CLAIMS

1. A composition comprising:

   a. at least 50 wt% of cyclohexylbenzene;

   b. no greater than 49.9 wt% of cyclo-hexyl-1-phenyl-1-hydroperoxide; and

   c. 0.1 wt% to 10 wt% of at least one of: cyclohexyl-1-phenyl-2-hydroperoxide, cyclohexyl-1-phenyl-3-hydroperoxide, cyclohexyl-1-phenyl-4-hydroperoxide, cyclopentyl-1-methyl-2-phenyl-2-hydroperoxide, cyclopentyl-1-methyl-3-phenyl-3-hydroperoxide, cyclopentyl-1-methyl-1-phenyl-2-hydroperoxide, cyclopentyl-1-methyl-1-phenyl-3-hydroperoxide; and cyclohexyl-1-phenyl-1,2-dihydroperoxide, cyclohexyl-1-phenyl-1,3-dihydroperoxide, cyclohexyl-1-phenyl-1,4-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-1,2-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-2,3-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-2,4-dihydroperoxide and cyclopentyl-1-methyl-2-phenyl-2,5-dihydroperoxide,

   wherein the wt%s are based upon the total weight of the composition.; and

   further wherein the composition is free of oxidation catalyst.

2. The composition of claim 1, wherein the composition comprises 0.5 wt % to 5 wt% of at least one of: cyclohexyl-1-phenyl-2-hydroperoxide, cyclohexyl-1-phenyl-3-hydroperoxide, cyclohexyl-1-phenyl-4-hydroperoxide, cyclopentyl-1-methyl-2-phenyl-2-hydroperoxide, cyclopentyl-1-methyl-3-phenyl-3-hydroperoxide, cyclopentyl-1-methyl-1-phenyl-2-hydroperoxide, cyclopentyl-1-methyl-1-phenyl-3-hydroperoxide; and cyclohexyl-1-phenyl-1,2-dihydroperoxide, cyclohexyl-1-phenyl-1,3-dihydroperoxide, cyclohexyl-1-phenyl-1,4-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-1,2-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-2,3-dihydroperoxide, cyclopentyl-1-methyl-2-phenyl-2,4-dihydroperoxide and cyclopentyl-1-methyl-2-phenyl-2,5-dihydroperoxide, wherein the wt%s are based upon the total weight of the composition.

3. The composition of claim 1 or claim 2, wherein the composition comprises 1 wt% to 4 wt% of at least one of: cyclohexyl-1-phenyl-2-hydroperoxide, cyclohexyl-1-phenyl-3-hydroperoxide, cyclohexyl-1-phenyl-4-hydroperoxide, cyclopentyl-1-methyl-2-phenyl-