



Magnesium Elektron

SERVICE & INNOVATION IN MAGNESIUM

Elektron Hardeners

Datasheet : 497

Magnesium Elektron UK,
P.O. Box 23, Rake Lane, Swinton, Manchester, M27 8DD, England.
Tel: 0161 911 1000 Fax: 0161 911 1010
Web: www.magnesium-elektron.com VAT No: GB 668 2142 26

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Registered Office: The Victoria, 150-182 Harbour City, Salford Quays, Salford, M50 3SP
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Elektron Hardeners

Magnesium Elektron produce a range of magnesium based hardeners to allow foundries to control the composition of magnesium alloy melts.

ZIRMAX

A metallic master alloy containing about one-third of the weight as zirconium in alloyable form. The balance is magnesium. Zirconium is used in magnesium alloy melts as a grain refiner and Zirmax is added to achieve the maximum solubility at the casting temperature.

RARE EARTH HARDENER

A metallic hardener containing about 14% cerium-rich rare earth metals, together with sufficient zinc to compensate for the slight dilution effect of the magnesium in Zirmax when alloying Elektron ZRE1 and Elektron RZ5. When melting alloys containing rare earth metals, a loss of about 10% of the original rare earth content is normally experienced due to oxidation and reaction with flux (if used). Rare Earth hardener is added to replace this loss.

ZE63 HARDENER

A cerium-rich rare earth metal hardener for use with Elektron ZE63 alloy. It contains 20% RE and slightly higher zinc content than the Magnesium Rare Earth Hardener.

ND HARDENER

A metallic hardener containing about 14% of didymium and intended for use with Elektron MSR, QE22 and EQ21 alloys. The didymium contains not less than 70% neodymium and the remainder substantially praseodymium. As with other rare earth containing alloys, about 10% of the didymium content is lost on remelting and is replaced by additions of Nd hardener. It should be noted that the hardener contains no silver.

WE HARDENER

An yttrium rich hardener containing approximately 20% yttrium for use with Elektron WE43 and Elektron WE54 alloys. The heavy rare earth content is present in the same Y: HRE ratio as the alloys to allow easy control of the chemical composition. The hardener is used to replace any yttrium losses on melting.

PACKAGING

All hardeners are normally supplied, in sealed 50kg drums, in the form of notched ingots. Zirmax ingots weigh approximately 2kg each. All other hardener ingots weigh approximately 0.9kg.



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