



EL NEMR

FOAM INDUSTRIES

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FOAM GRANULES FOR READY-MIX CONCRETE

FOAMIX 16/17

A mixture of extruded polystyrene foam granules to produce lightweight concrete.

PRODUCT DESCRIPTION

They are granules of expanded polystyrene foam and extruded with special sizes and gradations used for the production of lightweight concrete for multiple uses such as concrete inclinations and the work of levels in the facilities and filling the voids and is characterized by being heat and sound insulation and the density of the granules is 16/17 kg/m³

LIGHTWEIGHT CONCRETE COMPONENTS

Graduated silice sand - Portland cement - Foam granules - Water - concrete additives such as adecret PVOVF/DM2/any additives According to the Trial.

Resistance to compression and water absorption of 1 M³ components of fresh concrete.

S	The density of concrete 3kg /m	Reducing the weight of concrete	Cement (kg)	Sand (kg)	Foam Granules (kg)	Water (liter)	Adecet (kg)	Pressure resistance kg/cm ²	Water absorption
1	1900	20.8%	550	750	7	195	5.5	95	2%
2	1800	25%	500	675	7.5	185	5	75	3%
3	1600	33.3%	450	600	8.5	175	4.5	45	5%
4	1475	38.5%	400	525	10.5	165	4	40	6%
5	1300	45.8%	375	665	12.5	195	4.5	35	8%
6	950	60%	325	425	16	175	3.8	Compact without breaking	13%
7	800	66.6%	150	300	20	125	3	Compact without breaking	16%
8	400	83.3%	150	zero	23	105	3	Compact without	40%

HOW TO USE

Sand and cement are well mixed until complete homogeneity
Mix the addition with the water, mixing well until complete homogeneity
Add the mixed water in addition to the sand and cement mixture and mix in a mixer for at least 2 minutes
Gradually adding foam pellets, with continued mixing for a period of 2 minutes, until complete homogeneity
The foam granulated concrete is poured in the required places and treated by normal methods of concrete treatment

STORAGE: at least two years in a covered warehouse

PACKAGES: 2 kg – 2.5 kg woven sacks

The indicated mixtures give a density of 400-1900 kg/m³ and are sufficient for making 1 m³ fresh concrete.

In all cases, Experimental laboratory mixtures must be made to determine the correct proportions that achieve the required properties.

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FOAM GRANULES FOR READY-MIX CONCRETE

FOAMIX 20 /21

A mixture of extruded polystyrene foam granules to produce lightweight concrete.

PRODUCT DESCRIPTION

They are granules of expanded polystyrene foam and extruded with special sizes and gradations used for the production of lightweight concrete for multiple uses such as concrete inclinations and the work of levels in the facilities and filling the voids and is characterized by being heat and sound insulation and the density of the granules is 20/21 kg/m³

LIGHTWEIGHT CONCRETE COMPONENTS

Graduated silice sand - Portland cement - Foam granules - Water - concrete additives such as adecret PVOVF/DM2/any additives
According to the Trial .

Resistance to compression and water absorption of 1 M³ components of fresh concrete

S	The density of concrete 3kg /m	Reducing the weight of concrete	Cement (kg)	Sand (kg)	Foam Granules (kg)	Water (liter)	Adecet (kg)	Pressure resistance kg/cm²	Water absorption
1	1900	20.8%	600	1000	10.5	250	5.5	100	2%
2	1800	25%	550	950	11	255	5	80	3%
3	1600	33.3%	500	875	11.5	200	4.5	50	5%
4	1475	38.5%	450	825	12	200	4	40	6%
5	1300	45.8%	425	665	15	150	4.5	35	8%
6	950	60%	400	425	20	125	3.8	30	13%
7	800	66.6%	375	300	22.5	125	3	Compact without breaking	16%
8	400	83.3%	300	zero	26	100	3	Compact	40%

HOW TO USE

Sand and cement are well mixed until complete homogeneity
Mix the addition with the water, mixing well until complete homogeneity
Add the mixed water in addition to the sand and cement mixture and mix in a mixer for at least 2 minutes
Gradually adding foam pellets, with continued mixing for a period of 2 minutes, until complete homogeneity
The foam granulated concrete is poured in the required places and treated by normal methods of concrete treatment

STORAGE: at least two years in a covered warehouse

PACKAGES: 3 kg – 3.5 kg woven sacks

The indicated mixtures give a density of 400-1900 kg/m³ and are sufficient for making 1 m³ fresh concrete.

