

## SPECIFICATIONS

|            |         |
|------------|---------|
| Commercial | 439/441 |
|------------|---------|

Stainless steel producers have an ongoing programme of development designed to produce new grades. These new grades are sometimes developed for specific end uses and sometimes to improve upon an existing grade.

Uginox F18TNb spans both of these two areas since it was developed for a particular range of applications in certain industries where it can be used in place of type 1.4301 (304). On some aspects, its properties and performance in service are actually superior to 304 whilst on others it falls between 430 and 304. Notably however, it is also lower cost than 304.

This grade can be referred to as a 'Super-Ferritic'

### Features:

- ~ Good for Deep Drawing
- ~ Good Weldability
- ~ Good pitting corrosion resistance
- ~ Good brightness
- ~ Polishes well

### Applications/Industries:

The main target sector is catering equipment to replace grade 304

### Availability:

- ~ 1250mm & 1500mm wide
- ~ Thicknesses 0.5mm to 2.0mm
- ~ Finishes Bright Annealed or Polished

## CHEMICAL COMPOSITION

| <i>Manufacturer's Data</i> |              |
|----------------------------|--------------|
| Element                    | % Present    |
| Chromium (Cr)              | 17.8 typical |
| Ti plus Nb (Ti+Nb)         | 0.7 typical  |
| Carbon (C)                 | 0.02 typical |
| Iron (Fe)                  | Balance      |

## ALLOY DESIGNATIONS

Stainless Steel Grade Uginox F187TNb is a modified form of AISI 439/441 and of 1.4509/1.4510 (UNS S43940, S43932 & S43035)

## SUPPLIED FORMS

- Sheet
- Plate
- Tube

## GENERIC PHYSICAL PROPERTIES

| Property               | Value                       |
|------------------------|-----------------------------|
| Density                | 7.70 g/cm <sup>3</sup>      |
| Melting Point          | 1505 °C                     |
| Thermal Expansion      | 11.0 x10 <sup>-6</sup> /K   |
| Modulus of Elasticity  | 220 GPa                     |
| Thermal Conductivity   | 25.0 W/m.K                  |
| Electrical Resistivity | 0.60 x10 <sup>-6</sup> Ω .m |

## MECHANICAL PROPERTIES

| <i>Manufacturer's Data</i> |         |
|----------------------------|---------|
| Property                   | Value   |
| Proof Stress               | 300 MPa |
| Tensile Strength           | 590 MPa |
| Elongation A50 mm          | 30 %    |

## CONTACT

|          |  |
|----------|--|
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## REVISION HISTORY

|                   |               |
|-------------------|---------------|
| Datasheet Updated | 13 March 2020 |
|-------------------|---------------|

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