

Product Description

Novelis Pre-painted Aluminium

09.01.12

**FALZONAL – Pre-Painted Aluminium
In Standing- Seam- Quality**

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This specification is valid for coil coated aluminium coils and sheets for the production of roofing and wall cladding in standing – Seam- Quality and /or other manual or industrial roofing and façade cladding techniques.

The material is coated on both sides:
On top side with PVdF and on the bottom side with a protective lacquer. In addition the top side is covered by a strippable protective film

We reserve the right to make any alterations to enable technical progress to be made.

N.B.: We are not responsible for incorrect technical application.

1. Processing Advises

The coils and sheets can be processed by cutting, blanking, punching and milling and be formed by bending.

To avoid cracking during forming one has to adhere to a minimum inner bending radius and a minimum temperature.

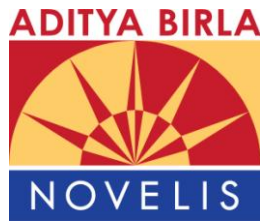
- minimum inner bending radius:

1.0T according to DIN EN 13523-7
sheet gauge 0,7 mm:
 $R_i = 1.0 \times 0,7 \text{ mm} = 0.7 \text{ mm}$

- minimum metal temperature during forming process: 0°C

2. Installation Advises

To ensure colour and gloss uniformity only sheets from productions with the same identification number are to be laid on one level of the roof/facade. Sheets with metallic coatings must always be laid in the same direction. This also is proposed for solid colours.



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An identification number is printed on the back side of the sheet. An arrow within the identification number indicates the coating direction.

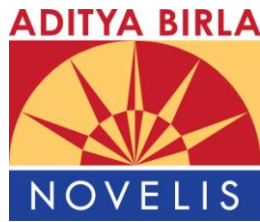
No peel of paint during punching, drilling, bending process.

3. Substructure Material

- 3.1 Alloy: WG-C4S
EN AW-3005 (AlMn1Mg0,5) acc. To EN 573-3
AA 3005 acc to international designation
- 3.2 Temper: H41
- 3.3 Mechanical Properties:
tensile strength R_m : 140 - 170 MPa
proof stress $R_{p0.2}$: >105 MPa
elongation A_{50} : > 6 %

4. Dimensions and Tolerances according to EN 485-4 (DIN 1783) ½ EN

- 4.1 Gauge: 0,73 mm +/- 0,03 mm
- 4.2 Widths: 600 mm and 1200 mm + 1,0 / - 0 mm
- 4.3 Lengths: will be delivered as coils



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5. Coatings

5.1.1 Pre-treatment: degreasing and chemical pre-treatment on both sides according to internal standard.

5.1.2 Front: PVdF (Polyvinylidenfluorid),
Kynar 500 / Hylar 5000,
80/20 (80%PVdF, 20%Acrylic resin)

2-coat-systems:	21-26 µm	tolerance	(+2/-1 µm)
4-coat-systems:	30-40µm	tolerance	(+4/-2 µm)
prints:	30-35µm*	tolerance	(+4/-2 µm)
stainless style bright:	42µm*	tolerance	(+4/-3 µm)

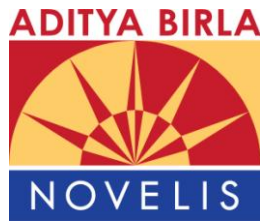
*depending on colour

gloss	approx. 20-80 units* (acc. to DIN EN 13523-2)
deviation	delta E <2 units (acc. to DIN EN 13523-3)
hardness	F-H (acc. to DIN EN 13523-4)
impact test	40 ip/mm (acc. to DIN EN 13523-5)
adhesion	very good (acc. to DIN EN 13523-6)
cupping	no de-lamination till fracture
T-bend	2,5T (acc. to DIN EN 13523-7) 2,0T for 4-coat-systems
MEK-test	>100 double rubs (acc. to DIN EN 13523-11)
surface	uniform (internal standard)
UV-resist.	very good (internal standard)
ASS-test	after 500 hrs of exposure no corrosion; corrosion creep from scratch less than 2,0mm
water immersion	after 1000 hrs no blistering no loss of adhesion

*depending on colour

5.1.3 colours according to Novelis colour chart or on special request.

