

## Material: ASTM B86 Zamak 5

### Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings

Group: Non-Ferrous Zinc Alloy

Sub Group: ASTM B86 Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings

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

**Grade Belongs to the Industry:** Casting

| Chemical Composition |      |               | Heat Treatment          |             |
|----------------------|------|---------------|-------------------------|-------------|
| Aluminium            | Al % | 3.700 - 4.300 | As-Cast or Aging        |             |
| Cadmium              | Cd % | 0.004 max.    |                         |             |
| Chromium             | Cr % | 0.020 max.    |                         |             |
| Copper               | Cu % | 0.700 - 1.200 |                         |             |
| Iron                 | Fe % | 0.050 max.    |                         |             |
| Magnesium            | Mg % | 0.020 - 0.060 |                         |             |
| Manganese            | Mn % | 0.060 max.    |                         |             |
| Nickel               | Ni % | 0.020 max.    |                         |             |
| Lead                 | Pb % | 0.005 max.    |                         |             |
| Silicon              | Si % | 0.035 max.    |                         |             |
| Tin                  | Sn % | 0.002 max.    | Mechanical Properties   |             |
| Titanium             | Ti % | 0.001 max.    | Tensile Strength in Mpa | 328 min.    |
| Zinc                 | Zn % | Balance       | Yield Strength in Mpa   | 228 min.    |
| -                    | -    | -             | Elongation in %         | 7 min.      |
| -                    | -    | -             | Reduction of Area in %  | -           |
| -                    | -    | -             | Hardness in HB          | 91 min.     |
| -                    | -    | -             | Impact in Joule         | 65 min. @RT |

| Cross Reference Table |          |               |                              |
|-----------------------|----------|---------------|------------------------------|
| Material              | Standard | Country       | Grade Belong to the Industry |
| Zamak 5               | ANSI/AA  | USA           | Casting                      |
| ZP5                   | ISO      | International | Casting                      |
| Z33531                | UNS      | USA           | Ingot and Casting            |
| B86 Alloy 5           | ASTM     | USA           | Casting                      |
| B86 AC41A             | ASTM     | USA           | Casting                      |
| B240 AC41A            | ASTM     | USA           | Ingot and Casting            |
| B240 Zamak 5          | ASTM     | USA           | Ingot and Casting            |

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