

# DREAMIES® T-M

## Advanced Hearing Protection for Infant Transport & MRI

Sound levels experienced by ill newborns during air and ground hospital transport can average over 80 dBA, with peak levels as high as 85-95 dBA,<sup>1-3</sup> and sound levels within MRI are similarly high.<sup>4</sup> Because such loud noise can elicit physiological instability in heart rate in neonates during ambulance transport and MRI examinations,<sup>3,5</sup> it is important to reduce patient noise exposure in these environments.

NEATCAP® DREAMIES® T-M offer a unique solution to this problem.




DREAMIES T-M materials and design provide sound attenuation across the audible frequency range, including low-frequency sounds associated with the air and ground transport sound environments, and sounds within the magnetic resonance imaging (MRI) sound environment.

Reduced exposure to noise increases the probability that the MR examination can be completed without sedation and with fewer motion artifacts.<sup>6</sup>



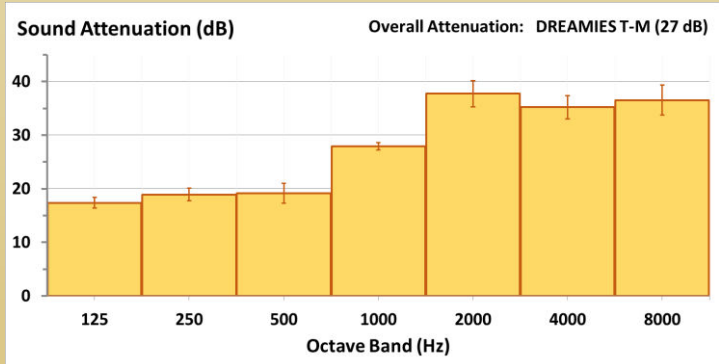
**MRI Safety Information**



**MR Safe** – an item that poses no known hazards in all MR environments


**DREAMIES T-M Sound Attenuation**

	Frequency (Hz)							
	Overall	125	250	500	1000	2000	4000	8000
Mean (dB)	27.3	17.4	18.9	19.2	27.9	37.7	35.2	36.5
SD	1.0	1.0	1.1	1.9	0.7	2.4	2.2	2.8



*DREAMIES T-M attenuates sound across the audible range, with maximum sound blocking at frequencies where MR sound levels are typically the loudest [e.g. T2W sequence noise in the 2,000 Hz octave band].<sup>7</sup>*

# Designed for Comfort and Ease-of-Use

- *Chiral, contoured, low-profile, transparent,* soft foam sealing ear cups
- *Adjustable,* soft, stabilizing headband to secure ear cups
- *Easy-to-fit and remove* with Velcro closure
- *No skin-contacting adhesives* to irritate skin
- Allows patient positioning within transport incubator and MRI head coil
- Compatible with transport and MR imaging protocols 
- Single Patient Use
- *Progression of Sizes* from XS for small preemies to XL for children up to 2 years



US Pat. 10,413,696, 11,185,447 and patents pending

DREAMIES T-M Sizing Reference Chart			
Catalog P/N	OFC	Headband	Ear Cups
NEAT005-01	23–27 cm	XS (23–27 cm)	XS (30mm)
NEAT005-02	27–31 cm	S (27–31 cm)	S (35mm)
NEAT005-03	31–35 cm	M (31–35 cm)	M (40mm)
NEAT005-04	35–41 cm	LG (35–41 cm)	LG (45mm)
NEAT005-05	41–48 cm	XL (41–48 cm)	XL (50mm)



Refer to Instructions for Use for Warnings and Precautions. Rx Only.

## References

- 1 L Buckland et al. Excessive exposure of sick neonates to sound during transport, Arch Dis Child Fetal Neonatal Ed. (2003) 88m, F513-F516
- 2 SE Sittig et al. Noise levels in a neonatal transport incubator in medically configured aircraft, Int J Pediatric Otorhinolaryngology. 75 (2011), 74-76.
- 3 BM Karlsson et al. Sound and Vibration: effects on infants' heart rate and variability during neonatal transport. Acta Paediatrica. 101 (2012) 148-154.
- 4 JA Tkach et al. Pediatr Radiol. Characterization of acoustic Noise in a neonatal intensive care unit MRI system. 44 (2014) 1011-1019.
- 5 KH Taber et al. Vital sign changes during infant magnetic resonance examinations. J Magn Reson Imaging. 8 (1998) 1252-1256.
- 6 JA Tkach et al. MRI in the Neonatal ICU: Initial Experience Using a Small-Footprint 1.5-T System. Am J Radiology, 202 (2014) W95-W105.
- 7 K Muto et al. Measurement of MRI device noise level in frequency domain. 8th International Congress on Acoustics 2004, IV2579-IV2582

