

Eccofloat®

Syntactic foams

Trelleborg AEM manufactures a range of high performance, low density syntactic foam for deep sea buoyancy applications.

These composite foams provide ultra low densities by selecting only the highest specification hollow glass microspheres, called Eccospheres®, and combining them within a rigid, high strength resin system. The syntactic foam is typically cast into blocks and then is used to prepare large buoyancy modules that can be readily shaped to conform to hull contours and outfitted for installation in the forward and aft free-flood areas of submarines.

Oceanographers also depend on syntactic foams to suspend instrumentation in deep ocean studies. For these applications, the syntactic foam is used in either block form or custom molded shapes for installation in manned and unmanned submersibles such as the legendary Alvin and Jason vehicles that were used to discover and explore the Titanic.

Trelleborg AEM produces various grades of syntactic foams, called Eccofloat®, to meet our customers broad range of requirements.

TG Grade syntactic foams are lightweight and economical for building manned and remote operating vehicles. The foams are also used to manufacture mine neutralization systems because of their zero magnetic and sea-water comparable acoustic signatures.



Applications include hydroplanes, rudders, trim adjustment modules for submarines and specialized applications such as acoustic windows due to the material profile and ability to significantly improve sonar functions.

EL Grade epoxy syntactic foams are the material of choice for manufacturing manned and unmanned submersibles because of their density range and ability to withstand exposure to diesel fuels and hydraulic fluids.

DS Grade syntactic foams combine lightweight glass Eccospheres® with multifunctional epoxy resin to produce ultra-high strength-to-weight materials for high-performance, deep sea applications including manned and unmanned submersibles.

ECCOFLOAT® PRODUCT	SERVICE DEPTH		DENSITY		SERVICE PRESSURE
	FSW	MSW	lbs/ft³	kg/m³	psi
TG-24/2000	6,560	2,000	24	385	3,000
TG-26/3000	9,843	3,000	26	416	4,444
TG-28/4000	13,124	4,000	28	448	5,287
TG-34/7000	22,900	7,000	34	544	10,164
TG-39/10000	32,800	10,000	39	639	14,750
EL-30/2000	6,750	2,000	30	147	3,000
EL-34/6000	20,000	6,000	34	544	9,000
EL-36/7300	24,000	7,300	36	576	11,000
DS-35/8000	26,700	8,130	35	560	11,888
DS-39/11500	38,000	11,500	39	624	16,872

Eccofloat® Product Sizes

Eccofloat® TG and EL Grades are available in the following dimensions:

6 x 12 x 12 in (152.4 x 304.8 x 304.8 mm)

6 x 12 x 24 in (152.4 x 304.8 x 609.6 mm)

6 x 19.5 x 29.5 in (150 x 500 x 750 mm)

Eccofloat® DS Grade is available in the following dimensions:

4 x 12 x 18 in (101.6 x 304.8 x 457.2 mm)



Certifications

Trelleborg AEM is ISO 9001 certified.

Contact Us

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