In all cases, Experimental laboratory mixtures must be made to determine the correct proportions that achieve the required properties.



FOAM GRANULES FOR READY-MIX CONCRETE

FOAMIX 32/35

A mixture of extruded polystyrene foam granules to produce lightweight concrete.

PRODUCT DESCRIPTION

They are granules of expanded polystyrene foam and extruded with special sizes and gradations used for the production of lightweight concrete for multiple uses such as concrete inclinations and the work of levels in the facilities and filling the voids and is characterized by being heat and sound insulation and the density of the granules is 32/35 kg/m³

LIGHTWEIGHT CONCRETE COMPONENTS

Graduated silice sand - Portland cement - Foam granules – Water - concrete additives such as adcret PVOVF/DM2/any additives According to the Trial .

Resistance to compression and water absorption of 1 M³ components of fresh concrete

S	The density of concrete 3kg /m	Reducing the weight of concrete	Cement (kg)	Sand (kg)	Foam Granules (kg)	Water (liter)	Adecret (kg)	Pressure resistance kg/cm²	Water absorption
1	1900	20.8%	600	1000	12	300	5.5	150	2%
2	1800	25%	550	975	13.5	275	5	135	3%
3	1600	33.3%	500	875	15	225	4.5	110	5%
4	1475	38.5%	450	825	16.5	200	4	95	6%
5	1300	45.8%	425	660	18	200	4.5	75	8%
6	950	60%	375	425	22	150	3.8	45	13%
7	800	66.6%	300	375	24	125	3	35	16%
8	400	83.3%	275	zero	30	100	3	Compact	40%

HOW TO USE

Sand and cement are well mixed until complete homogeneity
Mix the addition with the water, mixing well until complete homogeneity
Add the mixed water in addition to the sand and cement mixture and mix in a mixer for at least 2 minutes
Gradually adding foam pellets, with continued mixing for a period of 2 minutes, until complete homogeneity
The foam granulated concrete is poured in the required places and treated by normal methods of concrete treatment

STORAGE: at least two years in a covered warehouse

PACKAGES: 4.5 kg – 5 kg woven sacks

The indicated mixtures give a density of 400-1900 kg/m³ and are sufficient for making 1 m³ fresh concrete.

In all cases, Experimental laboratory mixtures must be made to determine the correct proportions that achieve the required properties.



GEOMETRY ALTERNATIVE TO THE HOLLOW SYSTEM.

Nemr Block : They are blocks of expanded polystyrene foam covered with a lightweight polymer concrete layer on one or two sides.

METHODS OF APPLICATION AND USES.

The seas are from 5-7 meters
Stack Nemr Block in One way, Between them are nerves 10-12 cm wide, with a distance of 40-60 cm
The seas are from 8-12 meters
Stack Nemr Block in Double way block, Between them are longitudinal and transverse nerves, with a width of 12-15 cm, with a distance between 60-100 cm

TECHNICAL SPECIFICATIONS

DESCRIPTION	UNIT	VALUE
Weight per flat meter	KG	30
The thickness of the cement layer	CM	1.5 : 1
The thickness of the foam	CM	100 : 10
Dimensions	CM	BY DESIGN
Foam Density	KG - M3	35 : 12
Stress Fracture	KG - M2	10 : 5
Foam Type	GRAY OR GRAY FLAME RETARDANT	

USES. They are blocks of expanded polystyrene foam covered with a lightweight polymer concrete layer on one or two sides.
It is used to raise internal levels.

NOTES.

Take into account the passage of electrical wires in the nerve pathways and inverted beams
Take into account the work of a spacer between the foam and rebar
It is taken into account to spray water periodically for a period of not less than a week on the ceiling after pouring and oyster whites from the lower side to obtain the highest rate of hardness for reinforced concrete and oyster whites and to avoid early suspicion.



PHYSICAL AND MECHANICAL PROPERTIES OF XTRUDED POLYSTYRENE FOAM

DESCRIPTION

Extruded polystyrene foam sheet, is a high-quality heat-insulating foam product characterized by closed cells, which distinguishes it with its hardness and higher resistance to water absorption.

PROPERTIES.

