



# AM 3 - 350

from Pechiney Rhenalu specification IS 5648

**THICKNESS** .....25 to 350 mm

**CHEMICAL COMPOSITION** .....2xxx ALLOY

## MECHANICAL PROPERTIES

| THICKNESS<br>mm | MINI. VALUES |     |       |     |     |     | TYPICAL VALUES |       |     |   |          |  |
|-----------------|--------------|-----|-------|-----|-----|-----|----------------|-------|-----|---|----------|--|
|                 | UTS          |     | 0,2PS |     | E   | UTS |                | 0,2PS |     | E | Hardness |  |
|                 | MPa          | ksi | MPa   | ksi | %   | MPa | ksi            | MPa   | ksi | % | HB*      |  |
| 25 → 50,8       | 428          | 62  | 317   | 45  | 7   | 465 | 67             | 366   | 53  | 9 | 145      |  |
| 50,8 → 76,2     | 428          | 62  | 310   | 44  | 6   | 465 | 67             | 366   | 53  | 9 | 145      |  |
| 76,2 → 101,6    | 414          | 60  | 304   | 44  | 5   | 465 | 67             | 366   | 53  | 8 | 145      |  |
| 101,6 → 127     | 407          | 59  | 297   | 43  | 5   | 460 | 66             | 365   | 52  | 7 | 140      |  |
| 127 → 152,4     | 393          | 56  | 290   | 42  | 4   | 455 | 65             | 360   | 52  | 6 | 135      |  |
| 152,4 → 203,2   | 380          | 55  | 280   | 40  | 2   | 420 | 60             | 330   | 47  | 4 | 125      |  |
| 203,2 → 254     | 355          | 51  | 270   | 39  | 1   | 390 | 56             | 315   | 45  | 3 | 120      |  |
| 254 → 305       | 320          | 46  | 240   | 34  | 0,5 | 360 | 52             | 310   | 44  | 2 | 110      |  |

UTS, 0,2PS, E : Value at 1/4 thickness, HB\* : ball 2.5 mm, 62.5 kg Indicative values

## HEAT TREATMENT

Plates are delivered after complete thermal treatment and internal stress relieving.  
No further thermal treatment is recommended.

## INTERNAL STRESS RELIEVED

Depending on thickness : - Stretching for thickness from 25 to 250 mm.

- Compression for thickness from 150 to 350 mm.

## PHYSICAL PROPERTIES

|                                      |                           |                       |             |
|--------------------------------------|---------------------------|-----------------------|-------------|
| Specific gravity                     | 2,84 kg/dm <sup>3</sup>   | Modulus of elasticity | 72400 MPa   |
| Coef. of thermal expansion (0-100°C) | 22,3.10 <sup>-6</sup> /°C | Modul. of compression | 74400 MPa   |
| Thermal conductivity (0-100 °C)      | 130 W/m.°C                | Poisson's coefficient | 0.33        |
| Specific heat (0-100 °C)             | 920 J/kg.°C               | Melting range         | 545 - 645°C |

## USAGE PROPERTIES

|           |                    |           |
|-----------|--------------------|-----------|
| Welding   | Refilling(TIG)     | Very good |
| Anodizing | Hard               | Very good |
| Milling   | Swarf breaking     | Good      |
|           | Surface brightness | Good      |

## DIMENSIONS

Minimum and maximum lengths available depend on their cross section.  
Our sales office will be pleased to advise on these limits.  
The herewith table is to be used only as a guide.

| Thickness | Minimal Width     |                  | Maximal Width     |                  | Standard Width    |                   |
|-----------|-------------------|------------------|-------------------|------------------|-------------------|-------------------|
|           | Compressed plates | Stretched plates | Compressed plates | Stretched plates | Compressed plates | Compressed plates |
| mm        | mm                | mm               | mm                | mm               | mm                | mm                |
| 25,4      | -                 | 3050             | -                 | 1000 - 1500      | -                 | -                 |
| 50,8      | -                 | 3050             | -                 | 1000 - 1500      | -                 | -                 |
| 76,2      | -                 | 3050             | -                 | 1000 - 1500      | -                 | -                 |
| 101,6     | -                 | 2400             | -                 | 1000 - 1500      | -                 | -                 |
| 152,4     | -                 | 1700             | 1500              | 1000 - 1500      | 1500              | 1500              |
| 203,2     | -                 | 1500             | 1500              | 1250             | 1500              | 1500              |
| 254       | 800               | 1100             | 1450              | 1000             | 1450              | 1450              |
| 305       | 800               | -                | 1450              | -                | 1450              | 1450              |

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