



Tricem Technical Information Sheet

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Stock Code BN1 (Powder)

1. GENERAL INFORMATION

Ecolube BN1 (Boron Nitride) is a state of the art release agent for the extrusion of aluminium alloys. It has the same crystal structure as graphite, and is also known as white graphite. Its characteristics are a low density and high thermal conductivity, together with a low electrical conductivity. It has excellent lubricating properties and temperature stability. It is chemically inert and has better oxidation stability than graphite. It is one of the most effective products used in the aluminium industry today.

2. APPLICATIONS

Ecolube BN1 is ideal for use as a release agent on the dummy block and billet end, and brings a substantial improvement in die protection and safety.

The accurate electrostatic application ensures efficiency in use and an excellent release effect where applied, giving an improved quality of aluminium alloy profiles.

3. EQUIPMENT

Ecolube BN1 is applied by means of an electrostatic powder spray system. Using off the shelf electrostatic spray equipment ensures a fast, easy and cost effective way of incorporating the system to any type of press. The powder-coating gun and nozzles are used and selected according to the requirements of the press.

4. REQUIREMENTS

For application via electrostatic spray equipment a dry, oil free compressed air supply is required along with an electrical power supply. The equipment is designed to be simply integrated into the PLC of any press.

5. METHOD OF USE

It is a low consumption powder, and generally the equipment is set to deposit approximately 0.3 gms per shot. You would need approximately 1 kg of Surfos EcolubeBN1 to accommodate 3500 billets.

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6. APPEARANCE

Ecolube BN1 is white in colour and is not free flowing.

7. CHEMICAL RESISTANCE

Ecolu approx. 1200

9. PROPERTIES

Chemical formulae		BN
Molecular weight		24.82
Crystal structure		hexagonal
Specific gravity	kg m ⁻³	2250
Hardness	Mohs	1-2
Linear coefficient of thermal expansion		7.51
	10 ⁻⁶ K ⁻¹ (20-1000°C)	0.77
Thermal conductivity (at room temperature)	W/m K	60
Electrical resistivity (at room temperature)	Ωcm	120
		>10 ¹²
Coefficient of friction		0.2-0.7

Ecolube BN1 Powder is a non- hazardous non-toxic material with no skin or eye irritations.

be BN1 is produced at a very high temperature. It is entirely inert to water and does not react with acids. It is stable with carbon up to a temperature of 1800°C and also with chlorine gas up to a temperature of 700°C. It will be entirely decomposed by molten, alkaline masses.

8. CHEMISTRY

Ecolube BN1-Quality

Purity (B+N)	>98.5%
Oxygen _{total} (O)	< 1.5%
Carbon (C)	< 0.1%
Particle size primary particles (in agglomerates)	approx. 4 µm
Corrosion resistance °C on air vacuum	approx. 900

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