

# Novelis Advanz™

## 6HS - s615

Novelis

Novelis Advanz™ 6HS - s615 is a heat treatable product specifically designed and optimized for high strength requirements. This product offers an excellent balance of properties: superior formability in the as-supplied temper, high in service strength and excellent bending and crash behavior. Novelis Advanz™ 6HS - s615 has a wide array of applications for general structure and crash energy absorption such as engine supports, cross members, transmission tunnel and front and rear crash members.

### Mechanical Properties

The product shows excellent formability and bake hardening response. Due to its superior in-service strength, this alloy is ideal for down-gauging both skin and structure components. All values listed are typical.

Temper	UTS (Rm)	YS (Rp0.2)	Total Elongation A80
T4 Delivery	≥240 MPa	≤135 MPa	≥27%
T6 2% pre-strain + 20 min @185°C	≥300 MPa	≤230 MPa	≥20%
T6 no pre-strain, 30 min @225°C	≥320 MPa	≥285 MPa	≥12%
T6 no pre-strain, 10 hours @180°C	≥345 MPa	≥315 MPa	≥13%

### Chemical Composition (wt. %)

The chemical composition of this product corresponds to AA6111.

Si	Fe	Cu	Mn	Mg	Cr
0.60 - 1.1	≤ 0.40	0.50 - 0.90	0.10 - 0.45	0.50 - 1.0	≤ 0.10
Zn	Ti	V	Others, each	Others	Other, total
≤ 0.15	≤ 0.10	N/A	≤ 0.05	N/A	≤ 0.15

### Physical Properties

Density	2.7 x 10 <sup>3</sup> kg/m <sup>3</sup>
Elastic Modulus	70,000 N/mm <sup>2</sup>
Coefficient of Thermal Expansion	23.4 x 10 <sup>-6</sup> K <sup>-1</sup>
Thermal Conductivity	160 - 190 W/mK
Electrical Conductivity	26 - 30 m/Ωmm <sup>2</sup>

### Production Regions

Our manufacturing footprint allows us to tailor solutions for auto-makers around the world. Novelis Advanz™ 6HS - s615 is produced in the following locations:



Asia



North America

### What surface treatments are available?

Acid Etch  
TiZr  
PT3  
AlubVs  
Mp-404  
RP4107  
E1  
DC290  
61-AUS/6130  
EDT

Acid Etch  
TiZr  
A951  
AlubVs  
Mp-404  
RP4107  
E1

Additional services may be available through our distributors, please contact your Novelis sales representative for more information.

### What finishing processes are available?

Cut-to-length  
Laser Blank

Edge Trimming  
Slitting

Additional services may be available through our distributors, please contact your Novelis sales representative for more information.

### What gauges are available?

0.7 - 4.0 mm

0.7 - 4.0 mm

Please contact your Novelis sales representative for more information about available widths and gauges.

### Contact Novelis

Novelis Global Automotive  
[novelis.com/automotive](http://novelis.com/automotive)

Not just aluminum, Novelis Aluminum.™

