

## Expandable Polystyrene – Product Information

### EPS Silver® S700R

#### Description

EPS Silver® S700R, part of the INEOS NOVA Performance Products (Expandable) range, is a free flowing flame retardant expandable polystyrene, consisting of spherical polystyrene beads containing an internal flame retardant additive, pentane as the expansion agent and an internal modifier to significantly improve the thermal insulating properties.

#### Typical properties

Property	Unit	Value
Bulk density	kg/m <sup>3</sup>	approx. 620
Bead size class	mm	0.4-0.7
Bead size specification > 95% between	mm	0.35-0.8

INEOS NOVA Silver® S700R contains a flame retardant and conforms to DIN4102, Part 1, B1. Details and copies of certifications are available on from your local INEOS NOVA representative.

#### Processing and Applications

EPS Silver® S700R can be prefoamed using both continuous and discontinuous prefoamers. The typical density range is 20 to 40 kg/m<sup>3</sup> but other densities are possible depending on applications and equipment. Typically, a density of 22 kg/m<sup>3</sup> can be achieved in a single expansion using a discontinuous prefoamer.

EPS Silver® S700R can be moulded on shape moulding equipment. It can be used to produce shape at medium to high density with very low thermal conductivity. It may be used for contour mouldings with a wall thickness < 10mm, such as moulded building elements and specialist packaging.

Detailed processing advice is available from your local INEOS NOVA representative.

#### Packaging of EPS Silver boards

It is recommended that EPS Silver boards are packed in opaque or non-transparent films, as their exposure to direct sunlight can lead to panel distortion.

#### Quality and source of manufacture

As INEOS NOVA EPS Silver® S700R is a performance material, many attributes important to EPS users cannot be readily specified. To assure customers that the material delivered will be of a consistently high quality, the INEOS NOVA EPS manufacturing facilities have established effective quality control and management procedures, and hold certifications in accordance with ISO 9001:2000. Further details are available from your local INEOS NOVA representative.

INEOS NOVA EPS Silver® S700R is manufactured at Ribecourt in France.

#### Regulatory Information

INEOS NOVA EPS Silver® S700R is not permitted for use in food contact applications.

On request, we will be happy to provide you with Regulatory Compliance Statements (RCS') that affirm our products' conformity to various EU Directives. Standard RCS' are available for Directives on RoHS (Return of Hazardous Substances), WEEE (Waste Electrical and Electronic Equipment), Packaging Waste et al. We can also provide Declarations confirming the absence of heavy metals and a range of other substances subject to restrictions under EU Marketing and Use Directives, or prohibited under national laws and Company Standards.

Please contact us for up-to-date regulatory information on any of our products.

## Expandable Polystyrene, the Environment and Waste Management

---

The energy and environmental benefits of EPS over its life cycle have been well documented in several studies, both in the construction as well as the packaging sectors. We have outlined below some of the key environmental points regarding EPS.

EPS is not classified as an ODS – Ozone Depleting Substance. In addition, ozone depleting substances such as CFC's, HFC's and HCFC's are not used in its manufacture. The blowing agent used in INEOS NOVA EPS is pentane, which has zero ozone depletion potential (ODP). The EU Risk Assessment on pentane (2003) concluded that additional monitoring of ambient air by Member States is required, prior to reaching any conclusions on the potential for pentane – in common with a host of other non methane hydrocarbons - to act as an ozone precursor. As such, there is currently no pan European legislation restricting the use of pentane.

Waste EPS bead, where it cannot be reused in the foam manufacturing process, may be safely recycled or disposed of for incineration, where facilities exist. Disposal by landfill should be undertaken as the last resort, since this method does not utilise the energy potential inherent in the waste product.

Please contact us if you need further details on any of the above issues.

## Safe handling of EPS

---

Before handling INEOS NOVA EPS, please refer to the Material Safety Data Sheet (MSDS). A copy of all our MSDS' may be obtained from our public website, [www.ineos-nova.com](http://www.ineos-nova.com).

In conjunction with the MSDS, a detailed brochure entitled "Expandable Polystyrene Storage and Handling Safety Guide" should be consulted before handling and using INEOS NOVA Expandable Polystyrene. Please contact us for a copy of this Guide.

A free DVD is also available on the subject of fire safety during the conversion of EPS beads to foam, produced by Plastics Europe in association with EUMEPS. The DVD contains a 15 minute video as well as a Safety Poster, a self-audit checklist and a Q & A section. The DVD is available in two different versions – W European and E European, comprising approximately 18 different European languages, and is ideal as a training tool on EPS fire safety for your workforce. We will be happy to supply a copy of the DVD, on request. Please mention the version that you require.

INEOS NOVA EPS grades are normally packed in 1000 kg net non-returnable semi-bulk containers, termed "Octabins". To minimise loss of expansion agent, each octabin has a separate plastic film liner, tied at the neck. EPS beads should be stored in closed containers, preferably below 20°C. They should be protected from adverse weather conditions and direct sunlight. Processing performance deteriorates over time and as storage temperature rises. The expansion agent, pentane, is flammable and can form explosive concentrations in part-empty containers, storage hoppers and other enclosed spaces. All possibility of ignition should be avoided and adequate floor-level ventilation provided in storage and processing areas.

EPS Silver® is a registered trademark of INEOS NOVA (International) S.A. in the European Community and a trademark of INEOS NOVA Inc. in North America; INEOS NOVA is a licensed user of this trademark.

### **INEOS NOVA International SA**

Avenue de la Gare 14  
1700 Fribourg  
Switzerland

Phone: +41 (0) 26-426-56-56

Fax: +41 (0) 26-426-56-57

[eps@ineos-nova.com](mailto:eps@ineos-nova.com)

---

The information contained in this publication is, to the best of our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

Release: November 2006