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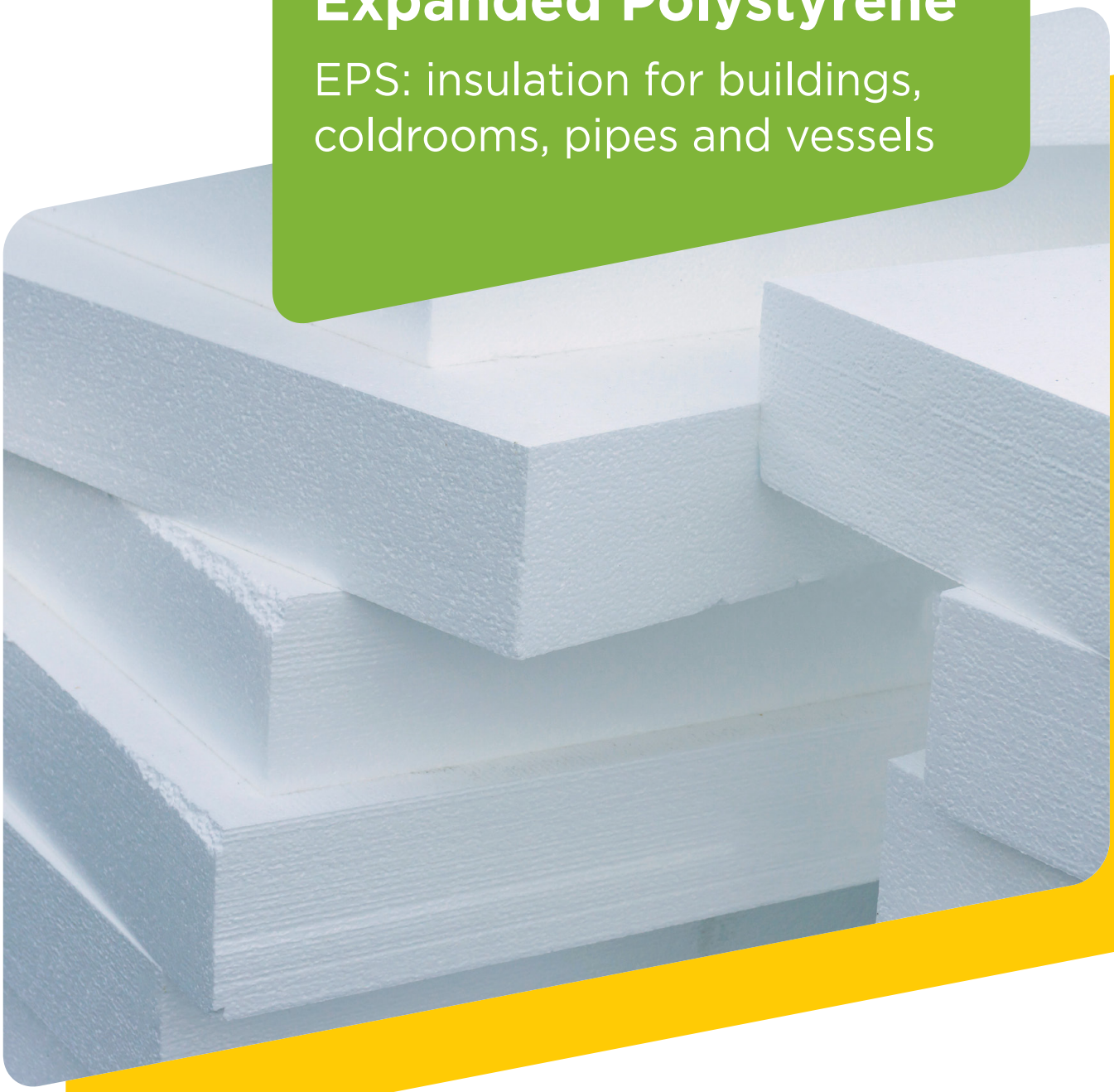
Expanded Polystyrene

