

## Material - UNI EN 1706 G-AS12MG

### Standard Specification for Primary Aluminium-Silicon-Magnesium Alloy for Casting

Group - Non-Ferrous Aluminium Alloy

Sub Group - UNI EN 1706 Primary Aluminium-Silicon-Magnesium Alloy for Casting

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

Grade Belongs to the Industry - Casting

| Chemical Composition |      |                 |
|----------------------|------|-----------------|
| Copper               | Cu % | 0.100 max.      |
| Magnesium            | Mg % | 0.270 - 0.400   |
| Silicon              | Si % | 11.500 - 13.000 |
| Iron                 | Fe % | 0.800 max.      |
| Manganese            | Mn % | 0.350 - 0.650   |
| Nickel               | Ni % | 0.100 max.      |
| Zinc                 | Zn % | 0.100 max.      |
| Titanium             | Ti % | 0.100 max.      |
| Other                | Ot%  | 0.300 max.      |
| Aluminium            | Al % | Balance         |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |

| Heat Treatment                    |
|-----------------------------------|
| As-Cast or Annealing or Quenching |

| Mechanical Properties   |               |
|-------------------------|---------------|
| Tensile Strength in Mpa | 215.7 - 313.8 |
| Yield Strength in Mpa   | 177 - 275     |
| Elongation in %         | 1 - 4         |
| Reduction of Area in %  | -             |
| Hardness in HB          | 80 - 110      |
| Impact in Joule         | -             |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| LM9                   | BS       | British | Ingot and Casting            |
| 4635                  | IS       | India   | Ingot and Casting            |
| G AlSi12MnMg          | UNI      | Italy   | Ingot and Casting            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |