting and crevice corrosion.
- High resistance to general corrosion.
- Very high mechanical strength.
- Physical properties that offer design advantages.
- High resistance to erosion corrosion and corrosion fatigue.
- Good weldability.