DATASHEET

Staggered Herringbone Micromixer Chip, PDMS/Glass, Chaotic-Advection Mixing, Plasma-Bonded, for Nanoparticle & LNP Synthesis Research, with Tubing Kit, 45x20mm (RUO)

Staggered herringbone micromixer (SHM) with 21 µm-deep grooves driving chaotic advection. >90% mixing in a single channel length. For nanoparticle synthesis, LNP formulation research and protein crystallization screening (RUO).

APPLICATION

Microfluidics & Life Science

KEY SPECS

- Material: RTV615 PDMS / Borosilicate Glass
- Mixer Geometry: Staggered Herringbone (SHM)
- Main Channel Width: 200 µm
- Main Channel Depth: 80 µm

1. Specifications

Material	RTV615 PDMS / Borosilicate Glass
Mixer Geometry	Staggered Herringbone (SHM)
Main Channel Width	200 µm
Main Channel Depth	80 µm
Groove Depth	40 µm
Chip Format	45 × 20 mm
Substrate Thickness	1 mm
Port Size	0.7 (22-gauge compatible) mm
Bonding	Oxygen Plasma (Permanent)
Operating Pressure	≤ 0.4 MPa

2. Product Details

The Staggered Herringbone Micromixer (SHM) integrates 21 µm-deep × 40 µm-wide herringbone grooves into a 200 µm-wide × 79 µm-deep main channel, driving chaotic advection that achieves >90% mixing efficiency within a single channel length. RTV615 PDMS is permanently plasma-bonded to borosilicate glass, withstanding sustained flow pressure with zero leakage. The complete mixing kit includes PTFE tubing, blunt needles and a syringe; 0.7 mm inlet/outlet ports connect to standard fittings. Compact 45×20 mm body fits common chip holders. Ideal for nanoparticle synthesis, lipid nanoparticle (LNP) formulation research, liposome preparation and protein-crystallization screening. **For research use only (RUO). Not for use in diagnostic or therapeutic procedures.**

In stock at Amazon warehouse, ship same day: https://www.amazon.com/dp/B0H6F3FL2R

3. Order / Quote

Model	Pack Size	Availability
LC-SHM-M0004-1	1× PDMS/glass chip (45×20 mm), 1× PTFE tubing set, 2× blunt needle tips, 1× syringe, 1× sealed ESD bag with RUO label	In stock (Amazon / US warehouse)

Current pricing and ordering: labcorematerials.com/products/staggered-herringbone-micromixer-chip/

4. Shipping & Compliance

- Ships as empty microfluidic hardware. No reagents, no biological materials. Not classified as dangerous goods.

Contact

business@labcorematerials.com

www.labcorematerials.com/products/staggered-herringbone-micromixer-chip/