# Styroflex® 2G 66

S/B/S, Copolymer

## PRODUCT DESCRIPTION

Styroflex® 2G 66 is a styrene-butadiene block copolymer (SBC) with the properties of a thermoplastic elastomer (S-TPE).
Styroflex® 2G 66 is the only S-TPE with a styrene content of at least 60 % styrene and a rubber fraction of at least 70 %.
Characteristic properties of Styroflex® 2G 66 are therefore: high transparency, excellent thermostability, very high elongation at break and high resilence. Styroflex® 2G 66 is more polar than comparable SBS or SEBS grades and offers a good printability.
Applications: Styroflex® 2G 66 is a very versatile material, suitable for a variety of applications: In multilayer (coextruded with PE-EVA), thin-gauge film for the supporting layer, Styroflex 2G 66 is used e.g. for packaging fresh meat. Styroflex® 2G 66 is also used for the modification of styrenic polymers; e.g. blended with high impact polystyrene it improves the toughness and the stress cracking resistance (ESCR) significantly. Styroflex® 2G 66 is also suited for two-component injection molding, especially with polystyrene, to which it has excellent adhesion. Styroflex® 2G 66 and compounds based on Styroflex® may be used for conventional injection molding (eg. of toys) and the extrusion of profiles, flexible tubing and soft foams.

## PHYSICAL FORM AND STORAGE

Styroflex® is supplied in pellet form and should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. The pellets may cluster if compressed or stored at elevated temperatures; however, granule clusters are easily broken up mechanically.

## PRODUCT SAFETY

During processing of Styroflex® small quantities of styrene monomer may be released into the atmosphere. At styrene vapour concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is where five to eight air changes per hour are made.
Styroflex® complies with the requirements of the FDA regulation 21 CRF 177.1810 ´Styrene Block Copolymers´ and with most of the food regulations in European countries. The suitability of the articles for the intended food-contact application, the influence on taste and odor of the contents, global migration as well as adherence to specific limits has to be tested by the manufacturer or user in every case.
For detailed written confirmation on the current status of Styroflex® in respect to food legislation and also on the laws/regulations in other countries, please contact our Styrenics Infopoint at phone +49 621 60 - 41446, e-Mail: styrenics.infopoint@basf-ag.de
For safety informationen please refer to our Material Safety Data Sheet for this product.

## NOTE

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.
In order to check the availability of products please contact us or our sales agency.

BASF Aktiengesellschaft
67056 Ludwigshafen, Germany

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BASF
The Chemical Company

| Typical values 1) at 23℃ | Test method 2) | Unit | Values |
|---|---|---|---|
| **PROPERTIES** | | | |
| Density | ISO 1183 | kg/m³ | 1010 |
| Water absorption, equilibrium in water at 23°C | similar to ISO 62 | % | 0.07 |
| Moisture absorption, equilibrium 23°C/50% r.h. | similar to ISO 62 | % | 0.07 |
| **PROCESSING** | | | |
| Processing: Injection moulding (M), Extrusion (E), blow moulding (B) | - | - | M,E, |
| Melt volume-flow rate MVR | ISO 1133 | cm³/10min | 13 |
| Temperature | ISO 1133 | °C | 200 |
| Load | ISO 1133 | kg | 5 |
| Melt volume-flow rate | ISO 1133 | cm³/10min | 3 |
| Temperature | ISO 1133 | °C | 190 |
| Load | ISO 1133 | kg | 2.16 |
| Melt volume-flow rate | ISO 1133 | cm³/10min | 14 |
| Temperature | ISO 1133 | °C | 230 |
| Load | ISO 1133 | kg | 2.16 |
| Melt temperature, injection moulding | - | °C | 190 - 220 |
| Mould temperature, injection moulding | - | °C | 30 - 50 |
| Melt temperature, flat film extrusion | - | °C | 190 - 220 |
| **FLAMMABILITY** | | | |
| UL 94 rating at 1.6 mm thickness | UL 94 | class | HB |
| UL 94 rating at 3.2 mm thickness | UL-94 | class | HB |
| **MECHANICAL PROPERTIES** | | | |
| Tensile modulus | ISO 527-1/-2 | MPa | 120 |
| Yield stress, 50 mm/min | ISO 527-1/-2 | MPa | 4 |
| Yield strain, 50 mm/min | ISO 527-1/-2 | % | 5 |
| Nominal strain at break, 50 mm/min | ISO 527-1/-2 | % | >300 |
| Flexural modulus | ISO 178 | MPa | 140 |
| Flexural strength | ISO 178 | MPa | 4 |
| Charpy unnotchen impact strength (23°C) | ISO 179/1eU | kJ/m² | N |
| Charpy unnotched impact strength (-30°C) | ISO 179/1eU | kJ/m² | N |
| Charpy notched impact strength (23°C) | ISO 179/1eA | kJ/m² | N |
| Charpy notched impact strength (-30°C) | ISO 179/1eA | kJ/m² | 2 |
| Izod notched impact strength 1A (23°C) | ISO 180/1A | kJ/m² | N |
| Izod notched impact strength 1A (-30°C) | ISO 180/1A | kJ/m² | 2 |
| Izod notched impact strength (23°C) | ASTM D 256 | J/m | N |
| Shore A hardness | ISO 868 | - | 84 |
| Shore D hardness | ISO 868 | - | 34 |
| **THERMAL PROPERTIES** | | | |
| Vicat-softening-temperature VST/A/120 | ISO 306 | °C | 35 |
| **ELECTRICAL PROPERTIES** | | | |
| Relative permittivity (100Hz) | IEC 60250 | - | 2.5 |
| Relative permittivity (1 MHz) | IEC 60250 | - | 2.5 |
| Volume resistivity | IEC 60093 | Ohm*m | >1E16 |
| Surface resitivity | IEC 60093 | Ohm | >1E14 |
| Electric strength K20/P50 | IEC 60243-1 | kV/mm | 120 |
| **SHEETS** | | | |
| Tear propagation restistance (ASTM D 1922) d = 50 µm, longitudianl | ASTM D 1922 | cN | 650 |
| Tear eropagation restistance (ASTM D 1922) d = 50 µm, transversal | ASTM D 1922 | cN | 800 |
| Free falling dart drop (ASTM D 1709), method B | ASTM D 1709 | g | >1000 |
| **OPTICAL PROPERITES** | | | |
| Transparency, d = 2 mm | DIN 5036-3 | % | 80 |
| Haze | DIN 5036-3 | % | 5 |

Footnotes
1) If the product definition doesn't state otherwise.
2) Specimens according to CAMPUS.

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