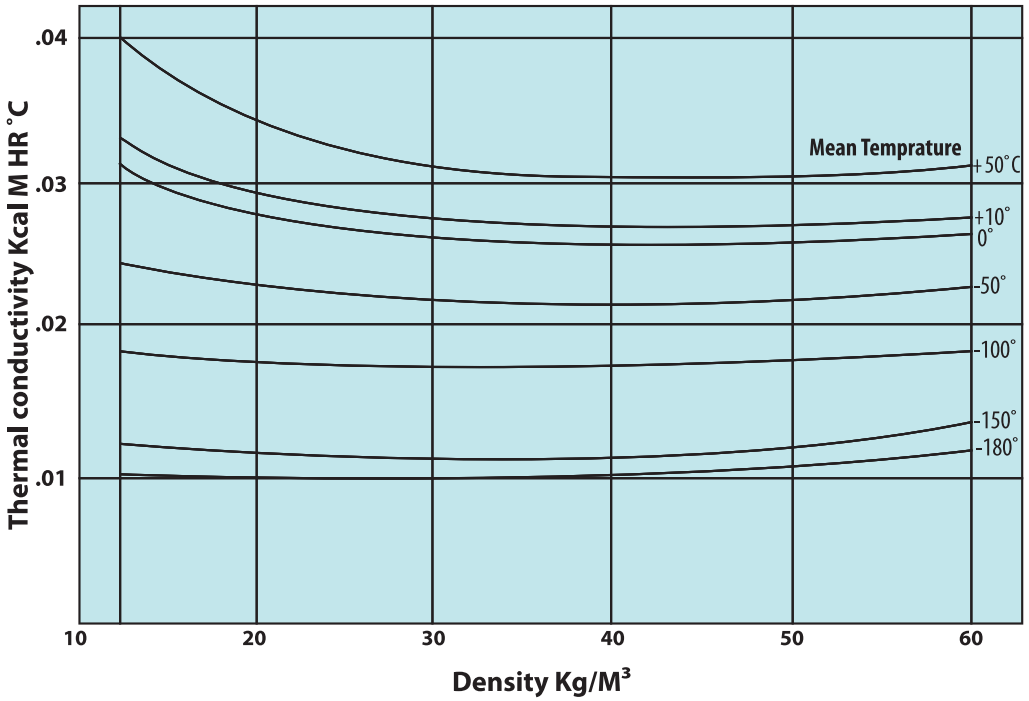
THERMAL CONDUCTIVITY AT VARIOUS TEMPRATURES V/S DENSITY



The specfic heat of **EXPANDED POLYSTYRENE** is 0.29 kcal/kg °C and its coefficient of thermal expansion/ contract is 5 to 7 x 10^{-1}/°C or 3 to 4 x 10^{-1}/°F

Contact us at :

