

## Material - ASTM B176 UNS C87800

### Standard Specification for Copper Alloy Die Castings

Group - Non-Ferrous Copper Alloy

Sub Group - ASTM B176 Copper Alloy Die Castings

Application - Intended for Valve, Pump, General Engineering, Automotive and Other Industries

Grade Belongs to the Industry - Casting

| Chemical Composition |           |                 | Heat Treatment               |              |
|----------------------|-----------|-----------------|------------------------------|--------------|
| Tin                  | Sn %      | 0.250 max.      | As-Cast                      |              |
| Lead                 | Pb %      | 0.150 max.      |                              |              |
| Zinc                 | Zn %      | 12.000 - 16.000 |                              |              |
| Iron                 | Fe %      | 0.150 max.      |                              |              |
| Ni + Cu              | Ni% + Cu% | 0.200 max.      |                              |              |
| Aluminium            | Al %      | 0.150 max.      |                              |              |
| Silicon              | Si %      | 3.800 - 4.200   |                              |              |
| Antimony             | Sb %      | 0.050 max.      |                              |              |
| Sulphur              | S %       | 0.050 max.      |                              |              |
| Phosphorus           | P %       | 0.010 max.      |                              |              |
| Copper               | Cu %      | 80.000 min.     | <b>Mechanical Properties</b> |              |
| -                    | -         | -               |                              |              |
| -                    | -         | -               |                              |              |
| -                    | -         | -               |                              |              |
| -                    | -         | -               |                              |              |
| -                    | -         | -               |                              |              |
|                      |           |                 | Tensile Strength in Mpa      | 589 min.     |
|                      |           |                 | Yield Strength in Mpa        | 345 min.     |
|                      |           |                 | Elongation in %              | 25 min.      |
|                      |           |                 | Reduction of Area in %       | -            |
|                      |           |                 | Hardness in HRB              | 85 - 90      |
|                      |           |                 | Impact in Joule              | 95 min. @ RT |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| B176 C87800           | ASTM     | USA     | Casting                      |
| B30 C87800            | ASTM     | USA     | Ingot and Casting            |
| CA878                 | SAE      | USA     | Casting                      |
| C87800                | SAE      | USA     | Casting                      |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |

**For any further inquiries, please do not hesitate to contact us. You may visit our website at [AMTECH TECHNOCAST PVT. LTD.](http://AMTECH TECHNOCAST PVT. LTD.), call us at [+91 9879817994](tel:+919879817994), or email us at [manish@amtechtechnocast.com](mailto:manish@amtechtechnocast.com)**

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