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Material Safety Data Sheet

Chemical Name:
Photocatalytic Hydroxyl Radical

Date:
1/1/2023

Chemical Formula:
-OH

CAS:
3352-57-6

Manufacturer:
International Ozone Technologies Group, Inc.
1100 “J” S. W. 10th. Street
Delray Beach, Florida 33444

Contact Info:
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Physical Properties:
Molecular Weight: 17.01
Melting Point:
Boiling Point: N/A
Flashpoint: N/A
Density (@ 20 C): N/A
Vapor Pressure: N/A
Vapor Density: N/A
Water Solubility: N/A
pH in Solution: N/A
Dissociation Constant (pKa): N/A
Oxidation Reduction Potential: N/A
Corrosivity to Material N/A
Reactivity to Container Material: N/A
Auto-Ignition Temperature: N/A
Explosive Properties: N/A
Oxidizing Properties: N/A
Surface Tension: N/A
Viscosity: N/A
Thermal Stability: N/A
Other Physical Property: N/A

Exposure Limits:
ACGIH: N/A NIOSH: N/A

Physical Properties Notes:
Hydroxyl radicals are unstable. They are formed and exist for less than two seconds; with a half-life in nanoseconds. They are naturally occurring from the sun's ultraviolet light imparting energy on water molecules in the 254nm to 385nm wavelength. Hydroxyl radicals have no known adverse human effects and are not considered a hazardous chemical. Hydroxyl radicals are produced in-situ by means of a photolysis process. They are not packaged, stored or transported in containers.

Carcinogenicity:
Not listed as carcinogen in National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), or OSHA.

Acute Toxicity:
No known acute toxicity.

Effects on Eyes and Skin:
None

Irritation to Respiratory Track:
None

Repeated Dose Toxicity:
None

Chronic and Long Term Toxicity:
None

Mutagenicity / Genotoxicity:
None

Developmental and Reproductive Toxicity:
None

Toxicokinetics:
None

Emergency First Aid:
None

Environmental Risks:
Persistence - None
Bioaccumulation - None
Toxicity - None
No known health risks

Hydroxyl radicals are known to be created in nature by ultraviolet (UV) energy. UV energy reduces atmospheric water molecules (water vapor in the air; measured as relative humidity). The reduction of water molecules results in one hydrogen atom (H) and one negative oxygen-hydrogen molecule (-OH). The –OH molecule is the hydroxyl radical. It is the action of atmospheric hydroxyl that naturally cleans the air that we all breathe.