

# Database of Steel and Alloy (Marochnik)

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## Characteristics for grade A7E ( A7E ).

|                           |                         |
|---------------------------|-------------------------|
| <b>Grade :</b>            | A7E ( A7E )             |
| <b>Classification :</b>   | Primary aluminium       |
| <b>Equivalent grades:</b> | <a href="#">Go here</a> |

## Chemical composition in % for grade A7E ( A7E )

| Fe      | Si       | Ti       | Al       | Cu       | Mg       | Zn       | Ga       | Impurity          |
|---------|----------|----------|----------|----------|----------|----------|----------|-------------------|
| max 0.2 | max 0.08 | max 0.01 | min 99.7 | max 0.01 | max 0.02 | max 0.04 | max 0.03 | other, each 0.02; |

## Physical properties for grade A7E ( A7E )

| T     | E 10 <sup>-5</sup> | $\alpha$ 10 <sup>6</sup> | $\lambda$      | $\rho$            | C            | R 10 <sup>9</sup> |
|-------|--------------------|--------------------------|----------------|-------------------|--------------|-------------------|
| Grade | MPa                | 1/Grade                  | Watt/(m·Grade) | kg/m <sup>3</sup> | J/(kg·Grade) | Ohm·m             |
| 20    |                    |                          |                |                   |              | 27.7              |

## Equivalent steels for grade A7E ( A7E )

Warning! Indicated both exact and nearest equivalents.

|                |
|----------------|
| USA            |
| -              |
| Aluminium 1370 |

## Specification :

### Physical properties :

- T** - Test temperature , [Grade]
- E** - Young modulus , [MPa]
- $\alpha$  - Coefficient of linear expansion (range 20° - T ) , [1/Grade]
- $\lambda$  - Thermal (heat) condition coefficient , [Watt/(m·Grade)]
- $\rho$  - Density , [kg/m<sup>3</sup>]
- C** - Specific heat ( range 20° - T ) , [J/(kg·Grade)]
- R** - Electrical resistance , [Ohm·m]

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more than 2500 steels and alloys (stainless steel, alloy steel, carbon steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).  
Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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