



Metamic 829 is a Molybdenum/ Alumina composition specifically designed for pyrometer protection sheaths used in vacuum melting furnaces.

It can be used in temperatures up to 1900°C and since no inner sheath is required gives rapid temperature response with dip- immersion.

Metamic 829 is recommended for use in the primary production of Super alloys and Special

Steels under vacuum and is widely used in the vacuum investment casting industry in the United Kingdom, Continental Europe, USA and Japan.

Magma's metamics are used for multi-dip temperature measurement, saving on process costs, often alongside optical measurements for calibration purposes. Additionally, due to the unique chemical composition, Magma's metamics do not contaminate the melt, as opposed to the conventional quartz type.

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Chemical Analysis %

Al ₂ O ₃	19.4
Mo	77.7
ZrO ₂	2.8

Physical Properties

Max. Service Temperature °C	1900
Bulk Density Kg/m ³	7450
Apparent Porosity %	3.0
Modulus of Rupture MN/m ²	276

Metamic Sheaths Size Range

Pattern	O/Lgth mm	O/Dia mm	I/Dia mm	Flange Dia mm
S302	95.3	6.4	4	–
S302F	95.3	6.4	4	8
S302A	95.3	7.1	4	–
S362A	114.3	7.1	4	–
S363F	114.3	9.5	6.4	12.7
S483	152.4	9.5	6.4	–
S483F	152.4	9.5	6.4	12.7
S502A	158.8	7.9	4.8	–
S503F	158.8	9.5	6.4	12.7
S642A	203.2	7.9	4.8	–
S1505F	300	10	7	12.7
S1506F	114.3	10	7	12.7
S1510	305	12	8	–
S1521	150	6	4	–
S1523F	258	6.4	4	11
S1529F	254	7.5	5	10
S1537F	254	9.5	6.4	12.7
S1538	152	7.9	4.8	–
S1551	220	6.4	4	–
S1552F	300	10	7	12.7
S1554F	180	7.9	4.8	10
S1557	150	9.5	6.4	–
S1560F	200	6.4	4	8
S1562	203	7.9	4.8	10.9

* All data is typical and does not imply or constitute a specification

Note

All products supplied to within the following dimensional tolerances: Length ±3mm, Diameter ±10%

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