



**AESTEIRON**  
STEELS LLP



# **SUPER DUPLEX AND DUPLEX SS PIPES**

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## SUPER DUPLEX AND DUPLEX SS PIPES

[UNS S32750 / UNS S32760 / UNS S32205 / UNS S31803]

### Introduction:

**Super Duplex S32750 & Super Duplex S32760 Welded Pipes** are forged for applications demanding a high degree of strength & corrosion resistance.

**Super Duplex Steel S32750 and S32760 Pipes** possess excellent corrosion resistance properties with outstanding resistance to pitting and crevice corrosion, which generally occurs in seawater and other habitat or environment containing chloride with Critical Pitting Temperature that exceeds 50 Deg Celsius.

**UNS S32750 and S32760 ERW Pipes** and seamless pipes are available in different shapes and sizes.

It provides excellent corrosion resistance properties and is also superior to **Grade 316** in most habitats and environments.

The desirable properties of both ferritic and austenitic steel are present in **seamless pipes S32750 and S32760**.

**Duplex 2205** is the most commonly used duplex ferritic or austenitic stainless steel grade. **And it offers better corrosion resistance.**

It is generally not suitable for temperatures above 300° Celsius. It suffers from the precipitation of brittle micro-constituents, nor is it ideal below -50°C due to its ductile-to-brittle transitioning.

### 1.4410 applications:

- Propeller & Pump shafting
- Sea water pump & Valve parts
- Oil & gas industry
- Seawater desalination systems
- Pulp & Paper industry
- Chemical Industry
- Chemical Tanker

### UNS S32750 CHEMICAL COMPOSITION:

Weight (in%)	C	Si	Mn	S	P	Cr	Ni	Mo	Cu	N
Minimum						24,0	6,00	3,00		0,24
Maximum	0,03	0,80	1,20	0,020	0,035	26,0	8,00	5,00	0,50	0,32

## UNS S32750 MECHANICAL PROPERTIES:

	Yield strength Rp0.2, [MPa]	Tensile strength Rm, [MPa]	Elongation [in %]	Hardness [HB]	Impact, Charpy-V, -46°C [J]	Pre
For BAR	≥ 550	≥ 750	≥ 25	≤ 310	≥ 45	≥ 40
For PLATE CR [COIL]	≥ 550	750 - 1000	≥ 25	≤ 310	≥ 45	≥ 40
For PLATE HR [COIL]	≥ 550	750 - 930	≥ 25	≤ 310	≥ 45	≥ 40
For PLATE [QUARTO]	≥ 550	750 - 930	≥ 25	≤ 310	≥ 45	≥ 40

The Super Duplex Steel S32750 Rectangular Pipes possesses excellent localized corrosion resistance, including intergranular, crevice corrosion, and pitting.

The CPT of Super Duplex Steel S32760 Electropolish Pipes is at least 35 Deg Celsius, which has a better resistance to seawater than Grade 316 type.

## S32750 Physical properties

Density	[in g/cm <sup>3</sup> ]	7.80
Specific heating	[in J/Kg - K]	453
Electric resistance	[μΩ - cm]	83.0
Conductivity [Thermal]	[W/m - K]	12.3
Thermal expansion avg. coefficient [10 <sup>-6</sup> /degree Celsius]	20~100 degree Celsius	13.4
	20~200 degree Celsius	13.7
	20~300 degree Celsius	13.8
	20~400 degree Celsius	14.0
The Young's Modulus	[in Mpa]	19.7 x 10 <sup>4</sup>
Magnetic		Y [magnetize]
The melting range	[in degree Celsius]	139 ~ 1455

➤ **Super Duplex S32750 / S32760 Seamless Pipes [Specifications]**

- **Specifications :** ASTM A 790 ASME SA 790
- **Dimensions :** ASTM, ASME & API
- **Size :** 1/8"NB - 30"NB IN
- **Specialized :** Large Diameter Size
- **Schedule :** SCH20, SCH30, SCH40, STD, SCH80
- **Type :** Seamless / ERW / Welded / Fabricated
- **Form :** Round, Hydraulic and others
- **Length :** Single Random, Double Random & Cut Length.
- **End :** Plain End, Beveled End, Treaded

