

A large circular collage of various industrial and scientific images. It includes a hand holding a blue ceramic sphere, a robotic arm with a yellow gripper, a close-up of a glass vial with a metal cap, a person in a white protective suit, and molten metal being poured into molds. In the center of this collage is a smaller white circle containing the 'FILLIT' logo and text.

FILLITTM

Hollow Ceramic Microspheres

**THE SPHERE
TECHNOCRATS**

ADVANCED
MICROSPHERES,
TRANSFORMING INDUSTRIES
WORLDWIDE.

www.petrachem.in

ABOUT PETRA INDIA GROUP

Founded in 2006 with a single unit, Petra India Group has grown into a global leader in lightweight sphere solutions, specializing in Hollow Ceramic Microspheres (HCM) and Cenospheres, marketed under our flagship brand FILLIT. From humble beginnings, we have expanded to six state-of-the-art manufacturing units across India, together spanning over 100,000 sq. ft. of production space, with a fully automated facility underway to meet future demand.

Our lightweight microsphere materials are engineered for high performance, durability, and cost efficiency, finding applications across oil & gas, composites, construction, coatings, and specialty industries.

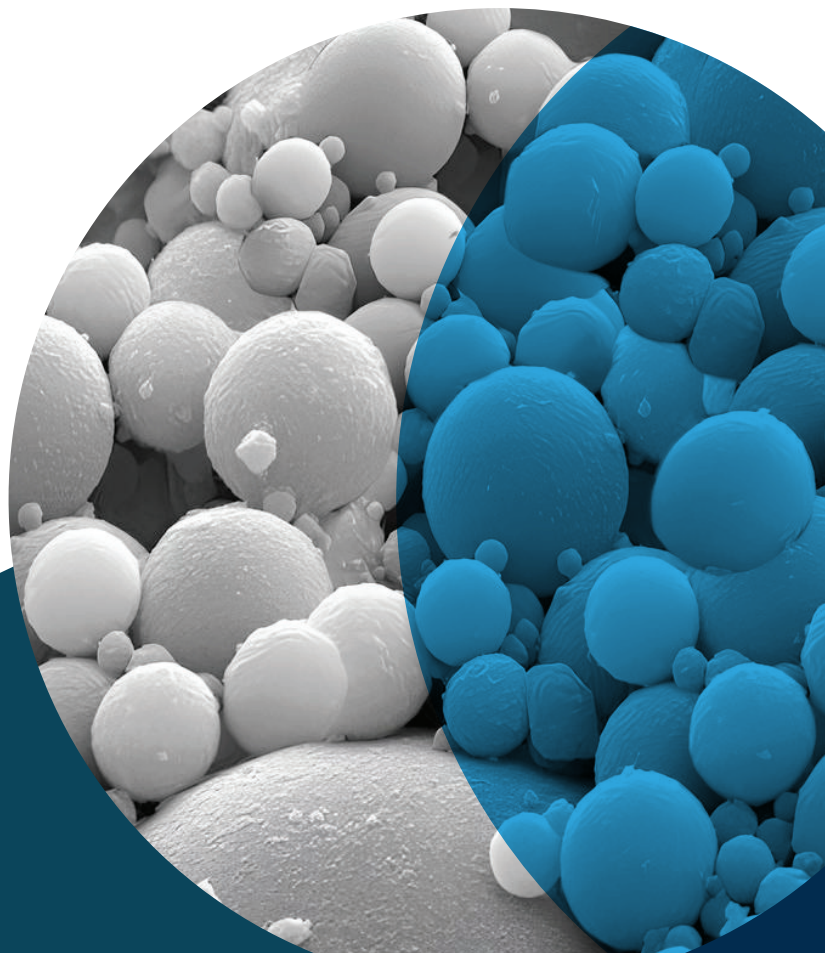
To strengthen our global presence, we have established a dedicated warehouse and blending unit in JAFZA, UAE, ensuring faster supply and seamless service to our international clients.

With over five decades of combined technical expertise and a growing global footprint, FILLIT continues to redefine lightweight material solutions for industries worldwide.

