

HRI UVTS-52

When a Photo-initiator is activated via absorption of a specific wavelength of light, it triggers the polymerization of a monomer. However, it is important to be able to control the polymerization materials so that the optimum performance and physical properties are achieved. This is the purpose of an inhibitor. **HRI UVTS-52** is the one of the best and most versatile inhibitors used to control the action of a photo-initiator. It works as both a UV and Thermal stabilizer to control polymerization. **HRI UVTS-52** is a nitroso dimer.

It is believed that nitroso dimers are in thermal equilibrium with nitroso monomers in the structure below. When the nitroso dimer is exposed to UV radiation, it is converted to a nitroso monomer. Free-radicals react with the nitroso monomers to form stable nitroxide compounds. The nitroxide compounds are not reactive enough to continue the growth of the free-radical chain. Therefore, it inhibits further reactions.

There are other inhibitors that can be used to control polymerization, such as Hydroquinone (HQ), Methoxy Hydroquinone (MEHQ) and Butylated Hydroxy Toluene (BHT), but none of these are as efficient as **HRI UVTS-52**.

