

STAR SOUND SYNTH

ABOUT THE PRODUCT

The product “**STAR SOUND SYNTH**” is made of 100% polyester fibre. The fibres are of different deniers and are thermally bonded with the presence of low melt fibers. No chemical is used at any stage of the process to bind the fibres. Since there is total absence of any chemical agent for the binding, the product is 100% fire retardant. It does not catch fire even if there is a source of flame adjoining to it. The material would just shrink away without giving any odours since it is 100% thermally bonded.

STAR SOUND SYNTH is a world class insulation product manufactured in India. It is made of fine, long, polyester fibres of various deniers thermally bonded by low melt fibres and is widely recognized for its energy conserving and sound absorption/thermal insulation properties. It possesses high absorbent values by virtue of its low fibre diameter, consistent fibre distribution and homogeneous density.

STAR SOUND SYNTH provides efficient insulation at a very nominal cost. Besides providing sound absorption, it also reduces the thermal radiation. It saves in the capital and operating costs of the acoustic treatments and air conditioned systems. Its application is versatile. It can be applied over/under false ceilings, under concrete roofs, between asbestos sheets etc.

The product has an open cell structure which is a prerequisite for a sound absorbent material and since there is no chemical involved at any stage of production which could close its open cell structure.

STAR SOUND SYNTH'S DIMENSIONS AND GRAMMAGES

STAR SOUND SYNTH comes in a roll/slab form. The size of the sheet/slab is 6'x4' which can be downsized as per requirement.

PRODUCT	THICKNESS	WIDTH	LENGTH	AREA PER ROLL	AREA PER ROLL
Grammage	mm	of product	of a Roll	in sq metre	in sq foot(Approx)
500 Gsm	10,25,40	1.20 mtr	15 mtr	18	194
800 Gsm	25, 50	1.20 mtr	15 mtr	18	194
1000 Gsm	25, 50	1.20 mtr	15 mtr	18	194
1500 Gsm	50,70	1.20 mtr	10 mtr	12	130

OTHER GRAMMAGES AND THICKNESSES ARE AVAILABLE ON REQUEST

STAR SOUND SYNTH

ADVANTAGES

- **EASY TO HANDLE**:- Fibres do not come off easily from the material. Due to inherent production process, the fibres are bonded so well that they form a uniform layer and do not fly off while handling. Such is not in the case of glass wool or Rockwool as their fibres come out where the strength of the chemical (Resin) is less and the fibre glass (glass wool) disintegrates rapidly if the chemical binding agent (Resin) is not there which often happens as the Resin cannot be applied on uniform basis

- **100% FIRE RETARDANT**:- Since there are no chemical agents involved in the manufacturing process at any time, **STAR SOUND SYNTH** is 100% fire retardant. There is no fire propagation with no emission of smoke or any toxic gases.

- **EASY INSTALLATION**:- The product can be easily installed under deck, on the walls and in and on the ducting by just pasting it with any adhesive just a little to hold the material. It does not require any framework (wooden or aluminium structure) to support it . A staggered vertical framework of wooden battens/GI channels is required only for the lining boards. No glass cloth / polythene lined hessian cloth is required for covering **STAR SOUND SYNTH** Neither are any GI wires or chicken mesh required to hold the material in position. However the chicken wire mesh may be provided to save the material from manual fiddling. This results in considerable savings and cutting in costs of the insulation treatment.

- **NON-ALLERGIC & NON CARCINOGENIC** :- **STAR SOUND SYNTH** is totally hygienic and non-allergic since no chemical processing is involved in the manufacturing process. It can be applied with bare hands and does not leave any itchy feeling to the users of it. No gloves are required for handling it and it is 100% non-carcinogenic, thereby making it very user friendly.

- **LONG LASTING** :- **STAR SOUND SYNTH** lasts for a long time and does not need frequent replacements.

- **LIGHTWEIGHT** :- It is extremely lightweight and flexible and easy to assemble.

