

BLOCK COPOLYMER, COMPOSITION, HEAT SHRINKABLE FILM, SHEET AND SHEET
MOLDED ARTICLE

ABSTRACT

The present invention aims to provide a block copolymer having a high tensile elongation value and a few gels.

According to the present invention, provided is a block copolymer having a first vinyl aromatic block (S1), a second vinyl aromatic block (S2), and a copolymerization block (B/S), wherein: the first vinyl aromatic block (S1) is substantially composed exclusively of a vinyl aromatic monomer unit; the second vinyl aromatic block (S2) is substantially composed exclusively of the vinyl aromatic monomer unit; a weight average molecular weight of the second vinyl aromatic block (S2) is equal to or less than a weight average molecular weight of the first vinyl aromatic block (S1); the copolymerization block (B/S) is substantially composed exclusively of the vinyl aromatic monomer unit and a conjugated diene monomer unit; a content ratio of the conjugated diene monomer unit in the copolymerization block is 55 mass% or more and 82 mass% or less; a ratio of the first vinyl aromatic block is 50 mass% or more and 85 mass% or less when a total of masses of the first vinyl aromatic block and the second vinyl aromatic block is taken as 100 mass%; a content ratio of the copolymerization block in the block copolymer is 38 mass% or more and 60 mass% or less; and the block copolymer has at least one peak of a loss tangent value ($\tan\delta$) in a range of -70 to -35°C when a dynamic viscoelasticity measurement is performed under conditions of a temperature increase rate of $4^{\circ}\text{C}/\text{min}$, a frequency of 1 Hz, and a strain of 0.02% in accordance with ISO6721-1.