



**LUXFER**  
MEL TECHNOLOGIES

## MELsperse Yttria Zirconia Nano Dispersions

Luxfer MEL Technologies MELsperse range are high purity, crystalline aqueous dispersions. With a highly uniform particle size, ceramics formed from these dispersions offer enhanced mechanical properties with a reduced grain size compared to conventional YSZ materials.

Luxfer MEL Technologies MELsperse range are manufactured in the UK by a precisely controlled chemical precipitation process that ensures consistency of both purity and performance.

### Features

- Aqueous based dispersions
- Nano zirconia particles
- Narrow particle size distribution
- Acidic pH ( 2 – 5 )
- High solids loading (20 – 60 wt.% Oxide)

### Applications

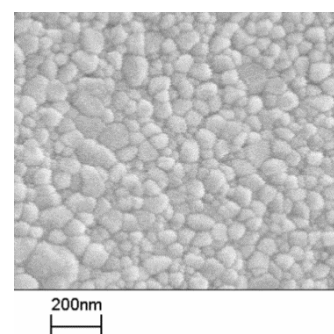
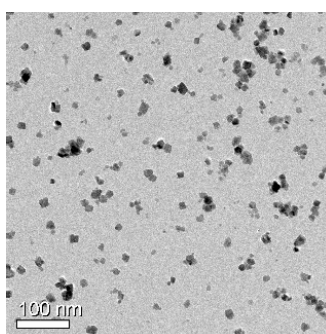
Depending on the specific composition and solids content used, MELsperse nano dispersions are commonly used in:

- Advanced ceramics
- Healthcare
- Optical devices
- Coatings
- Filtration
- Abrasives and polishing

### Chemical composition (typical values)

Grade	Y <sub>2</sub> O <sub>3</sub> (wt. %)	Z-Avg (nm)	Solids Content (wt. %)
Undoped	-	40 – 50	20 – 60
3Y	5.3	40 – 50	20 – 60
5Y	8.0	40 - 50	20 - 60

Other compositions available on request



Highly dispersed particles and uniform grain size at sintering temperatures < 1200°C

### Packaging

Standard packaging is 5 or 25 litre UN approved containers

### Safety data sheet

Regional SDS information is available on request.

Discover more at

[www.luxfermeltechnologies.com](http://www.luxfermeltechnologies.com)

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\* The information contained within is meant as a guideline only

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