No extra aluminum foil layer is required along with• **STAR SOUND SYNTH**.

- **STAR SOUND SYNTH** does not retain water and dries quickly if wetted by accident. It is stable under varying conditions of temperature and humidity. It is not prone to sagging or settling.

- **STAR SOUND SYNTH** is inorganic. It does not encourage the growth of fungi and vermin.

- **STAR SOUND SYNTH** is chemically inert. It's application does not cause or accelerate corrosion. It is rot proof and odourless.

- **STAR SOUND SYNTH** has uniform layers and has equal and proportionate distribution of the fibres.

SOUND INSULATION OF BUILDINGS

INTRODUCTION

Acoustic consideration plays a decisive role in the design of auditoriums, concert halls, cinemas and similar places of entertainment. Acoustics are equally important in designing homes and offices. However, the nature of acoustic required varies from case to case. In theatres, concert halls etc. the interior acoustics eliminating reverberations are very important, whereas in homes and offices, sound insulation against air borne and impact sound may be more important to ensure comfort.

How does the noise originate?

The noise in a room or hall may originate in 3 ways.

Air borne from a source within the room e.g typing office, weaving sheds, engine rooms•

Air borne from external sources.●

By impact blows on the structure.●

The disagreeable nature of noise is caused by reverberation -- the result of repeated reflections of sound from hard-surfaced wall, rather than by the actual noise level from the source. Noise in rooms can be reduced considerably by lining them with high quality sound absorbent material.

“STAR SOUND SYNTH” THERMALLY BONDED POLYSTER FIBRE NON-WOVEN WADDING combats reverberation most effectively, it is the most suitable and ideal material for the purpose

Note:-

1. During the first painting and subsequent re-decoration, care must be taken not to bridge the perforations or seal the surface of insulation, since this can reduce the effectiveness of the sound absorbent treatment.
2. Reverberation time can be controlled by using different grammages of **STAR SOUND SYNTH** and/or by using lining boards of varying open areas.
3. In auditoriums, theatres etc., where acoustic control must be perfect, a consultants advice would be beneficial in deciding the most effective combination of the product.

THERMAL INSULATION

Thermal Insulation plays a vital role in the efficient working of air conditioning systems by reducing the energy cost to the optimum levels. We as the thermal insulation manufacturers understand that the cost of the insulation material along with the cost of its application is as important as the cost of capital air conditioning equipment and cost of energy saved. We have therefore through the extensive research, developed an insulating material out of complex polymer configuration which mainly has the following properties to benefit the inhabitants of the environment for which the insulating material is targeted. The revolutionary properties of insulation are

1) NON CARCIOGENIC

2) FIRE RETARDANT

3) LOW COST

Note:- For optimal thermal insulation consulting engineers advice would be the most beneficial.

INTENDED APPLICATIONS:

ACOUSTICAL INSULATION•

UNDERDECK INSULATION•

OVER FALSE CEILING•

THERMAL INSULATION (OUTSIDE• & INSIDE DUCT INSULATION)

TECHNICAL SPECIFICATION OF STAR SOUND SYNTH S.NO	PROPERTIES/ TECHNICAL SPECS	DESCRIPTION
1	Composition and size options	“STAR SOUND SYNTH” comprises a 100% thermally bonded non-woven polyester fibre with no chemicals added. It is rectangular lay-in edge & available in any dimensions required
2	Acoustic Performance	“STAR SOUND SYNTH” 1000gsm 50mm thick is tested in R/T chamber as per IS:8225/ISO:354/ASTM C423C . Having NRC of not less than 0.80
3	Fire Rating	As per guidelines of ASTM D 635 “STAR SOUND SYNTH” shrinks & melts without catching fire on giving a flame upto 25mm mark, Linear burning rate 100mm\ minute
4	Thermal Conductivity	“STAR SOUND SYNTH” 1000gsm 50mm K value of not more than .030 W/MK at a mean temperature of 25°C with nil moisture content, As per IS:3346-1980.



