



Certificate No : MD00/4701/0001/7b

Appendix 1

**KESKIPAKOVALU OY**  
**Lastikankatu 21,**  
**FI-33730 Tampere**  
**Finland**

Long freezing range alloys	Alloy Type	Designation	tonnes Maximum
	Phosphor bronze	CuSn11P	1.70
	Tin bronze	CuSn12	1.70
	Gunmetal	CuSn10Zn2	1.70
	Leaded gunmetal	CuSn5Pb5Zn5	1.70
		CuSn7Zn4Pb7	1.70
		CuSn6Zn4Pb2	1.70
		CuSn7Zn2Pb3	1.70
	Leaded bronze	CuSn10Pb10	1.70
		CuSn5Pb9	1.70
		CuSn5Pb20	1.70
		CuSn7Pb15	1.70
Short freezing range alloys	Alloy Type	Designation	tonnes Maximum
	Aluminium bronze	CuAl10Fe5Ni5	1.70
		CuAl11Fe6Ni6	1.70

Approval is for centrifugal castings and continuous casting in long and short freezing range alloys. Approval for continuous castings is up to a maximum diameter/width of 230mm.

Not approved for weld repair.

Valid Until : 30 August 2020  
Date of Issue : 02 October 2017

**Gavin Young**

Metallurgical Specialist to Lloyd's Register EMEA  
A member of the Lloyd's Register group



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**KESKIPAKOVALU OY**  
**Lastikankatu 21,**  
**FI-33730 Tampere**  
**Finland**

has been approved as a manufacturer in accordance with the requirements of Lloyd's Register for :-

**Copper Alloy Castings for Valves, Liners, Bushes and Fittings**

This approval is subject to compliance with the Rules for the Manufacture, Testing and Certification of Materials. The full details of the processes and grades to which this approval applies are given in the Appendix of this certificate.

Lloyd's Register is to be notified of any change that may affect the validity of this Certificate.

This Certificate is issued to the above manufacturer and is valid until the date given below.

**Valid Until : 30 August 2020**  
**Date of Issue : 02 October 2017**

A handwritten signature in blue ink, appearing to read 'G. Young', written over a horizontal line.

**Gavin Young**  
Metallurgical Specialist to Lloyd's Register EMEA  
A member of the Lloyd's Register group