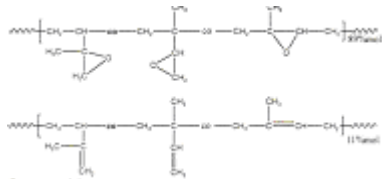


## Sample Name: Polyisoprene epoxy

(1,4 rich addition and 1,2 and 3,4 addition epoxy)

**Sample #:** P7055A-EIP

### **Structure:**



### **Composition:**

**Epoxydation: 89% mol**

$M_n \times 10^3$	PDI
1.5	1.15
$T_g$ for the polymer	78°C

### **Synthesis Procedure:**

Polyisoprene epoxy (1, 4 addition rich) is obtained by living anionic polymerization of isoprene in polar media and followed by epoxidation.

### **Characterization:**

Poly(hydroxyl branched isoprene) was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight, polydispersity index (PDI). The composition of the microstructure was calculated from FTIR and NMR.

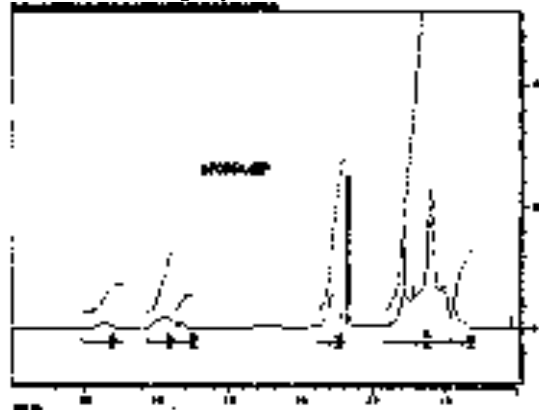
### **Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

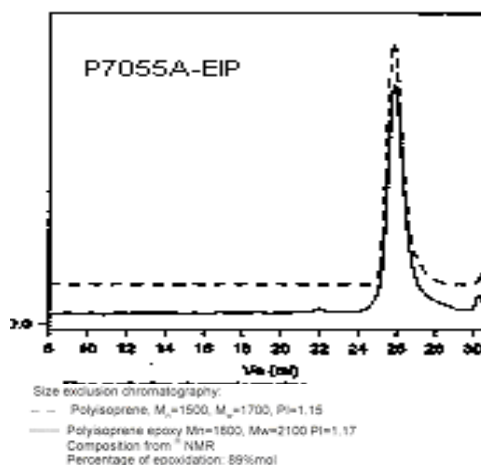
### **Solubility:**

Poly(hydroxyl branched isoprene) is soluble in THF, methanol, DMF, chloroform, toluene and precipitates in hexane.

### **<sup>1</sup>H NMR of homopolymer:**



### **SEC of homopolymer:**



### **DSC thermogram for the sample:**