About FILLIT

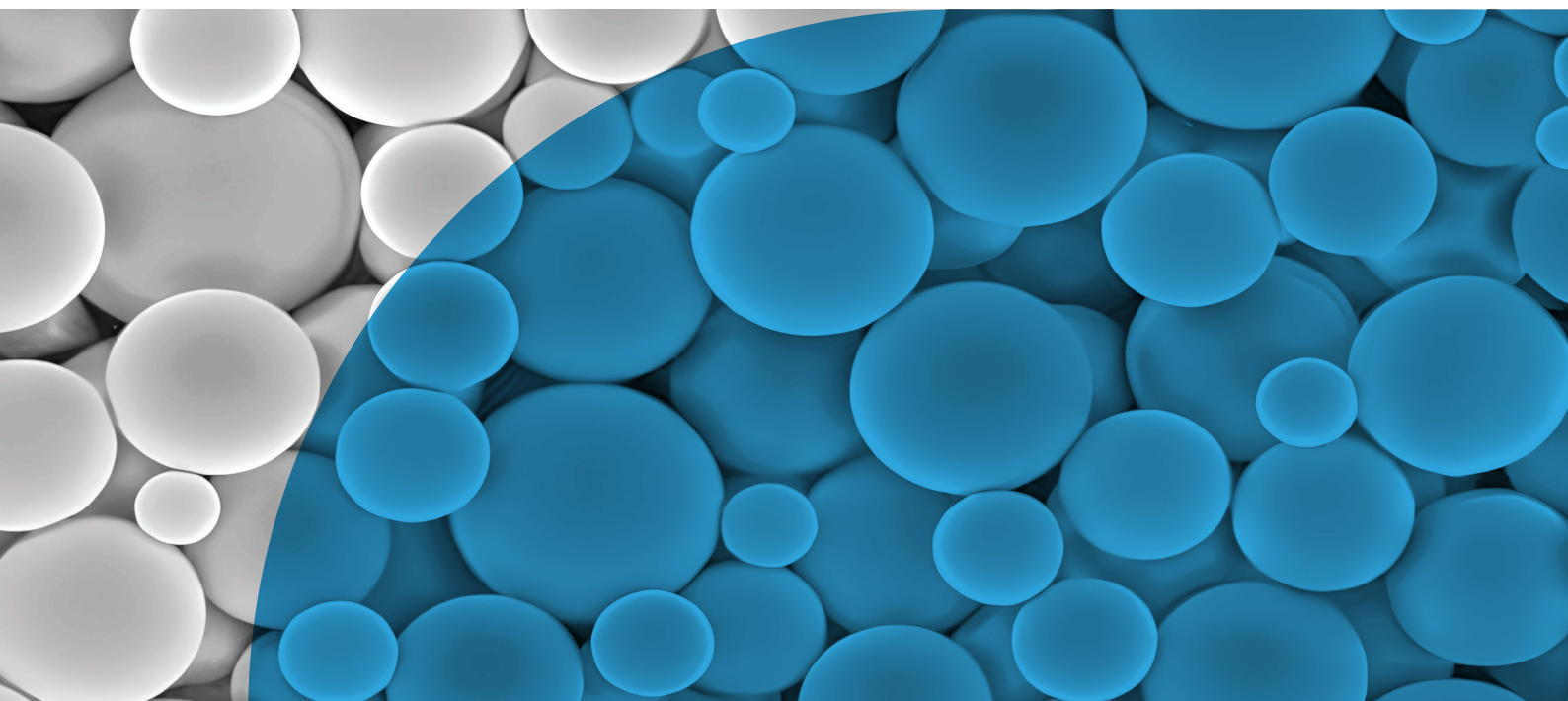
HOLLOW CERAMIC MICROSPHERES / CENOSPHERE

FILLIT is hollow ceramic micro sphere, containing nitrogen and carbon dioxide negative pressurized gas inside. In current era, FILLIT is the World's No. 1 light-weight high performance filler due to its unique properties like **light weight, high compressive strength, low density, low thermal conductivity, electrical insulation and high temperature resistance.**



FILLIT PRODUCT OVERVIEW

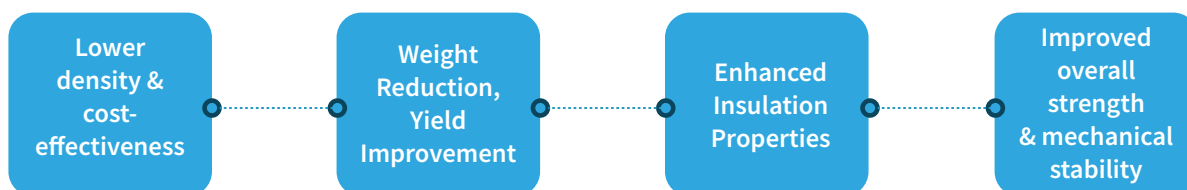
Category	Property	Typical Range / Value
Physical Properties	Color	Free Flowing Grey powder
	Shape	Hollow, spherical
	Particle Size	0 – 800 µm (depending on grade)
	True Density	0.06 – 0.99 g/cc
	Bulk Density	0.38 – 0.48 g/cc
	Wall Thickness	1 – 2 µm (approx.)
	Crush Strength (Isostatic)	1500 – 4800 psi
	Thermal Conductivity	< 0.15 W/m·K
	Thermal Resistance	Up to 1200 °C (short term)
	Oil Absorption	Low (5–10 g/100g)
Chemical Properties	Composition	Predominantly Alumino-Silicate (Al ₂ O ₃ , SiO ₂)
	SiO ₂ Content	50 – 65%
	Al ₂ O ₃ Content	25 – 35%
	Fe ₂ O ₃	< 2%
	pH (in water slurry)	6 – 8
	Chemical Stability	Insoluble in water, resistant to acids & alkalis (moderate)
	Moisture Content	< 0.5%



