



## AXJ810 - TH

Composition (wgt %): Mg-8Al-1Ca-0.3Sr-0.2Mn

Room Temperature Tensile Properties:

<u>Treatment</u>	<u>YS, MPa</u>	<u>UTS, MPa</u>	<u>Elong, %</u>
As Thixomolded	169	234	8
TTMP + 5 min/300°C	263	330	8
TTMP + 15 min/300°C	252	330	10
TTMP + 30 min/300°C	240	321	11

Room Temperature Flexural Bend Properties:

<u>Treatment</u>	<u>YS, MPa</u>	<u>UTS, MPa</u>	<u>Max Bend Strain, %</u>
TTMP + 5min/300°C	283	382	4

High Temperature Tensile Properties at 150°C:

<u>Treatment</u>	<u>YS, MPa</u>	<u>UTS, MPa</u>	<u>Elong, %</u>
As Thixomolded	119	158	18

High Temperature Creep Properties:

<u>Test Conditions</u>	<u>Creep Strain for 200 hr, %</u>	<u>MCR 10<sup>10</sup> [5<sup>-1</sup>]*</u>
150°C, 50 MPa	0.14	9.3
150°C, 70 MPa	0.37	16.8
175°C, 50 MPa	0.37	15.2

\* MCR = minimum creep rate

Sheet Thickness: 0.8 to 2.5mm

Moldability: Equal to AZ91D

Liquidus Temperature: 617°C

Eutectic Temperature: 494°C

Microstructure: Grain Size - 2µm  
Precipitate Size – 30-300 nanometers