

HABI – HEXAARYLBIIMIDAZOLE

Imidazole is a five member heterocyclic molecule with Nitrogen in the 1 & 3 positions and the Carbon in the remaining positions. When Benzene is attached to a carbon, it is called an ARYL GROUP. In the Imidazole structure, if benzene is attached at positions 2,4,5 this is TRIARYLIMIDAZOLE, also known as HABI monomer. The TRIARYLIMIDAZOLE is oxidized to the dimer (Biimidazole). This dimer has 6 aryl groups, hence **HEXAARYLBIIMIDAZOLE**.

Why are there so many different HABI's? Numerous HABI's are possible by modifying the substituent groups ("R") attached to the backbone of the molecule. For example, the structure is called a Lophine Dimer when only hydrogen is present. However, the moment one chlorine atom takes the place of one hydrogen atom; the compound is now called o-Cl-HABI. The addition of the Cl changes the physical properties and performance of the molecule. There are hundreds of HABI's that can be synthesized by the addition of functional groups to various and /or multiple positions on the molecule. Each may exhibit different physical properties and performance. The performance of each material; however, is system and application dependent.

