



## ELEKTRON RARE EARTH HARDENERS

Elektron Rare Earth Hardeners are engineered additions to Elektron alloys to enable controlled additions of Rare Earths to be added to the alloy melt. Elektron Rare Earth hardeners are available for cerium mischmetal, neodymium, yttrium and gadolinium rare earths.

### CERIUM MISCHMETAL HARDENER

Elektron Cerium Rare Earth Hardener is a concentrated alloy of cerium rich rare earth (mischmetal) and zinc in a magnesium matrix. It is optimised as an addition for use in Elektron ZE41A, RZ5, EZ33A and ZRE1 alloys.

It is available in two formulations with nominally 14% or 20% rare earth content. The product is in notch bar form, with each bar weighing approximately 0.9kg (2lb). The product is designed to be able to be broken in to smaller pieces for accurate dosing.

### CHEMICAL COMPOSITION

	HD3/00	HD3/01
Cerium Rich Rare Earth	12-17%	18-22%
Zinc	4-6%	4-6%
Magnesium	Balance	Balance
Zinc free versions of these hardeners are available by special request		
Colour Coding	Blue-Black	Blue-Black

### NEODYMIUM HARDENER

Elektron Neodymium Hardener is a concentrated alloy of neodymium rare earth in a magnesium matrix. It is optimised as an addition for use in Elektron QE22A, MSEB, Elektron 21 and WE43B alloys.

It is available in two formulations with nominally 14% or 25% neodymium content. The product is in notch bar form, with each bar weighing approximately 0.9kg (2lb). The product is designed to be able to be broken in to smaller pieces for accurate dosing.

### CHEMICAL COMPOSITION

	HD2/00	HD2/01
Neodymium	12-17%	22-28%
Magnesium	Balance	Balance
Colour Coding	Blue-Black	Blue-Black

## ELEKTRON RARE EARTH HARDENERS

**YTTRIUM HARDENER**

Elektron Yttrium Hardener is a concentrated alloy of yttrium rare earth in a magnesium matrix. It is optimised as an addition for use in Elektron WE43B alloy.

It is available with nominally 22% yttrium content and also contains neodymium and other heavy rare earths to allow for dilutions effects when adding the hardener to the alloy. The product is in notch bar form, with each bar weighing approximately 0.9kg (2lb). The product is designed to be able to be broken in to smaller pieces for accurate dosing.

The product is also available containing only yttrium.

**CHEMICAL COMPOSITION**

	HD4/00	HD10/00
Yttrium	20-25%	22-28%
Neodymium	4% nominal	
Heavy Rare Earths	5-8% nominal	
Magnesium	Balance	Balance
Colour Coding	Blue-Yellow-Black dot	None

**GADOLINIUM HARDENER**

Elektron Gadolinium Hardener is a concentrated alloy of gadolinium rare earth in a magnesium matrix. It is optimised as an addition for use in Elektron 21 alloy.

It is available with nominally 22% gadolinium content. The product is in notch bar form, with each bar weighing approximately 0.9kg (2lb). The product is designed to be able to be broken in to smaller pieces for accurate dosing.

**CHEMICAL COMPOSITION**

	HD9/00
Gadolinium	20-25%
Magnesium	Balance
Colour Coding	Orange

**PACKAGING**

All Rare Earth hardeners are normally supplied in a sealed 50kg drum.

† The information contained within is meant as a guideline only

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