



SUN NUCLEAR
A MIRION MEDICAL COMPANY

Doppler Fluid

769DF

- Mimics acoustic and physical properties of blood in accordance with IEC 61685
- Supports evaluation of Doppler imaging system performance
- Available in half-gallon (1.9 L) container



Doppler Fluid is a stable, non-hazardous solution formulated to simulate the acoustic and physical properties of human blood. It supports evaluation of Doppler ultrasound imaging system performance.

The formulation is based on IEC 61685 standards and is fully degassed prior to packaging to minimize image noise caused by air bubbles. Each batch is tested for speed of sound, attenuation, density, and viscosity using instrumentation traceable to NIST standards to ensure consistent and reliable performance.

Safety

Sun Nuclear has evaluated this fluid and does not believe it poses a hazard at the quantities and concentrations provided. Although this product has been evaluated and found to be safe if used as intended, it is always best to avoid repeated or prolonged skin contact with materials not intended for use on the skin.

Disposal

Solidify with vermiculite or other suitable material and discard in normal household trash.

Storage

Particle separation may occur during prolonged storage. Stir before each use. The fluids have been formulated to prevent clumping of particulates within this fluid, allowing repeated use after stirring the fluid.

Key Benefits

- Based on IEC 61685:2001 blood-mimicking fluid specifications
- Simulates acoustic and physical properties of blood for Doppler testing applications
- No refrigeration required

Doppler Fluid

Mimics acoustic and physical properties of blood in accordance with IEC 61685

Specifications

	IEC 61685:2001 BMF Specification	Doppler Fluid
Viscosity (cP)	4 ± 0.4	4 ± 0.5
Density (g/cc)	1.05 ± 0.04	1.05 ± 0.04
Sound Speed (m/s)	1570 ± 30	1570 ± 15
Attenuation coefficient (dB/cm/MHz)	< 0.10	0.10 ± 0.02
Backscatter coefficient ($f^4\text{mm}^{-1}\text{sr}^{-1}$)	$1 \times 10^{-31} - 1 \times 10^{-30}$	$\approx 10^{-30}$
Particle size (micrometers)	7–8	5 ± 1
Fluid Properties	Non-Newtonian	Newtonian