

UGINOX[®] FME

tinned K44

Description

- > UGINOX FME is a bistabilized ferritic stainless steel with an electro-tinned coating on both sides.
- > This ferritic stainless steel is K44 and belongs to the KARA range: it contains 18% chromium and molybdenum and is stabilized with titanium and niobium.
- > UGINOX FME weathers over time, acquiring a matt finish through natural patination giving a traditional rustic final appearance.
- > UGINOX FME has the benefit of a high corrosion resistance, suitable for use in aggressive atmospheres.

Elements	%C	%Si	%Mn	%Cr	%Mo	%Ti+Nb
K44	0.016	0.40	0.30	17.75	1.85	0.50

Typical values

European designation

American designation

X2CrMoTi18-2 1. 4521⁽¹⁾

Type 444⁽²⁾

(1) According to NF EN 10088-2

(2) According to ASTM A 240



Think Stabilized Stainless Steel !

- > **Chromium** is a key chemical compound, which basically gives stainless steel its corrosion resistance property. Indeed a chromium oxide is created on the material surface in contact with air and water. This layer repairs itself and therefore protects the surface.
- > **Molybdenum** reinforces its corrosion resistance, as well as both **stabilisers** (titanium and niobium).

Key strengths

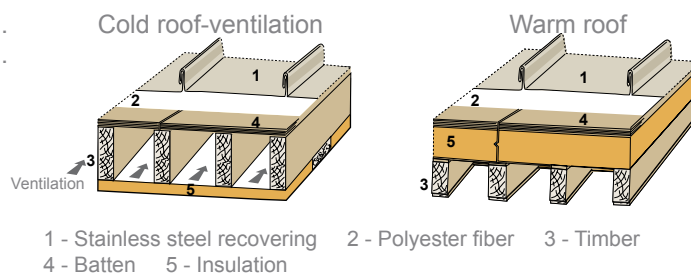
- > Workable at low temperatures, including in mountainous regions.
- > Ease of soldering.
- > Low thermal expansion coefficient: enables the use of long strips in single sections.
- > High corrosion resistance, suitable for use in aggressive atmospheres.
- > Nickel-free grade offering price stability over time.
- > 100% recyclable.

		Average values	FME	Zn ⁽¹⁾	Cu ⁽¹⁾	Al ⁽¹⁾
Physical properties	Melting point °C	1495	418	1083	660	
	Density kg/dm ³	7.7	7.1	8.9	2.7	
	Expansion coefficient mm/m with ΔT°= 100°C	1.08	2.2	1.68	2.35	
	Thermal conductivity W/m.K at 20°C	23	110	328	201	
Tensile properties (transverse)	Proof Stress 0.2 MPa	380	110/150	190 1/4 hard	45	
	Tensile Strength MPa	520	150/190	260 1/4 hard	120	

(1) reference of a type of zinc, copper or aluminium traditionally used for roofing

Applications

- > Standing seam roofing.
- > Self supporting roofing.
- > Cleated seam roofing.
- > Suitable for cold or warm roofs.
- > Gutters.
- > Roofing accessories.



Atmospheric exposure

> Atmospheric exposure behaviour

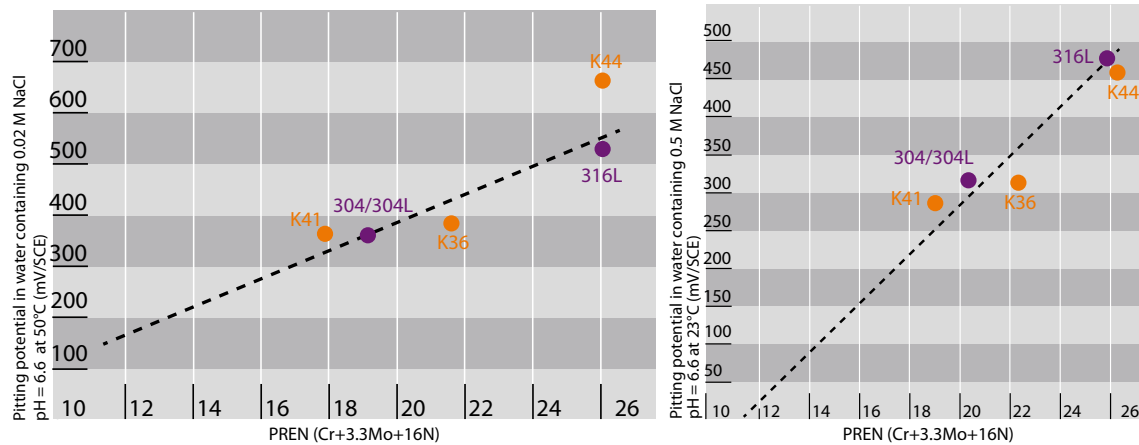
UGINOX FME is naturally resistant to corrosion and suitable for any environment.

UGINOX FME will adapt to any location for roofs installed according to current good practices (e.g. NF DTU 40.44 French Code).

UGINOX FME is not recommended for use in coastal environment without prior consultation and is not for use in vertical and sheltered areas.

> Behaviour to localised corrosion

Along with tinned coating, the corrosion resistance of the underlying base material is of primary importance.



Commercial designation	EN standard
K36	1.4526
K41	1.4509
K44	1.4521
304/304L	1.4301 1.4307
316L	1.4404

Our dimensional range

- > Thickness: 0.5mm
- > Maximum width: 1160mm
- > Available in coil, slit coil and sheet

		Widths (mm)					
		500	580	670	800	1000	1160
Thickness (mm)	0.5	51	44	38	32	26	22

Lengths in linear meters in relation to gauge, calculated on the basis of 100 kg coils, rounded to the nearest linear meter.

Our recommendations

- > Use UGINOX FME for standing seam, self supporting and cleated seam roofing, as well as for accessories.
- > Avoid the use of UGINOX FME in vertical and sheltered areas.
- > Use dedicated stainless steel tools to avoid any risk of cross contamination.
- > Do not work with other metals adjacent to UGINOX FME, which could cause contamination as a result of projections.
- > Avoid the use of metallic pads or wire wool including powder based abrasives.
- > Before soldering use an orthophosphoric based acid for pickling. Use of chlorine based pickling agents is prohibited. We recommend immediate rinsing with water after soldering.