

# Material: SAE Stellite 12

## Standard Specification for Cobalt-Based alloy

**Group:** Non-Ferrous Cobalt Alloys

**Sub Group:** SAE Stellite 12 Cobalt-Based alloy

**Application:** Intended for Valve, Pump, General Engineering, Automotive, Medical and other Industries

**Grade Belongs to the Industry:** Casting

| Chemical Composition |      |                 |
|----------------------|------|-----------------|
| Carbon               | C %  | 1.100 - 1.700   |
| Chromium             | Cr % | 26.000 - 33.000 |
| Tungsten             | W %  | 7.000 - 9.500   |
| Iron                 | Fe % | 3.000 max.      |
| Manganese            | Mn % | 1.000 max.      |
| Molybdenum           | Mo % | 1.000 max.      |
| Nickel               | Ni % | 3.000 max.      |
| Phosphorus           | P %  | 0.030 max.      |
| Sulphur              | S %  | 0.030 max.      |
| Silicon              | Si % | 0.400 - 2.000   |
| Cobalt               | Co % | Balance         |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |

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

| Mechanical Properties   |         |
|-------------------------|---------|
| Tensile Strength in Mpa | -       |
| Yield Strength in Mpa   | -       |
| Elongation in %         | -       |
| Reduction of Area in %  | -       |
| Hardness in HRC         | 42 min. |
| Impact in Joule         | -       |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| R30012                | UNS      | USA     | Casting                      |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |

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