➤ **Super Duplex Welded Pipe Type**

• **Super Duplex S32750 / S32760 Seamless Pipe :-**

- [1] Super Duplex S32750 / S32760 Seamless Pipe
- [2] Super Duplex S32750 Seamless Pipe
- [3] S32760 Super Duplex Seamless Pipe
- [4] UNS S32750 Seamless Pipe
- [5] WERKSTOFF NR. 1.4410 Seamless Pipe
- [6] ASTM A790 S32760 Super Duplex Seamless Pipes

• **Super Duplex S32750 / S32760 Welded Pipe:-**

- [1] Super Duplex S32750 / S32760 Welded Pipe
- [2] S32750 Super Duplex Welded Pipe
- [3] Super Duplex S32760 ERW Pipe
- [4] Super Duplex S32750 EFW Pipe
- [5] Super Duplex S32760 ERW Pipe
- [6] Super Duplex S32750 EFW Pipe
- [7] S32760 Super Duplex Welded Pipe
- [8] UNS S32750 Welded Pipe
- [9] WERKSTOFF NR. 1.4410 Welded Pipe
- [10] ASTM A790 S32750 / S32760 Super Duplex Welded Pipes

• **Super Duplex S32750 / S32760 Round Pipe:-**

- [1] Super Duplex S32750 / S32760 Round Pipe
- [2] S32750 Super Duplex Round Pipe
- [3] S32760 Super Duplex Round Pipe
- [4] UNS S32750 Round Pipe
- [5] ASTM A790 S32750 / S32760 Super Duplex Round Pipes

• **Custom Super Duplex S32750 / S32760 Pipe:-**

- [1] Super Duplex S32750 / S32760 Custom Pipe
- [2] S32750 Super Duplex Custom Pipe
- [3] S32760 Super Duplex Custom Pipe
- [4] UNS S32750 Custom Pipe
- [5] WERKSTOFF NR. 1.4410 Custom Pipe
- [6] ASME SA790 Super Duplex S32750 Custom Pipes

## SS 2507 Super Duplex Pipe

➤ SS 2507 Super Duplex Pipe Specification is stated as below:

- **Specification** - ASTM A790 / ASME SA790, ASTM A789 / ASME SA A789
- **Standard** - ASTM, ASME & API
- **Seamless Pipes & Tubes Sizes** - 1 / 2" NB - 8" NB
- **Welded Pipes & Tubes Sizes** - 1 / 2" NB - 8" NB
- **Outer Diameter [OD]** - 6.0 - 630 mm
- **Thickness (in mm)** - 0.3mm - 50 mm
- **Length** - Single and Double Random & required length
- **Schedule** - SCH 10, SCH80, SCH120, SCH20, SCH140, SCH160, XXS, SCH30, STD, SCH60, XS & SCH40.
- **Types** - Seamless , welded, fabricated, ERW, EFW, CDW
- **Form** - Round Pipes, Square Pipes, Rectangular Pipe
- **End** - Plain, Treaded, Beveled

### Super Duplex 2507 Chemical Composition

Name of the element	Content(percentage)
Chromium [CR]	24 - 26
Nickel [Ni]	6 - 8
Molybdenum [Mo]	3 - 5
Manganese [Mn]	1.20 Maximum
Silicon [Si]	0.80 Maximum
Copper [Cu]	0.50 Maximum
Nitrogen [N]	0.24 - 0.32
Phosphorous [P]	0.035 Maximum
Carbon [C]	0.030 Maximum
Sulphur [S]	0.020 Maximum
Iron [Fe]	Balance

### Super Duplex 2507 physical properties

Property	Relevant metric
Melting point	1350 Degree Celsius
Density	7.8 g/ cm <sup>3</sup>

### Duplex 2507 Equivalent ASTM Grade:

Seamless steel pipe	A790	Standard	UNS	WERKSTOFF NR.
Welded Pipe	A790	Super Duplex 2507	1.441	S32750
		Super Duplex 2507	1.4401	S32760
		Super Duplex 2507	1.4401	Xeron 100

Grade	Proof stress 0.2% [in MPa]	Tensile strength [in MPa]	Elong A5 [in %]	Hardness Maximum	
				HB	HRB
2507	550	795	15	310	32*

## Duplex 2507 Steel Pipe Tolerances

NPS	Permissible Variations Outside Diameter[OD]	
	Over In.	Under In.
1/8 - 1 to 1/2	1/64 [0.015]	1/32 [0.031]
Over 1 to 1/2 - 4	1/32 [0.031]	1/32 [0.031]
Over 4 - 8	1/16 [0.062]	1/32 [0.031]
Over 8 - 18	3/23 [0.093]	1/32 [0.031]

## Duplex 2507 Seamless Pipe Pressure Rating

Hastelloy C22 Pipe Outside Diameter [in inches]	Wall Thickness [WT] [in inches]							
	.028	.035	.049	.065	.083	.095	.109	.120
	Working Pressure [pound per square inch](psig)							
1/8	7900	10100						
1/4	3700	4622	7000	9500				
5/16		3700	5400	7300				
3/8		3100	4400	6100				
1/2		2300	3200	4400				
3/4			2200	3000	4000	4600		
1				2200	2900	3400	3900	4300

### ➤ Super Duplex 2507 Applications:

- Construction
- Petrochemical industries
- Chemical industries
- Cement Steel plant
- Power plant
- Refineries
- Nuclear power
- Engineering Company
- Paper industries
- Oil mills
- Sugar industries
- Mining
- Breweries
- Defence industries
- Ship building
- Water desalination
- Sea Water
- Refineries
- Mining

## Story :

Aesteiron Steels LLP is a manufacturer, stockist & supplier of ASTM A790 Super Duplex Steel UNS S32750 Pipe characterized with being temperature resistant and having a high degree of resistance to corrosion.

Aesteiron Steels offers a wide range of Super Duplex Steel S32750 / S32760 pipes where our team of specialised professionals work in close proximity with the clients to manufacture these products as per their needs and specifications.

Equipped with an experience of over 4 decades in industrial steel & executing over 100 large projects satisfactorily, 'AESTEIRON Steels LLP' has emerged as a leading producer of duplex steel UNS S32750 Pipe or ASTM A790 S32750 Seamless Pipe (also termed by ALLOY 1.4410, EN 1.4410, UNS S32750, Grade F53, SAF2507).

Being specialised in ASTM A790 S32750 seamless pipe in India, we offer the products at competitive prices to our client's advantage. The categories includes Duplex UNS S32750 Sch 40/ 80 Pipe and others.

## SS 2507 Super Duplex Pipe

Aesteiron Steels LLP is one of the most prominent manufacturers, stockists and suppliers of duplex steel 2507 and super duplex 2507 pipe based in India.

We can offer the duplex 2507 seamless or welded pipe at competitive prices as we have a prominent hold in the Indian market due to our industry expertise of over 4 decades.

We stock duplex steel SAF 2507 seamless pipe, 2507 super duplex rectangular pipe, duplex 2507 square pipe, duplex Steel 2507 Electropolished Pipe, ss 2507 round pipe, duplex SS 2507 Polish Pipe, Duplex saf 2507 cold drawn stainless-steel pipe, ASME SA 790 Super duplex steel seamless pipes.

We have supplied ASTM A790 UNS S32760 pipe, Duplex 2507 UNS S32760 Pipe, ASTM A790 UNS S32750 seamless pipe, duplex steel SAF 2507 seamless pipe and are the SAF 2507 and Duplex 2507 pipe Distributors to prominent clients here in India as well as overseas.

