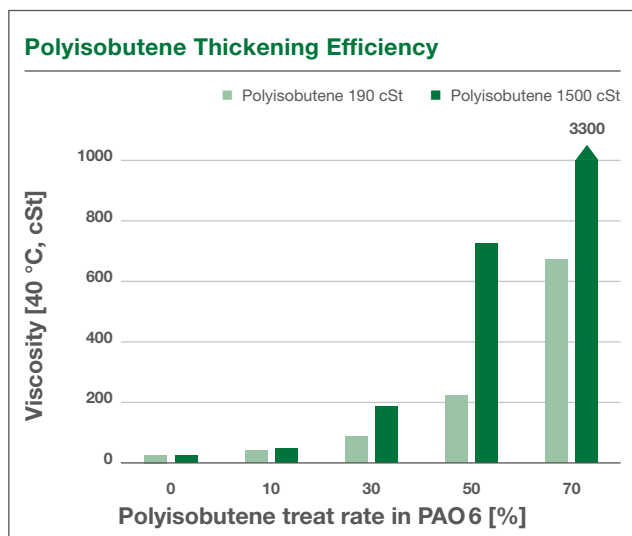


# Polyisobutenes for the Lubricant Industry

Cost-effective high viscosity base stocks with good shear stability



BASF's polyisobutene (PIB) portfolio of PIB homopolymers has been designed to meet the demanding requirements of the lubricant industry.

### High performance PIB grades

- are cost attractive high viscosity components for thickening or co-thickening of lubricants.
- are suitable for thickening mineral oil base stocks and are also compatible with PAO and Ester base stocks.
- can be used in a variety of industrial, driveline and grease applications, e.g. axle and transmission lubricants, hydraulic and gear lubricants as well as metalworking fluids.
- do not contain any chlorine and are thus not promoting any corrosion.

Additionally, BASF polyisobutenes feature a very high viscosity index for improved equipment protection at higher temperatures, are very shear stable and very well suited for high load applications requiring low viscosity loss and extended drain intervals.

## BASF Polyisobutene Properties in PAO Blends

|                        | Blend        | Viscosity (40 °C) cSt | Viscosity (100 °C) cSt | Viscosity Index | Pour Point (°C) | KRL Shear 20 h         | KRL Shear 100 h        |
|------------------------|--------------|-----------------------|------------------------|-----------------|-----------------|------------------------|------------------------|
| Method                 |              | ASTM D445             | ASTM D445              | ASTM D2270      | ASTM D97        | DIN 51350-6, ASTM D445 | DIN 51350-6, ASTM D445 |
| Polyisobutene 190 cSt  | 42 % in PAO6 | 156                   | 17.6                   | 124             | -57             | < 1.0 %                | 1.4 %                  |
| Polyisobutene 1500 cSt | 28 % in PAO6 | 150                   | 19.1                   | 145             | -54             | 2.1 %                  | 5.1 %                  |

## BASF Polyisobutene Grades – Overview

|                     | Method     | Unit | BASF Polyisobutene Viscosity Grades |         |         |         |         |          |
|---------------------|------------|------|-------------------------------------|---------|---------|---------|---------|----------|
|                     |            |      | 190 cSt                             | 230 cSt | 500 cSt | 640 cSt | 700 cSt | 1500 cSt |
| Viscosity at 40 °C  | ASTM D445  | cSt  | 4,650                               | 5,600   | 15,000  | 18,600  | 22,500  | 48,000   |
| Viscosity at 100 °C | ASTM D445  | cSt  | 190                                 | 230     | 500     | 640     | 700     | 1,500    |
| Viscosity Index     | ASTM D2270 | -    | 145                                 | 150     | 175     | 191     | 198     | 230      |
| Chlorine Content    | ASTM D7359 | ppm  | < 1                                 | < 1     | < 1     | < 1     | < 1     | < 1      |