EPS: insulation for buildings, coldrooms, pipes and vessels



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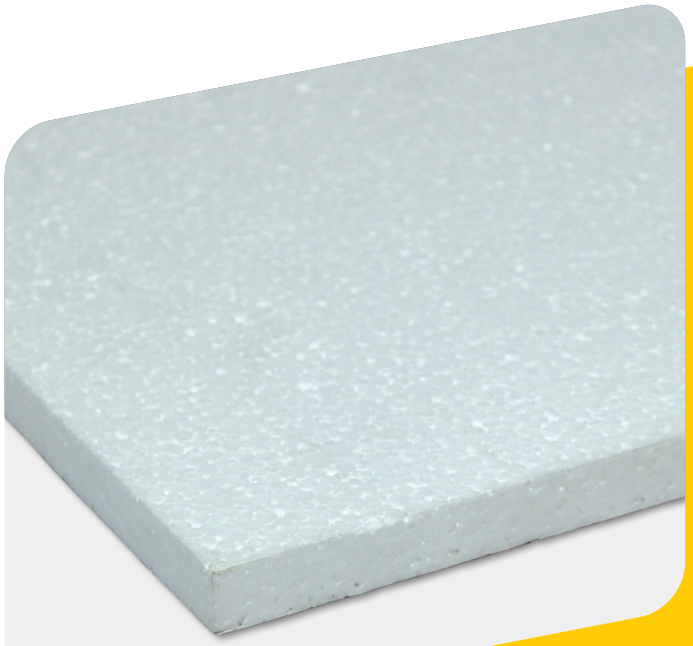

Expanded Polystyrene (EPS) is a lightweight, rigid, plastic foam insulation material produced from solid beads of polystyrene. EPS contains no CFC's and is considered ozone friendly by the Wildlife Society of South Africa.

TECHNICAL DATA SHEET

ENERGY SAVING

UNIQUE LIGHTNESS

THERMAL COMFORT

DESCRIPTION

Polystyrene is made by polymerising styrene, which is produced by combining benzene and ethylene. The polystyrene thus produced is one of the thermoplastic materials sometimes called linear polymers. These are materials that soften on the application of heat and harden as they cool. The expanded foam (known as EPS) is used in various built environment applications.

Sagex has more than 50 years experience in the manufacture of EPS and introduced the product into the South African market.

QUALITY MANAGEMENT SYSTEM

Isover products are manufactured according to ISO 9001:2015.

ENVIRONMENTAL SUSTAINABILITY

The Springs EPS facility is ISO 14001:2015 accredited.

Less material, less energy and less emissions

- Zero ozone depleting potential (ODP)
- Zero global warming potential (GWP).

FEATURES & BENEFITS

- Resistant to vibration
- Low mass
- Thermally efficient
- Recyclable
- CFC and HCFC free, physiologically and chemically harmless
- Resistant to aging, mildew, bacteria and rot
- Easily cut and worked (fine toothed saw and conventional hand tools)
- Easily bonded – ensure adhesive is compatible with EPS
- Easily painted using high quality acrylic PVA applied by brush or spray.

FIRE PROPERTIES

- Flame retardant EPS distinctly reduces the flammability and the spread of flame on the surface of foamed articles. This product is self-extinguishing as soon as the ignition source is removed
- Sagex FR grade (Styfrene unfaced has obtained a B/ B1/2/H&V with and without sprinklers when tested in accordance with SANS 428).

THERMAL PROPERTIES

Refer to physical properties table.

PHYSICAL PROPERTIES

Properties	15 D	20 D	30 D
Density (kg/m³) – tolerance +/- 10%	15	20	30
Thermal conductivity at 10˚C (W/m.K) (mean temperature)	0.038	0.035	0.033
Compressive strength (kPa) - @ 10% deformation	70	110	200
Tensile strength (kPa)	200	280	440
Water absorption % volume	0.5 - 1.5	0.5 - 1.5	0.5 - 1.5
Temperature limits	-110˚C to 70˚C		

Typical values

DURABILITY

- Odourless, inert and fully compatible with all standard building materials and components
- Resistant to fresh water, salt water, alcohol, weak and certain strong acids, weak and strong alkalis, resistant to most vegetable and animal oils
- EPS is vulnerable to ketones, esters, hydrocarbon chlorides, benzol, petrol, fuel and turpentine ether
- Will not promote corrosion of steel, copper or aluminium
- Will not sustain vermin
- Will not breed or promote fungi, mould or bacteria
- Rot proof.

ACOUSTIC PROPERTIES

EPS is not known as a good sound absorbing product due to its closed cell structure and low density. Isover offers a range of alternative acoustical insulation products if required.

APPLICATIONS

Sagex EPS has a 50 year proven track record as a cost competitive insulation material with application in a wide range of industries. Excellent thermal properties, lightweight and other user-friendly features combine to provide almost infinite product potential.

TOOLS NEEDED FOR INSTALLATION

Basic carpentry tools needed.

INSTALLATION INSTRUCTIONS

Note: Adhesives/paint must be compatible with EPS. Refer to our technical solution centre.

HANDLING & STORAGE

As per all items in storage, fire safety regulations should always be considered. All health and safety regulations should be adhered to and complied with. Product should always be stored under cover and protected from the elements.

ENVIRONMENTAL

- CFC and HCFC free
- Recyclable
- Does not decompose into harmful substances.

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