- Reducing electricity consumption to rates of up to 40%
- Resistant to water absorption
- Resist heat loss or gain
- Moisture resistance
- Durability and compressive resistance
- Convenient installation
- Low cost

NOTES.

Take into account the protection of the panels after installation with a cement layer.

When installing for walls, it is recommended to add a polymeric material to the cement mixture for better foam cohesion.



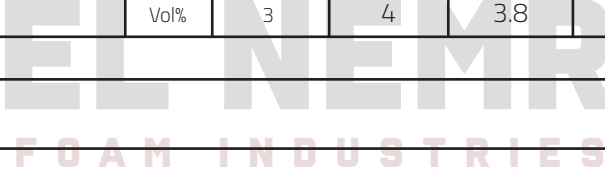
PROPERTY	STANDARD	UNIT	VALUE
DENSITY	DIN 53420	KG / M3	32 : 36
THERMAL CONDUCTIVITY (90DAYS, 10°C)	DIN 52612	W / MK	< 0.026
THERMAL CONDUCTIVITY (90DAYS, 24°C)	ATSM °C518	W / MK	< 0.028
COMPRESSIVE STRENGTH AT 10% DEFLECTION	ATSM 1621	KPA	300
FLAMMABILITY	DIN 4102	BUILDING MATERIAL CLASS	B 1
DESIGN LOAD FOR TRAFFIC		KN / M2	90
WATER VAPOUR PERMEABILITY	ATSM E96		< 63
WATER ABSORPTION	ATSM °C272	NG / (PA.S.2) @ 25.4 MM	< 0.1
TEMPERATURE LIMITS		°C	Minus 50 to plus 75 degrees

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- ADVANTAGES OF THERMAL INSULATION.

- Reduction in energy costs
- Long term monetary gain
- Lower capacity of cooling / heating
- Comfortable internal environment
- Longer life of cooling / heating system
- Environment friendly

**PHYSICAL AND MECHANICAL PROPERTIES
OF EXPANDED POLYSTYRENE FOAM**

PROPERTY	TEST METHOD	UNIT						
Moulded density	DIN 53420	Kgm ⁻³	15	20	25	30	35	40
Maximum permission compressive stress at <2% compression	DIN 53421	KPa	12-25	20-35	28-50	36-62	44-74	52-87
Compressive stress 10% compression	DIN 53421	KPa	65-110	100-160	140-210	180-255	225-305	265-350
Flexural strength	DIN 53423	KPa	160-210	240-300	325-400	410-490	490-590	580-680
Tensile strength	DIN 18164	KPa	150-230	225-325	260-415	375-510	450-600	530-700
Shear strength	DIN 53427	KPa	90-120	120-150	150-190	190-220	220-250	250-290
Average coefficient of linear expansion between 20 and 80C	DIN 53752	K ⁻¹	0.6X10 ⁻⁴	0.6X10 ⁻⁴	0.6X10 ⁻⁴	0.6X10 ⁻⁴	0.6X10 ⁻⁴	0.6X10 ⁻⁴
Dimensional stability under heat,short term Dimensional stability under heat,long term Under 5 kpa load Under 20 kpa load	Based on DIN 53421 Based on DIN 18164	°C	95	95	95	95	95	95
		°C	85	85	85	85	85	85
		°C	75-80	80-85	80-85	80-85	80-85	80-85
Continuous service (3) temperature in air		°C	180-- +85	180-- +85	180-- +85	180-- +85	180-- +85	180-- +85
Thermal conductivity with average specimen temperature of 10 C	DIN 52612	Wm- K ⁻¹	0.032-0.036	0.031-0.035	0.031-0.034	0.031-0.033	0.031-0.033	0.031-0.033
Approximate water vapour permeability	DIN 53429	Gd m	40	35	26	20	16	12
Water vapour diffusion resistance factor	DIN 4108		20-50	30-70	30-70	40-100	40-100	40-100
Typical water absorption after DIN 53428 immersion in water For 7 days For 1 year	DIN 53428	Vol%	3	2.3	2.2	2	1.9	1.8
		Vol%	3	4	3.8	3.5	3.2	3
1 Tested at.23 C								
2 Under mechanical load for 48 hours								
3 Without significant mechanical load								
4 Target values								
* Assuming correct processing conitions								
** D= Day i.e. 24								

