

Styropor[®] KF362M

For the production of expanded foam Blocks and moldings having bulk densities of 16~30 kg/m³ and fire characteristics in conformity with:

- DIN 4102 – B2,
- KSM 3808 (Korea standard)
- UL94

Product description

Expandable polystyrene (EPS)
(blowing agent : pentane)

Form as supplied

Styropor KF362M is supplied in the form of rounded particles.

| | | |
|------------------|----------------|----------|
| Bead Size range | 1.04 – 0.72 mm | |
| Sieve Analysis | >1.19 mm | max. 1% |
| | 1.19 – 0.59 mm | min. 97% |
| | <0.59 mm | max. 2% |
| Moisture content | max. 1.0% | |

Storage

Styropor KF362M should always be stored in cool place, i.e. at temperatures up to a maximum of 20 °C. Styropor is normally supplied in cardboard containers or alternatively in flexible bulk bags. It can be stored in the unopened original receptacles for one month(after delivery) respectively before processing.

The receptacles have to be protected against the effects of weather (rain, snow, frost, sun) and against damage.

With regard to storage and transportation we recommend that our "Guide-lines for transportation and storage" be observed.

Processing

Styropor KF362M is converted to expanded foam in 3 stages.

Preexpansion

The lowest achievable bulk density depends on the type and mode of operation of the preexpansion equipment. The bulk density range of around 16 to 25kg/m³ usual for further processing to form blockware is reliably controlled in technically sound, continuously operating installations. Low bulk densities are achieved by continuous secondary expansion(after intermediate aging for about six hours) or by preexpansion at a slight excess pressure in equipment operating in batch mode. The preexpanded material has good free-flow properties and can be conveyed pneumatically without problem.

Intermediate aging

For the usual bulk densities of 16 to 30 kg/m³ we recommend intermediate aging times of 12 to 48 hours

Final expansion

Styropor KF362M is foamed out to expanded foam in commercial block molds or automatic molding machine. Moldings can be produced at relatively high mold temperatures with low water pick-up and low specific steam consumption.

By comparison with the standard Styropor F grade expanded foam made from Styropor KF362M exhibits higher water tightness. The somewhat longer cycle time by comparison with Styropor KF362M can be compensated by shorter drying time after molding

Technical processing issues are dealt with at length in our brochure "Processing of Styropor". The following Technical Information leaflets contain further advice:

- TI 540 Preexpansion of Styropor
- TI 570 Intermediate aging of Preexpanded Styropor
- TI 340 Steam power for expanding Styropor

Safety notes

It is to be noted that in the storage and processing of Styropor and of the expanded foams manufactured from it, ignitable mixtures of blowing agent (pentane) and air can arise due to blowing agent diffusing out and therefore all conceivable sources of ignition are to be kept away (naked flames, welding sparks, electric sparks, avoidance of electrostatic charging).

A ban on smoking is to be observed without fail!

In connection with this, see TI 290 "Determination of pneumatogen content in air". Information about the safety precautions necessary in processing may be obtained from the brochure "Fire safety during processing".

The contents of open containers should be processed quickly. At other times the containers are to be kept well sealed.

The transportation of Styropor or of expanded foams freshly made from it, in unventilated or closed means of conveyance is not permissible. The technical information leaflet:

TI 060 Transport Guidelines contains further information.

Biological action

During the storage and in the processing of Styropor pentane escapes. Especially when cutting the expanded foams with heated wires care is to be taken to remove the vapors arising by suction, since apart from pentane they still contain small amounts of styrene.

The maximum allowable concentration values for styrene and for pentane are to be observed.

Expanded foams made from Styropor have been manufactured and processed for several decades. In this time no effects harmful to health whatsoever have been ascertained.

Food legislation

Further information with regard to the provisions of food legislation may be obtained from the Technical Information leaflet:

- TI 125 Regulatory questions concerning food packaging

Environmental issues

Questions relevant to the environment in connection with the production and processing of Styropor and the use of expanded foams made from Styropor are answered in detail in the following Technical information leaflet:

- TI 180 Expanded Styropor foam: Environmental issues in processing
- TI 181 Expanded Styropor foam: Environmental issues in construction

Note

The information in this publication is based on our current knowledge and experience. This information does not relieve processors of the need to carry out their own tests and trials due to the profusion of possible effects when processing and applying our products. No legally binding assurance of certain properties or of suitability for a specific purpose can be inferred from our information.

Recipients of our products are themselves responsible for observing any proprietary rights and existing laws and regulations.