## UNS S32750 material stock

Super Duplex Steel UNS S32750 Pipe	UNS S32750 Super Duplex Seamless Pipe
Super Duplex S32750 Bush Pipes	Super Duplex UNS S32750 Welded Pipe
Duplex S32750 Fabricated Pipes	Duplex UNS S32750 ERW Pipe
DIN 1.4410 UNS S32750 Beveled End Pipes	Grade UNS S32750 EFW Pipe
Alloy UNS 32750 Custom Pipes	Werkstoff UNS S32750 SMLS Pipe
Super Duplex S32750 UNS CDW Pipes	Alloy 32750 Hollow Pipe
UNS S32750 F53 Cold Drawn Seamless Pipes	Super Duplex Steel S32750 Round Pipe
UNS S32750 Super Duplex Cold Drawn Pipes	UNS S32750 Super Duplex Steel Square Pipe
Super Duplex UNS S32750 4 inch Pipes	Super Duplex DIN 1.4410 Rectangular Pipe
Duplex UNS S32750 Thick Wall Pipes	DIN 1.4410 UNS S32750 Clad Pipe
Grade UNS S32750 Large Pipes	Alloy UNS 32750 Annealed pipe
Werkstoff UNS S32750 Schedule 5S Pipes	Super Duplex S32750 UNS Rectangle Pipe
Alloy 32750 Schedule 40 Pipes	UNS S32750 F53 Capillary Pipe
Super Duplex Steel S32750 Polished Pipes	Super Duplex Steel S32750 Capillary Thin Pipe
UNS S32750 Super Duplex Steel Electropolished Pipes	UNS S32750 Super Duplex Steel High pressure Pipe
Super Duplex DIN 1.4410 Exhaust Pipes	Super Duplex S32750 small diameter pipe

## UNS S32760 material stock

Super Duplex Steel UNS S32760 Pipe {Xeron100}	UNS S32760 Super Duplex Seamless Pipe
Super Duplex S32760 Bush Pipes	Super Duplex UNS S32760 Welded Pipe
Duplex S32760 Fabricated Pipes	Duplex UNS S32760{Xeron100} ERW Pipe
DIN 1.4501 UNS S32760 Beveled End Pipes	Grade UNS S32760{Xeron100} EFW Pipe
Alloy UNS 32760{Xeron100} Custom Pipes	Werkstoff UNS S32760 SMLS Pipe
Super Duplex S32760 UNS CDW Pipes	Alloy 32760{Xeron100} Hollow Pipe
UNS S32760 F53 Cold Drawn Seamless Pipes	Super Duplex Steel S32760 Round Pipe
UNS S32760 Super Duplex Cold Drawn Pipes	UNS S32760 Super Duplex Steel Square Pipe
Super Duplex UNS S32760 4 inch Pipes	Super Duplex DIN 1.4501 Rectangular Pipe
Duplex UNS S32760 Thick Wall Pipes	DIN 1.4501 UNS S32760 Clad Pipe
Grade UNS S32760{Xeron100} Large Pipes	Alloy UNS 32760{Xeron100} Annealed pipe
Werkstoff UNS S32760 Schedule 5S Pipes	Super Duplex S32760 UNS Rectangle Pipe
Alloy 32760{Xeron100} Schedule 40 Pipes	UNS S32760{Xeron100} F53 Capillary Pipe
Super Duplex Steel S32760 Polished Pipes	Super Duplex Steel S32760 Capillary Thin Pipe
UNS S32760 Super Duplex Steel Electropolished Pipes	UNS S32760{Xeron100} Super Duplex Steel High pressure Pipe
Super Duplex DIN 1.4501 Exhaust Pipes	Super Duplex S32760 small diameter pipe



## UNS S31803 material stock

Super Duplex Steel UNS S31803 Pipe	UNS S31803 Super Duplex Seamless Pipe
Super Duplex S31803 Bush Pipes	Super Duplex UNS S31803 Welded Pipe
Duplex S31803 Fabricated Pipes	Duplex UNS S31803 ERW Pipe
DIN 1.4462 UNS S31803 Beveled End Pipes	Grade UNS S31803 EFW Pipe
Alloy UNS 31803 Custom Pipes	Werkstoff UNS S31803 SMLS Pipe
Super Duplex S31803 UNS CDW Pipes	Alloy 31803 Hollow Pipe
UNS S31803 F53 Cold Drawn Seamless Pipes	Super Duplex Steel S31803 Round Pipe
UNS S31803 Super Duplex Cold Drawn Pipes	UNS S31803 Super Duplex Steel Square Pipe
Super Duplex UNS S31803 4 inch Pipes	Super Duplex DIN 1.4462 Rectangular Pipe
Duplex UNS S31803 Thick Wall Pipes	DIN 1.4462 UNS S31803 Clad Pipe
Grade UNS S31803 Large Pipes	Alloy UNS 31803 Annealed pipe
Werkstoff UNS S31803 Schedule 5S Pipes	Super Duplex S31803 UNS Rectangle Pipe
Alloy 31803 Schedule 40 Pipes	UNS S31803 F53 Capillary Pipe
Super Duplex Steel S31803 Polished Pipes	Super Duplex Steel S31803 Capillary Thin Pipe
UNS S31803 Super Duplex Steel Electropolished Pipes	UNS S31803 Super Duplex Steel High pressure Pipe
Super Duplex DIN 1.4462 Exhaust Pipes	Super Duplex S31803 small diameter pipe

