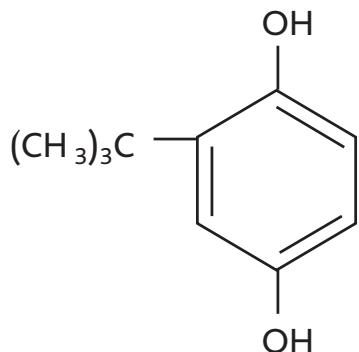


Eastman™ MTBHQ (mono-*tert*-butylhydroquinone)



CAS 1948-33-0

| Typical properties ^a | |
|---|--|
| General | |
| Empirical formula | C ₁₀ H ₁₄ O ₂ |
| Molecular weight (theoretical) | 166.22 |
| Assay, wt% | 98 |
| Physical appearance | Light tan powder |
| Melting point, °C (°F) | 125 (257) |
| Boiling point, °C (°F) | 295 (563) |
| Solubility at 25°C, g/100 g solvent | |
| Water | Moderate |
| Ethyl alcohol | 120 |
| Ethyl acetate | 100 |
| Toluene | Insoluble |
| Acetone | 190 |
| Flammability | |
| Flash point (Cleveland Open Cup), °C (°F) | 171 (340) |
| Fire point (Cleveland Open Cup), °C (°F) | 174 (345) |
| Autoignition temperature, °C (°F) | 457 (855) |
| Shipping regulation | |
| DOT labels required | None |
| DOT classification | Not regulated |

^aEastman makes no representation that the material in any particular shipment will conform exactly to the listed values.

Eastman™ MTBHQ finds use primarily as a polymerization inhibitor and industrial antioxidant. Compared with unsubstituted hydroquinone, its higher solubility and increased stability at higher temperatures combine to make it more useful in many applications. It is also an interesting organic intermediate because of its hindered hydroxyl group.

Applications

Inhibitor (Retarder): Eastman™ MTBHQ is an effective polymerization inhibitor for use in storing and shipping unsaturated polyesters and certain other polymerizable systems. Although its potency diminishes with increasing temperature, MTBHQ is an effective retarder even at temperatures as high as 114°C (237°F).

Antioxidant: Eastman™ MTBHQ, at concentrations of 0.01% to 1.0%, is a useful antioxidant¹ in unstable organic liquids such as chlorinated hydrocarbons, certain oils, ethers, and aldehydes, and in preparations containing these ingredients. In some cases, the potency of MTBHQ is greater than that of unsubstituted hydroquinone.

Stabilizer: At a concentration of 0.5%, Eastman™ MTBHQ has been found to be an effective heat and light stabilizer for pressure-sensitive adhesives based on poly(vinyl ethyl ether) resins.² These stabilized films are reported to be superior to many commercially available rubber-based adhesives.

Packaging

Eastman™ MTBHQ is shipped in nonreturnable fiber drums having a net weight of 35 kilograms and a gross weight of 39 kilograms.

¹ Eastman™ MTBHQ should not be confused with Eastman Tenox™ TBHQ antioxidant. Eastman Tenox™ TBHQ is a highly refined food grade of mono-*tert*-butylhydroquinone for use in stabilizing various edible oils, fats, and foods against oxidative deterioration.

² Surface Coatings Technical Release No. 27, Union Carbide Plastics Company



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Material Safety Data Sheets providing safety precautions that should be observed when handling and storing Eastman products are available online or by request. You should obtain and review the available material safety information before handling any of these products. If any materials mentioned are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

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