5.1.4 reverse: epoxy coat, transparent, Type 2916-25
thickness: approx. 3-6 µm*
*depending on colour on front side



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5. Coating Properties

- 6.1 Front: best colour and gloss durability,
best corrosion and chemical resistance,
no chalking
- 6.2 Back: suitable for bonding with most of the available glues
(2K-EP or 2K-PUR)

7. Protective Film

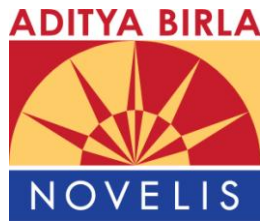
To protect the material against damages during processing and installation the sheets are covered by a white, UV-resistant protective film, which is printed with Novelis symbol and FALZONAL logo. This protective film can be easily stripped off.

Thickness: 80 µm

For an easy removal in the area of the standing seam the protective film is both sides asymmetrically perforated.

To give a achieve a better shoe-grip during the installation, the protective film has an anti-slip surface.

The protective film must be removed latest 6 months after installation.



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8. Quality Control

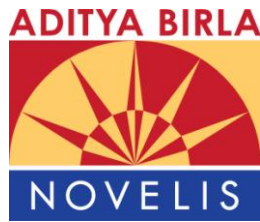
8.1 Test Procedures

Novelis Deutschland GmbH is certified according to DIN EN ISO 9001:2000 (Certificate Registration No: 08 100 939026, valid until 2010-10-21.)

The quality control is carried out in accordance with European guidelines such as EN, ISO, DIN and ECCA.

The following criteria are tested to the corresponding standard:

Tests	Standard
Metal Substrate	
Chemical composition	EN 573-3 (<i>DIN 1725</i>)
Temper designations	EN 515
Mechanical properties	Internal standard, EN 1396
Tensile testing	EN 10002-1
Tolerances on shape and Dimensions	EN 485-4 (<i>DIN 1783</i>)
Coating properties	
Pre-treatment	Internal standard
Primer and top coat (thickness)	DIN EN 13523-1
Gloss	DIN EN 13523-2
Colour difference	DIN EN 13523-3
Lacquer hardness - Pencil Test	DIN EN 13523-4
Impact test	DIN EN 13523-5
Lacquer adhesion after cupping	DIN EN 13523-6
T-bend-test	DIN EN 13523-7
Lacquer hardening - MEK test	DIN EN 13523-11 / Internal standard
Bonding test	Internal standard
Surface quality	Internal standard



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Accelerated Exposure Tests

Acetic acid salt spray test

DIN EN 13523-8 / ESS DIN 50021
under creep, blisters <1mm after 500h

Water immersion resistance test

DIN EN 13523-9
not affected after 1000h

QUV-Test

DIN EN 13523-10
colour change < 5 Units

Outdoor Exposure Tests at:

Göttingen

Internal standard

Hoek van Holland

DIN EN 13523-19/21 / Internal Standard

Florida

Internal standard

9. Cleaning

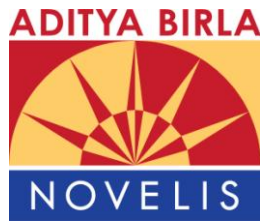
Easy to clean with clear water or pH-neutral detergents
Graffiti can be easily removed from colours with gloss of 60 and 80. For all other colours environmentally friendly detergents are available in the market

10. Fire Protection Non-combustible A1, acc. to EN 13501

11. Health and safety aspects

Novelis Deutschland GmbH is certified according to:
DIN EN ISO 14001:2009 Environmental Management
OHSAS 18001:1999 Occupational Health and Safety Management
The Novelis guide lines are laid down in the Novelis Code of Conduct
Novelis issues yearly Environmental Declarations

12. Others



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No toxic substances are released into the environment from paints used for these products.

Any deviations to this product description are subject to a special agreement.

In the interest of technical progress we reserve the right to make any modifications.

We are not responsible for incorrect technical applications of our products.

Novelis Deutschland GmbH
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Hannoversche Str. 1
37075 Göttingen
Germany

HBä / 12.02.2009