Technical Data Sheet

TON Q2

Chemical Composition

Aluminum	Iron	Nickel	Manganese	Copper
10.0 %	3.0 %	4.8 %	≤1.5 %	Rem.

Note: Cu + Sum of Named Elements, 99.5% min.

Matters Needing Attention

TON Q2 should not be used for oxidizing acids conditions.

Mechanical and Physical Properties

Properties (1)	Metric	US Customary
Brinell Hardness	220 HB	220 HB
Tensile Strength	689 MPa	100 ksi
Yield Strength(2)	414 MPa	60 ksi
Elongation	15 %	15 %
Density	7.58 g/cm^3	0.274 lb/in^3
Electrical Conductivity	7 %IACS	4.1 Ms/m
Thermal Conductivity	39 W/m·K	22.5 Btu/hr·ft·°F
Coefficient of (3) Thermal Expansion	16.2x10^{-6}/°C	9.0x10^{-6}/°F

(1) Typical values measured at room temperature, 20°C (68°F), unless otherwise stated.
(2) Offset yield strength set at 0.2% strain.
(3) Typical value measured at 20-300°C (68-572°F).

Material properties

High Strength, Good Ductility and Toughness, Excellent Corrosion Resistance and Wear Resistance.

Typical Uses

Injection Mold: Guide Bushings, Wear Plates, Slides, Side cores
Stamping Die: Slides, Bushings
Other: Valve Guides, Valve Seats, Valve Bodies, Valve Balls
Hydraulic Bushings for Earth Moving Equipment
Ship Propellers
High Strength Clamps
Cams, Gears, Worm Gears
Support Bushings, Wear Plates
Nuts, Bolts, Tie Rods

Fabrication Properties

Machinability Rating: 30% (Free-Cutting Brass, C36000 is defined as 100%). Both high strength tool steel cutting tool and cemented carbide cutting tool can be used for various machining. Good lubricating and cooling should be guaranteed.
Forgeability Rating: 75% (Forging Brass, C37700 is defined as 100%).
Workability: Capacity for Being Hot Formed (Good), Capacity for Being Cold Worked (Poor).
Welding Suitability: Gas Shielded Arc Welding (Good), Brazing (Fair), Soldering (Not Recommended), Oxyacetylene Welding (Not Recommended).