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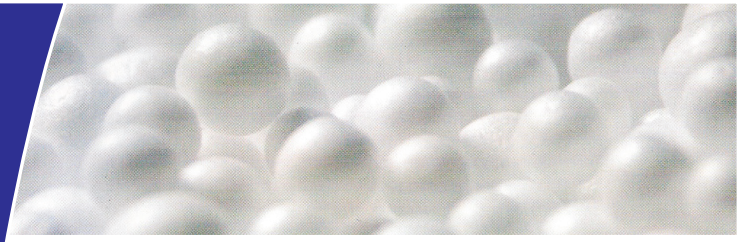
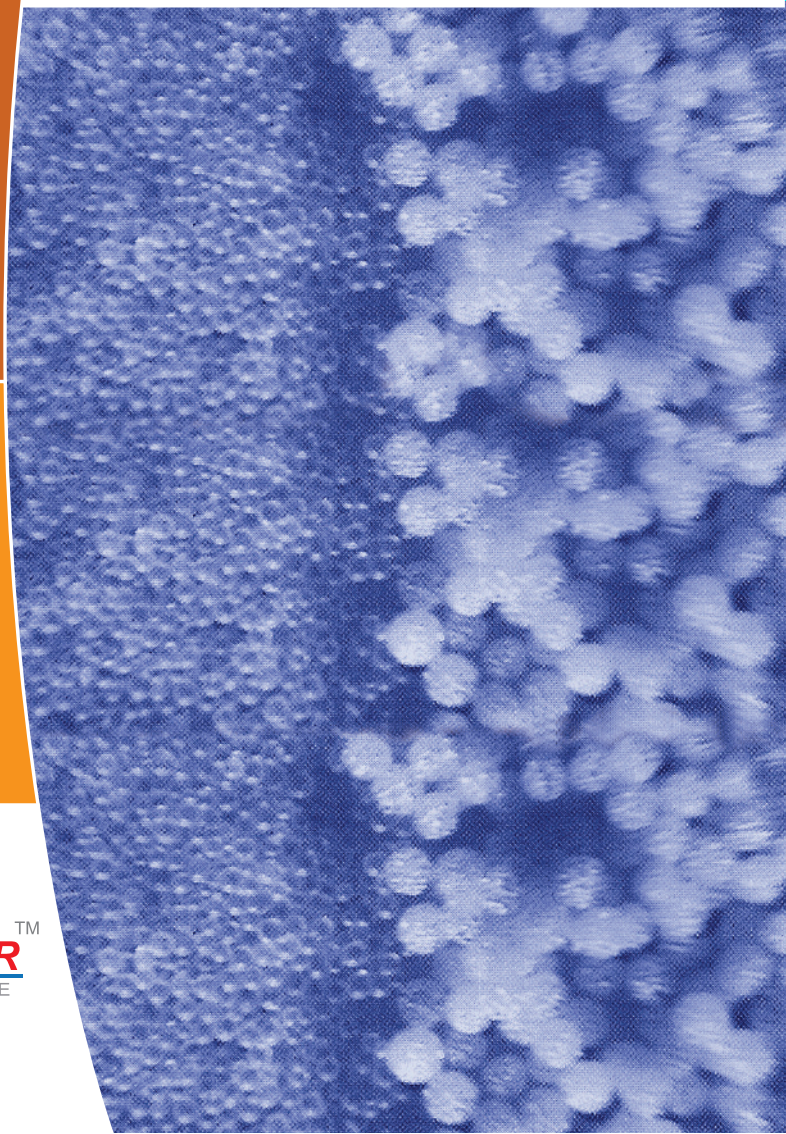


Andhra Expanded Polystyrene Pvt. Ltd.



PEARL STAR™
QUALITY THERMOCOLE

COMPANY PROFILE

We are Pleased to introduce our selves as the leading manufacturers of Expandable Polystyrene (thermocole).Having three units in and around Hyderabad. We have the highest production capacity in South India, Established in 1994, we are one of the fastest growing company specialized in the manufacturing of Hi performance, cost effective Expanded Polystyrene (EPS).

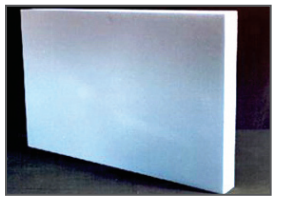
The company has set high standards and guidelines for meeting the quality parameters.The company has a well-knit team of qualified engineers & trained technical staff with years of knowledge and experience to execute the job to perfection. The Expandable Polystyrene manufactured by the company are sold under the trademark " **PEARL STAR ™** " Quality Thermocole.

Our products have found applications in various industrial segments such as Medical & Hygiene, Home Appliance, Electrical & Electronics, Food Processing, Agri & Aqua Products, Automotives, Telecom etc.It is also used as an Insulation Material in Cold Storages & Clean Rooms (as upper & under deck insulaton), Temperature control Pipe Lines, Incubators. It is used in cold chain as Fruit box, Ice or Ice Cream Box, Fish Box and vaccine box.Its our constant endeavor to identify and formulate, innovative cost effective methods for existing and futuristic applications.