FILLIT - REDEFINING LIGHTWEIGHT PERFORMANCE

Worldwide, customers rely on FILLIT Hollow Ceramic Microspheres across a broad spectrum of industries for their ability to deliver lightweight, high-performance, and cost-effective solutions. From oil & gas drilling fluids and cementing to advanced composites, coatings & construction materials, FILLIT consistently enhances product performance while reducing overall weight and cost.

At Petra India Group, we offer a wide range of customized grades tailored to meet specific application needs and solve industry challenges. Whether for thermal insulation, weight reduction, or improved mechanical strength, our solutions are engineered for precision and performance.



Oil & Gas

FILLIT Hollow Ceramic Microspheres reduce the density of drilling fluids and cements, improving wellbore stability while maintaining strength. Their high crush strength ensures performance under extreme downhole pressures.

Applications: Drilling muds, cement slurries, well spacers & completion fluids.



Refractory & Foundry

FILLIT provides excellent thermal insulation and lightweighting in refractory bricks and castings. The microspheres enhance strength retention at high temperatures and reduce thermal stress.

Applications: Refractory bricks, castables, insulating coatings & foundry cores.



Paints & Coatings

FILLIT improves coating performance by reducing density and controlling viscosity, while providing smooth surfaces and durability. It also enhances thermal insulation and crack resistance in protective coatings.

Applications: Decorative paints, industrial coatings, primers & powder coatings.





Building & Construction

FILLIT delivers lightweight, durable, and thermally insulating solutions for construction materials. It reduces shrinkage, enhances workability, and improves energy efficiency.

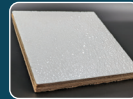
Applications: Lightweight concrete, plasters, mortars, putties & panels.



Unsaturated Polyesters & Epoxy

In polymer matrices, FILLIT lowers density while maintaining mechanical strength and thermal stability. It improves stiffness, impact resistance, and dimensional stability in composites.

Applications: FRP panels, laminates, castings and molded components.



PVC & Polyurethane

FILLIT enhances processability, reduces weight, and imparts thermal and chemical stability. It also improves surface smoothness and mechanical performance in flexible and rigid formulations.

Applications: Pipes, sheets, foams, coatings and sealants.



Others / Specialty Applications

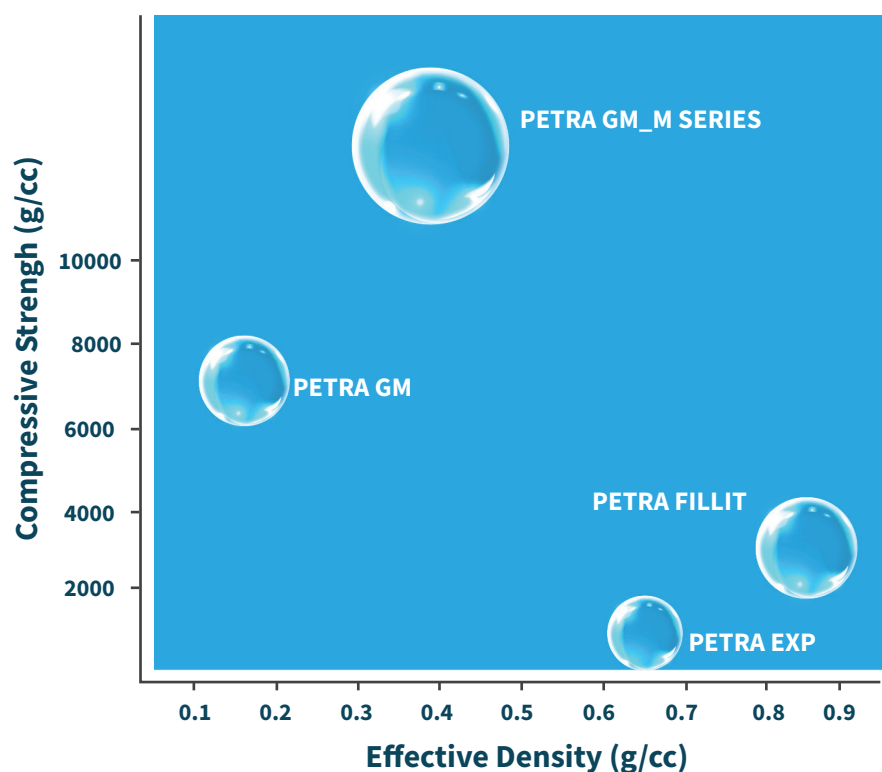
FILLIT is used in adhesives, syntactic foams, lightweight composites, and specialty industrial formulations where weight reduction, thermal insulation, and impact absorption are critical.

