


# Alloy 7075 by MTC NISSAL company

conforming to EU directives: 2000/53/CE (ELV) - 2011/65/EU (RoHS II)

Color code EU **VIOLET**

| PRODUCTION PROGRAM |   |   |   |
|--------------------|---|---|---|
| Unit:mm            |  |  |  |
| Drawn              | 10 ÷ 65   | 10 ÷ 36   | 20 ÷ 36   |
| Extruded           | 20 ÷ 120  | 20 ÷ 36   | 20 ÷ 36   |

Alloy 7075 has the highest strength of all aluminum machine alloys and high resistance to fatigue. Moreover, it has good resistance to corrosion and attitude to hard, protective and decorative anodizing.

Main applications: Due to its very high strength, alloy 7075 is used for highly stressed structural parts for mechanical industry, aviation defense, motorbike and automotive.

Applications include aircraft fittings, gears and shafts and various other commercial aircraft, aerospace and defense equipment.

## CHEMICAL COMPOSITION

| Si   | Fe   | Cu    | Mn   | Mg      | Cr        | Ni | Zn      | Zr+Ti | Pb | Bi | Other                | Al        |
|------|------|-------|------|---------|-----------|----|---------|-------|----|----|----------------------|-----------|
| ≤0.4 | ≤0.5 | 1.2+2 | ≤0.3 | 2.1+2.9 | 0.18+0.20 |    | 5.1+6.1 | ≤0.2  |    |    | Each 0.05 Total 0.15 | Remainder |

## PHYSICAL PROPERTIES

|  |   |        |
|--|---|--------|
| Density                                | $\frac{\text{Kg}}{\text{dm}^3}$           | 2.8    |
| Modules of elasticity                  | MPa                                       | 72.000 |
| Coefficient of thermal expansion       | $\frac{\times 10^{-6}}{^{\circ}\text{C}}$ | 23.5   |
| Thermal conductivity at 20°C           | $\frac{\text{W}}{\text{mk}}$              | 130    |
| Typical electrical resistivity at 20°C | $\frac{\Omega\text{mm}^2}{\text{m}}$      | 0.052  |

## MECHANICAL PROPERTIES

|          | Temper            | Diam mm   | Rm Mpa | Rp Mpa | A% | HBW Typical |
|----------|-------------------|-----------|--------|--------|----|-------------|
| Drawn    | T6                | ≤80       | 540    | 485    | 7  | 150         |
|          | T651              | ≤80       | 540    | 485    | 5  | 150         |
|          | T73               | ≤80       | 455    | 385    | 10 | 135         |
|          | T7351             | ≤80       | 455    | 385    | 8  | 135         |
| Extruded | T6,T6510,T6511    | ≤100      | 560    | 500    | 7  | 150         |
|          | T6,T6510,T6511    | 100<D≤150 | 550    | 440    | 5  | 150         |
|          | T6,T6510,T6511    | 150<D≤200 | 440    | 400    | 5  | 150         |
|          | T73,T73510,T73511 | ≤75       | 475    | 405    | 7  | 135         |
|          | T73,T73510,T7351  | 75<D≤100  | 470    | 390    | 6  | 135         |
|          | T73,T73510,T7351  | 100<D≤150 | 440    | 360    | 6  | 135         |

| PROPERTIES                          | T6 |  |  |  |  |
|-------------------------------------|----|--|--|--|--|
| Mechinability                       |    |  |  |  |  |
| Protective anodizing                |    |  |  |  |  |
| Decorative anodizing                |    |  |  |  |  |
| Hard anodizing                      |    |  |  |  |  |
| Resistance to atmospheric corrosion |    |  |  |  |  |
| Resistance to marine corrosion      |    |  |  |  |  |
| MIG-TIG weldability                 |    |  |  |  |  |
| At resistance weldability           |    |  |  |  |  |
| Brazing weldability                 |    |  |  |  |  |
| Plastic formability when cold       |    |  |  |  |  |
| Plastic formability when hot        |    |  |  |  |  |

Legend

|           |
|-----------|
| Excellent |
|-----------|

|      |
|------|
| Good |
|------|

|            |
|------------|
| Acceptable |
|------------|

|                 |
|-----------------|
| Not recommended |
|-----------------|



email: [office@mtc.co.rs](mailto:office@mtc.co.rs)