FACTS & FIGURES

The Associated Chamber of Commerce and Industry (Assocham), highest body of the Chambers of Commerce of India (CCI), providing a forum for dialogue between business and government said in its report "Food Processing and Agri Business" **that the country is short by 10 million tonnes of cold storage capacity due to which about 30-40% of agricultural produce goes waste every year.**

Enough food for a rising population is a worldwide anxiety.The solution lies not only in increasing food output but also in the simultannous prevention of waste and spoilage of seasonal surpluses.Since most food stay longer at low temperatures, cold storage is a logical approach to the problem. In India, an annually increasing number of cold stores (from 80 in 1955 to 5386 in 2009) spread country-wide, help to conserve the nation's critical output of perishable vegetables and fruits, dairy and poultry produts, meat, fish and shrimp, dry chilles and other agri products.



EPS SHEETS

Economic operation of the refrigerating machinery and the critical mantenance of steady storage tempratures is enabled by the terminal insulation lining of the roof, walls, & doors of the storage chambers. Poor insulation effects the ablity to control storage condition thereby effecting the quality of the item stored. Thus a good & economical Thermal Insulating material is essentially needed. EPS is made up of Microscopic air bubbles in its closed cell structure making it an outstanding Light weight Thermal Insulating material which is dependent on the apparent density and the temperature of the chamber as shown in the graph.

EPS PIPE SECTION

Typical cold storage temperatures

Product	Temperature ℃
Meat and meat products:	
Pre chilling room	+2 to +6
Meat cool room	-2 to +1
Rapid freezing	-35 to -40
Frozen meat	-20 to -25
Cooked meats and sausage	0 to +2
Frozen poultry	-18 to -25
Rapid freezing of poultry	-30 to -40
Dairy Products :	
Milk, Cream	0 to +4
Cream cheese	0 to +1
Butter	-1 to +4
Frozen butter	-10 to -18
Butter handling	+12 to+15
Hard cheeses, depending on type	0 to+12
Soft cheese	0 to +2
Eggs, storage	-0.5 to+0.5
Home-made ice-cream	-8 to -12
Deep-frozen ice-cream	-25 to -35
ice	-4 to -6
Products	**Temperature℃**
Dry Chillies	- 2 to -8
Tamarind	- 2 to -8
jaggery	- 2 to -8
Bajra	-10 to -13
Jawari	-10 to -13
Raggi	-10 to -13
Haldi	
Fish:	
Frozen fish	-20 to -40
Fish on ice	0 to -1
Smaked fish	-6 to -8
Vegatables :	
Fresh vegetables	around 0
Frozen vegitables	-18 to -25
Potatos	+3 to +6
Fruits :	
Mango	-10 to -13
Beverages :	
Hops	-2 to 0
Malt	+8 to+10
Beer fermentation	+4 to +6
Bulk beer	-2 to +2
Wines	+6 to+14
Spirits and liqueurs	+6 to +8
Aerated soft drinks	+6 to +8
Fruit juices	0 to +2

Products	Temperature℃
Baker's wares etc, :	
Freshly baked goods	0 to +6
Bread	+8 to +10
Chocolate	+4 to +6

RECOMMENDED THICKNESS OF EXPANDED STYROPOR (in millimeters) FOR COLD STORAGES

Temp°C	Thicknesses		
	Floor	Walls	Ceiling
5	65	75	80
0	80	100	110
-10	100	125	140
-20	125	150	155
-30	140	175	200
-40	150	200	225

Total thickness	To be applied in layers of
65	40 + 25
75	40+ 35
80	40 + 40
100	50 + 50
110	60 + 50
125	75 + 50
140	75 + 65
150	75 + 75
165	100 + 65
175	75 + 50 + 50
200	75 + 75 + 50
225	75 + 75 + 75

Based on average conditions should be modified to suit individual technical requirements.

EPS FRUIT BOX

EPS FISH BOX