## SAF 2507 material stock

Super Duplex Steel SAF 2507 Pipe	SAF 2507 Super Duplex Seamless Pipe
Super Duplex SAF 2507 Bush Pipes	Super Duplex SAF 2507 Welded Pipe
Duplex SAF 2507 Fabricated Pipes	Duplex SAF 2507 ERW Pipe
DIN 1.4410 SAF 2507 Beveled End Pipes	Grade SAF 2507 EFW Pipe
Alloy SAF 2507 Custom Pipes	Werkstoff SAF 2507 SMLS Pipe
Super Duplex SAF 2507 UNS CDW Pipes	Alloy SAF 2507 Hollow Pipe
SAF 2507 F53 Cold Drawn Seamless Pipes	Super Duplex Steel SAF 2507 Round Pipe
SAF 2507 Super Duplex Cold Drawn Pipes	SAF 2507 Super Duplex Steel Square Pipe
Super Duplex SAF 2507 4 inch Pipes	Super Duplex DIN 1.4410 Rectangular Pipe
Duplex SAF 2507 Thick Wall Pipes	DIN 1.4410 SAF 2507 Clad Pipe
Grade SAF 2507 Large Pipes	Alloy SAF 2507 Annealed pipe
SAF 2507 Schedule 5S Pipes	Super Duplex SAF 2507 UNS Rectangle Pipe
Alloy SAF 2507 Schedule 40 Pipes	SAF 2507 F53 Capillary Pipe
Super Duplex Steel SAF 2507 Polished Pipes	Super Duplex Steel SAF 2507 Capillary Thin Pipe
SAF 2507 Super Duplex Steel Electropolished Pipes	SAF 2507 Super Duplex Steel High pressure Pipe
Super Duplex DIN 1.4410 Exhaust Pipes	Super Duplex SAF 2507 small diameter pipe

**SAF 2205 material stock**

Super Duplex Steel UNS SAF 2205 Pipe	SAF 2205 Super Duplex Seamless Pipe
Super Duplex SAF 2205 Bush Pipes	Super Duplex SAF 2205 Welded Pipe
Duplex SAF 2205 Fabricated Pipes	Duplex SAF 2205 ERW Pipe
DIN 1.4462 SAF 2205 Beveled End Pipes	Grade SAF 2205 EFW Pipe
Alloy SAF 2205 Custom Pipes	Werkstoff SAF 2205 SMLS Pipe
Super Duplex SAF 2205 UNS CDW Pipes	Alloy SAF 2205 Hollow Pipe
SAF 2205 F53 Cold Drawn Seamless Pipes	Super Duplex Steel SAF 2205 Round Pipe
SAF 2205 Super Duplex Cold Drawn Pipes	SAF 2205 Super Duplex Steel Square Pipe
Super Duplex SAF 2205 4 inch Pipes	Super Duplex DIN 1.4462 Rectangular Pipe
Duplex SAF 2205 Thick Wall Pipes	DIN 1.4462 SAF 2205 Clad Pipe
Grade SAF 2205 Large Pipes	Alloy UNS 31803 Annealed pipe
Werkstoff SAF 2205 Schedule 5S Pipes	Super Duplex SAF 2205 UNS Rectangle Pipe
Alloy SAF 2205 Schedule 40 Pipes	SAF 2205 F53 Capillary Pipe
Super Duplex Steel SAF 2205 Polished Pipes	Super Duplex Steel SAF 2205 Capillary Thin Pipe
SAF 2205 Super Duplex Steel Electropolished Pipes	SAF 2205 Super Duplex Steel High pressure Pipe
Super Duplex DIN 1.4462 Exhaust Pipes	Super Duplex SAF 2205 small diameter pipe