

# Benz HF-1 Natural Yellow Hydrophobic

## Specifications

Characteristics	Value	
Water Content	<4%	
Optical Purity	>99.98%	
Severity Index	<1000	
Refractive Index	@589nm	@546nm
20°C Dry	1.483	1.485
35°C Dry	1.481	1.483
UT Cutoff	<5% @400nm	
Extractables	<0.5%	

## Options

Standard size	Diameter – 16.0 ± 0.3 mm	Thickness – 3.3 mm
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## Machining

Cryogenic machining is required for Benz HF-1 material.

### Diamond Tooling

TOOLING	RADIUS (MM)	TOP RAKE	RELIEF
Rough Cut	0.40	0°/-2.5°	15°
Fine Cut	0.30	0°/-2.5°	15°

### Machining Recommendations: Lathe-Cutting Parameters

	Speed (RPM)	Feed (mm/min)	Depth of Cut	Blank Surface Temp
Rough Cut	8,000	0.7 mm/min	0.2 mm	< -20°C
Fine Cut	9,000	0.4 mm/min	0.1 mm	< -20°C

### Machining Recommendations: Diamond Milling Parameters

	Speed (RPM)	Tool Feed	Blank Surface Temp
First Cut	50,000	30 mm/min	< -20°C
Fine Cut	50,000	45 mm/min	< -20°C

## Polishing

Benz HF-1 Natural Yellow material can be polished using normal aqueous media tumble polishing methods.