)))| **Sound Synth** |(((

The Effective Airborne Sound Barrier

Star Sound Synth is the environmentally responsible, single-solution substrates. Whether you need excellent accoustical performance, tackability, impact resistance, a product free from VOCs, one with a high post-consumer recycled content or all of the above.

Star Sound Synth is a revolutionery new insulation made from 100% polyester fiber with upto a 60% post consumer content (recycled plastic beverage containers), which is itself 100% recyclable.

Star Sound Synth is semi-rigid substrates. It is impact resistant and tackable while retaining excellent acoustical properties for wall and ceiling applications. In addition, it is free of volatile organic compounds (VOCs) like formaldehyde. Further, Star Sound Synth is antimicrobial and non-hygroscopic.

Star Sound Synth can be used as an acoustical insulation, a thermal insulation, a atackable surface, a high-impact surface, and as a substrate beneath fabric coverings or for all five reasons at the same time, it is a truly the single solution substrate.



STAR SOUND SYNTH CAN ALSO BE A USED AS A PRE-MADE ACOUSTICAL AND TACKABLE PANELS, MODULAR PANEL SYSTEMS. AS WELL AS CEILING TILES, DAFFLES, CLOUD DIFFUSERS, AND AS FLOORING UNDERLAYMENT.

ENVIRONMENTALLY FRIENDLY MULTI-PURPOSE INSULATION



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)))| **Sound Synth** |(((

PRODUCT NAME - STAR SOUND SYNTH

Specification

THICKNESS	GSM	SIZE	COLOUR	FORM
25 MM	500	as per request	WHITE	SLAB / ROLL
25 MM	1000	as per request	WHITE	SLAB / ROLL
50 MM	500	as per request	WHITE	SLAB / ROLL
50 MM	1000	as per request	WHITE	SLAB / ROLL
50 MM	1500	as per request	WHITE	SLAB / ROLL
50 MM	2000	as per request	WHITE	SLAB / ROLL

PRODUCT DESCRIPTION

Basic Use

Star Sound Synth is a white polyester fiber insulation used for acoustical control and to provide a high-impact tackable panel, wall surface and for the thermal insulation.

Benefits

It resists Bacterial and fungal growth, is non toxic and non-allergenic, it will not rot, deteriorate or change color over time. The product can be easily fabricated on the job site using standard tools.

Composition & Materials

Star sound synth is manufactured from 100% polyester fibers thermo-bonded together to achieve the desired thickness and density. It has a 60% post consumer content (recycled plastic beverage containers). It is itself 100% recyclable or alternatively it can be safely destroyed by incineration.

Limitations

Star sound synth should be kept clean and dry at all times.

INSTALLATION

Star sound synth : Multi-purpose insulation is applied directly to drywall, concrete, CMU or other ASTM E 84, Class A I material. Star sound synth can be cut installed using a standard tools.

TECHNICAL DATA

APPLICABLE STANDARDS	FIRE RESISTANT	PHYSICAL / CHEMICAL PROPERTIES
<ul style="list-style-type: none"> ● BOCA, ICBO, SBCCI, CABO, ICC 	<ul style="list-style-type: none"> ● ASTM D635, IS 8225 / ISO:354 Maximum Flame spread index 15 mm -- 15, 25 mm -- 10, 50 mm -- 5 Maximum Smoke Developed Index 15 mm - 200, 25 mm -- 180, 50 mm -- 160 	<ul style="list-style-type: none"> ● Acoustical Performance ASTM C423 ● Thermal Performance IS:3346-1980 15 mm--2.10, 25 mm--3.59, 50 mm--4.10 ● Water vapor sorption <0.4% by weight -- Non-hygroscopic ● Weather Resistance No change in appearance. ● ATM C 1338--08--Standard Test Method for determining Fungi Resistance of insulation materials and Facings. Passed with no fungal growth found on all replicates at 40X Magnification after 4 weeks of incubation.



