

# UGINOX<sup>®</sup> AME

## tinned 316L

### Description

- > UGINOX AME is an austenitic stainless steel with molybdenum with an electro-tinned coating on both sides.
- > This austenitic stainless steel is 316L: it contains 17% chromium, 10% nickel as well as molybdenum.
- > UGINOX AME weathers over time, acquiring a matt finish through natural patination giving a traditional rustic final appearance.
- > UGINOX AME is suitable for use in aggressive environments.

Elements	%C	%Si	%Mn	%Cr	%Mo	%Ni
316L	0.02	0.40	1.25	16.7	2.05	10.05

Typical values

European designation	American designation
X2CrNiMo17-12-2 1.4404 <sup>(1)</sup>	Type 316L <sup>(2)</sup>

(1) According to NF EN 10088-2

(2) According to ASTM A 240



### Think 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.

### Key strengths

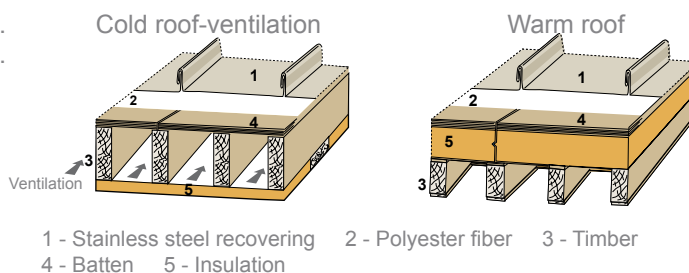
- > High corrosion resistance in harsher atmospheres.
- > Workable at low temperatures, including in mountainous regions.
- > Ease of soldering.
- > 100% recyclable.

	Average values	AME	Zn <sup>(1)</sup>	Cu <sup>(1)</sup>	Al <sup>(1)</sup>
Physical properties	Melting point °C	1440	418	1083	660
	Density kg/dm <sup>3</sup>	8	7.1	8.9	2.7
	Expansion coefficient mm/m with ΔT°= 100°C	1,6	2,2	1,68	2,35
	Thermal conductivity W/m.K at 20°C	15	110	328	201
Tensile properties (transverse)	Proof Stress 0.2 MPa	340	110/150	190 1/4 hard	45
	Tensile Strength MPa	620	150/190	260 1/4 hard	120

(1) Reference of a type of zinc, copper or aluminium traditionally employed in roofing.

### Applications

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



Battle Abbey Visitor Facilities, East Sussex – England.  
Contractor: Westridge Construction  
Project Manager: Dannatt Johnson Architects  
© Aperam  
Executed using grade UGINOX AME

## Atmospheric exposure

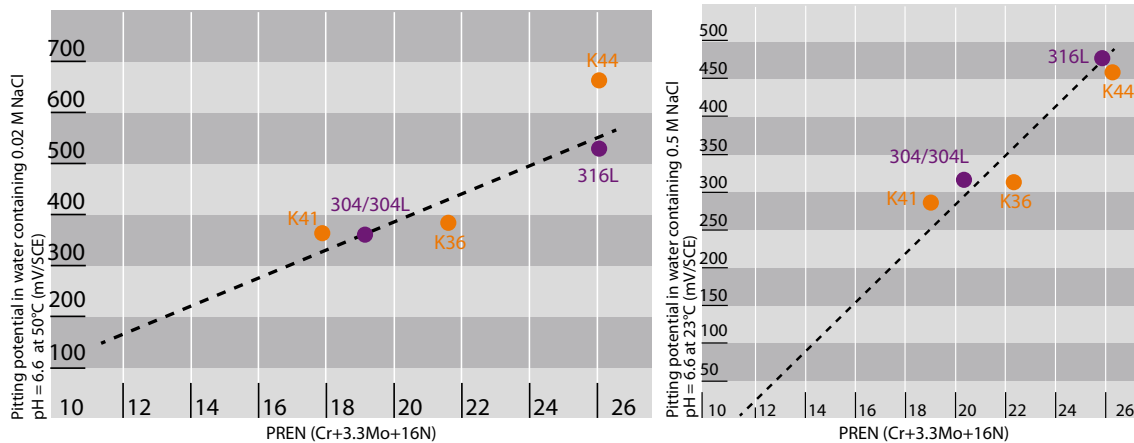
### > Atmospheric exposure behaviour

UGINOX AME is naturally resistant to corrosion and suitable for any environment. UGINOX AME will adapt to any location for roofs installed according to current good practices (e.g. NF DTU 40.44 French Code).

UGINOX AME is not recommended for use in coastal environments 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 range: 0.4-0.5mm
- > Maximum width: 1160mm
- > Available in coil, slit coil and sheet

		Widths (mm)					
		500	580	670	800	1000	1160
Thickness (mm)	0.4	63	54	47	39	31	27
	0.5	50	43	37	31	25	21

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 AME for standing seam, self supporting and cleated seam roofing, as well as for accessories.
- > Avoid the use of UGINOX AME 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 AME, 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.