

## Continuous casting bronze



|                                         | Denom.<br>commercial |          | Cu   | Sn   | Pb   | Zn    | Ni  | Si   | P    | Fe  | Al   | Mn   | Sb   | S    | Others |
|-----------------------------------------|----------------------|----------|------|------|------|-------|-----|------|------|-----|------|------|------|------|--------|
| RED<br>BRONZES<br>AND<br>TIN<br>BRONZES | IM-2                 | Low Rest | 4.0  | 4.0  | 4.0  |       |     |      |      |     |      |      |      |      |        |
|                                         |                      | Máx.     |      | 7.0  | 6.5  | 6.5   | 2.0 |      |      |     |      |      |      |      |        |
|                                         | IM-3                 | Low Rest | 6.0  | 5.0  | 3.5  |       |     |      |      |     |      |      |      |      |        |
|                                         |                      | Low      |      | 8.0  | 8.0  | 5.5   | 2.0 |      |      |     |      |      |      |      | 1.0    |
|                                         | IM-4                 | Low Rest | 9.0  |      | 1.0  |       |     |      |      |     |      |      |      |      |        |
| Máx.                                    |                      |          | 11.0 | 2.0  | 3.0  | 2.0   |     | 0.2  | 0.25 |     |      | 0.3  | 0.1  |      |        |
| LEADED<br>BRONZE                        | IM-5                 | Low      | 83.5 | 10.5 | 0.7  |       |     |      |      |     |      |      |      |      |        |
|                                         |                      | Máx.     | 87.0 | 12.5 | 2.5  | 2.0   | 2.0 |      | 0.4  | 0.2 |      |      | 0.2  | 0.08 |        |
|                                         | IM-7                 | Low      | 78.0 | 9.0  | 8.0  |       |     |      | 0.05 |     |      |      |      |      |        |
| Máx.                                    |                      | 82.0     | 11.0 | 11.0 | 2.0  | 2.0   |     | 0.10 | 0.25 |     |      | 0.50 | 0.10 |      |        |
| LUMINUM<br>BRONZE                       | IM-8                 | Low      | 76   |      |      |       | 4.0 |      |      | 4   | 8.5  |      |      |      |        |
|                                         |                      | Máx.     | 83   | 0.1  | 0.03 | 0.5   | 6.0 | 0.1  |      | 5.5 | 10.5 | 3    |      |      |        |
| HIGH<br>STRENGTH<br>BRASS               | IM-LAR               | Low      | 60.0 |      |      |       |     |      |      | 1.5 | 3.0  | 2.5  |      |      |        |
|                                         |                      | Máx.     | 67.0 | 0.2  | 0.2  | Resto | 3.0 | 0.1  | 0.03 | 4.0 | 7.0  | 5.0  |      |      |        |

| Den.        | Description                                                                      | International<br>equivalents                                      | Elastic<br>limit<br>Rp.<br>0.2<br>N/mm <sup>2</sup> | Braking<br>load<br>R <sub>m</sub><br>N/mm <sup>2</sup> | Exten-<br>ded<br>A5<br>(%) | Hardness<br>HB<br>10/1000 | Elastic<br>Module<br>KN/mm <sup>2</sup> | Density<br>Kg/dm <sup>3</sup> |
|-------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|----------------------------|---------------------------|-----------------------------------------|-------------------------------|
| <b>IM-2</b> | Material resistant to seawater and brazing weldable, only conditionally brazing. | EN 1982:<br>1998 CC491K<br>BS 1400 LG2<br>DIN 1705<br>CuSn5Zn5Pb5 | 110                                                 | 250                                                    | 13                         | 65                        | 65/105                                  | 8.8                           |

|               |                                                                                                                  |                                                                 |     |     |    |     |         |     |
|---------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----|-----|----|-----|---------|-----|
| <b>IM-3</b>   | Bearings, slide plates peaks to 4,000 N/cm <sup>2</sup> . Suitable for sliding emergency. Resistant to seawater. | EN 1982:1998<br>CC493K<br>BS 1400 LG4 / DIN 1705<br>CuSn7ZnPb   | 120 | 260 | 12 | 70  | 98/115  | 8.8 |
| <b>IM-4</b>   | Hard material resistant to seawater for bearings and mating parts under moderate stress.                         | DIN 1705 Rg 10 / BS 1400 LG 3<br>ISO 1338<br>CuSn10Zn2          | 140 | 280 | 8  | 90  | 75/110  | 8.7 |
| <b>IM-5</b>   | Gears and sprockets, bearings with relatively high loads and low speeds.                                         | EN 1982: 1998<br>CuSn11Pb2-C<br>DIN 1705<br>CuSn12Pb            | 150 | 300 | 5  | 90  | 90/110  | 8.7 |
| <b>IM-7</b>   | Material of good corrosion resistance, slip and wear.                                                            | EN 1982: 1998<br>CC495K<br>BS1400 LB2 /DIN 1716<br>CuPb10Sn10   | 110 | 220 | 6  | 70  | 75/83   | 9.0 |
| <b>IM-8</b>   | For very high loads and stresses. Resistant to acids oxidantes not even warm seawater. Very weldable material.   | N 1982: 1998<br>CC333G<br>BS1400 AB2 / DIN 1714<br>CuAl10Ni     | 280 | 650 | 13 | 150 | 110/128 | 7.6 |
| <b>IM-LAR</b> | Material of very high static load papers submitted at slow speeds, used for die.                                 | IN 1982: 1998<br>CC762S<br>BS 1400 HTB3 / DIN 1709<br>CuZn25Al5 | 480 | 750 | 5  | 190 | 105/115 | 7.8 |