Applications: Syntactic foams, adhesives, sealants, composite panels & specialty fillers.



STRONG, DENSE AND DEEP

Find the balance
that fits your demand.



GRADES WE OFFER

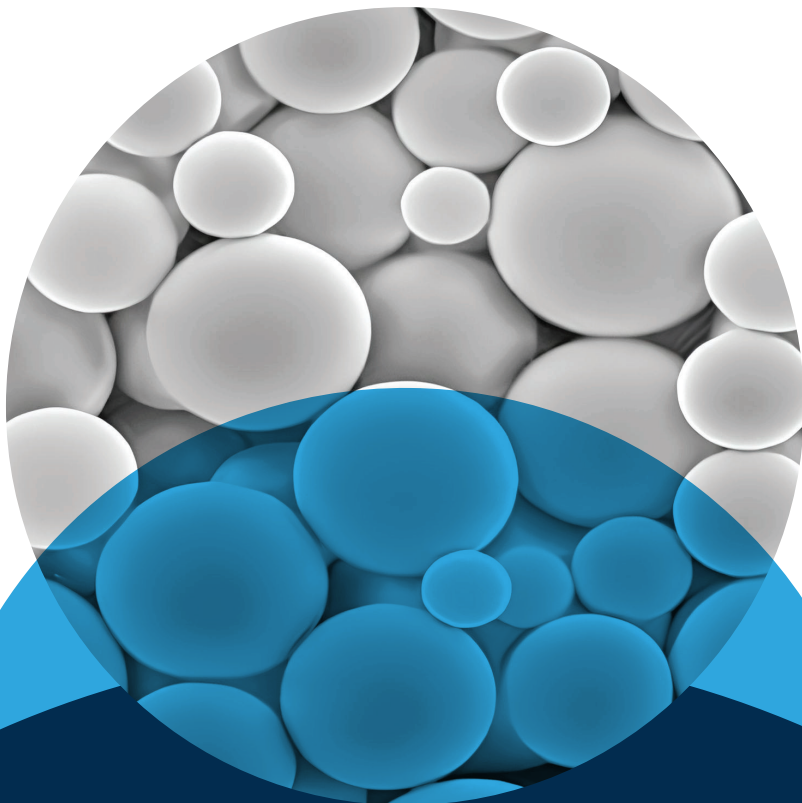
Type of Grade	Particle Size (Microms)	Density (g/cc)	Bulk Density (g/cc)	Compressive Strength (3000 psi)
Cementing Grades (Oil & Gas)				
FILLIT 0.85 H	5-500	0.80-0.85	0.35-0.48	86-88% Survival
FILLIT 0.85 M	5-500	0.80-0.85	0.35-0.48	78-80% Survival
FILLIT 0.85 L	5-500	0.80-0.85	0.35-0.48	68-70% Survival
FILLIT 0.80 H	5-500	0.70-0.80	0.32-0.42	86-88% Survival
FILLIT 0.80 M	5-500	0.70-0.80	0.32-0.42	78-80% Survival
FILLIT 0.80 L	5-500	0.70-0.80	0.32-0.42	68-70% Survival
Paints & Coatings				
FILLIT 75	5-75	0.70-0.90	0.35-0.48	—
FILLIT 100	5-100	0.70-0.90	0.35-0.48	—
FILLIT 125	5-125	0.70-0.90	0.35-0.48	—
FILLIT 150	5-150	0.70-0.90	0.35-0.48	—
FILLIT 212	5-212	0.70-0.90	0.35-0.50	—
FILLIT 300	5-300	0.70-0.90	0.35-0.50	—
FILLIT 500	5-500	0.70-0.90	0.35-0.50	—
FILLIT 800	5-800	0.70-0.90	0.35-0.50	—
FILLIT 500 EXP	5-500	0.75-0.85	0.35-0.50	—
Friction & Abrasios				
FILLIT 500 I 99	5-500	0.70-0.99	0.35-0.48	70-80% Survival
Refractory & Foundry				
FILLIT 100-500	5-500	0.80-1.0	0.35-0.50	78-80% Survival
FILLIT 500 I 99	5-500	0.80-1.0	0.35-0.50	78-80% Survival

“

FILLIT – Where
INNOVATION MEETS

Lightweight Excellence.

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ROOWA, BHAVNAGAR, GUJARAT, 364001.

Manufacturing Plant

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