Environmental and Health Benefits of Star Insulation

INTRODUCTION

All Star Insulation products are made from 100% thermally bonded polyester fibre. Polyester fibre is commonly used in clothing and bedding applications. Polyester fibre also uses the same raw material as PET (Polyethylene Terephthalate - Plastics Identification Recycling Code #1). PET is commonly used in bottles and jars for storing water, soft drinks, sauces and spreads. Polyester fibre is non-toxic and no known physical or health hazards have been associated with polyester over several decades of use across the world in a multitude of applications.

EASE OF INSTALLATION

Star Insulation products are safe and easy to install with no special clothing, gloves or masks required for installation. Star Insulation is dust free and a non-irritant. With increasing emphasis on workplace safety this is an important advantage, since there are no potential OH&S (Occupational Health & Safety) issues arising from its use. No special or restricted areas are required on site when installing Star Insulation products.

LONGEVITY OF INSULATION PERFORMANCE

Since Star Insulation products do not use resin based binders that may deteriorate over time, the insulation will not sag, become brittle, degrade or contribute to indoor airborne dust. It does not absorb moisture and is insect and vermin resistant. The insulation will maintain the stated performance for the life of the building.

RECYCLED FIBRE CONTENT AND ENERGY USAGE

Star Insulation is a polyester insulation manufacturer to use a minimum 60% recycled fibre content in insulation products. Recycled polyester fibre uses less than half the embodied energy of virgin polyester. So not only is there an energy saving by using Star Insulation products to reduce heating and cooling requirements, there is an energy saving by using Star Insulation products due to the lower embodied energy content of the insulation material.

Using Star Insulation products is very beneficial in a Life Cycle Analysis (LCA) because they are 100% recyclable.

Star Insulation is committed to minimising the environmental impact of its operations and embodied energy content of the insulation material:

Star Insulation works closely with other manufacturers to collect and recycle polyester fabrics.

Star Insulation employs state of the art energy efficient production processes.

Star Insulation's nationwide footprint reduces the cost of transport for supply of goods to its customers.

Star Insulation has active waste management programs in place to minimise the generation and disposal of production waste to landfill with the majority of waste materials recycled either in-house or by recycling partners.

All of the plastic packaging used by Star Insulation is recyclable and made from LDPE (Low Density Polyethylene - Plastics Identification Recycling Code #4). Whenever possible, remilled (recycled) LDPE is specified for the plastic packaging.



Environmental and Health Benefits of Star Insulation

ZERO OZONE DEPLETING POTENTIAL

The materials used in insulation products made by Star Insulation and the manufacturing processes used in Star Insulation factory to make these products, have a zero ozone Depleting Potential (ODP).

ZERO FORMALDEHYDE

The manufacturing process for polyester insulation products at Star Insulation does not include the use of solvents or resins. Therefore there is no residual formaldehyde or other Volatile Organic Compounds (VOCs) on the insulation due to the manufacturing process. With polyester not being a VOC either, the VOC content of our polyester insulation products is expected to be negligible.

ZERO CHLORIDES

The insulation products made by Star Insulation do not contain any raw material with chloride compounds nor are chloride compounds used in the insulation manufacturing process. There are also no other corrosive chemicals used at any stage of the manufacture of the insulation or the raw materials. Therefore all Star Insulation products can be considered to have non-corrosive properties.

NON-ALLERGENIC PROPERTIES

The polyester used in Star Insulation products has non-allergenic properties and is safe for asthma sufferers. Star Insulation products do not contain binders that may deteriorate and crumble over time, or use brittle or short fibres that are prone to breakage and/or easily respirable. Therefore it does not have the potential to create airborne dust due to fibres or other detritus working their way down through lighting and air conditioning vents in the ceiling.

