

INTEROX® Hydrogen Peroxide

INTEROX® 35% PFP Grade Hydrogen Peroxide for Aseptic Packaging Bath Applications

Technical Data Sheet

Introduction

Hydrogen peroxide's environmentally-compatible properties are of particular benefit in food applications: it decomposes into water and oxygen, leaves little or no residue and, unlike other more traditional chemical disinfectants, does not form harmful byproducts. As a result of its antimicrobial performance, its ease of handling and its low dry residue, hydrogen peroxide is now the most widely accepted sterilant for aseptic packaging applications.

Applications

INTEROX 35% PFP Grade Hydrogen Peroxide is a more heavily stabilized formulation and is tailored for the bath type aseptic packaging machines. The different stabilizer system ensures that the hydrogen peroxide maintains excellent stability at the elevated temperatures found in the bath. This increased stability serves to minimize the loss of hydrogen peroxide through decomposition, increases bath life, results in more efficient consumption rates and ensures adequate sterilization.

Because of the higher stabilizer and residue levels, INTEROX PFP Grade should not be used in spray or vaporization type applications as clogged spray nozzles and coating of vaporizer surfaces could result. INTEROX PFP Grade does not meet the requirements of the Food Chemicals Codex. However, it is manufactured from INTEROX Food Grade Hydrogen Peroxide and Food Grade stabilizers, both of which do meet Food Chemicals Codex specifications.

Typical Values

Hydrogen peroxide is a clear, colorless liquid. Its density is slightly higher than that of water, but is miscible with water in all proportions. Hydrogen peroxide decomposes exothermally to water and oxygen with no toxic residues. The decomposition is normally slow (<1% per year), but is accelerated by heat and decomposition catalysts, such as transition metals and their compounds, strong acids and strong alkalis.

Product Data Typical Values	INTEROX® 35% PFP Grade Hydrogen Peroxide (Bath Applications)
Assay, (%w/w)	35.0 - 36.0 %
Density, 25°C	1.131 - 1.135
Dry Residue, ppm	<50
pH	3.4
Phosphate, ppm	< 100
Iron, ppm	<0.02

Typical analysis values are not guaranteed data.



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Availability

INTEROX 35% PFP Grade Hydrogen Peroxide is available in bulk truck or drum quantities from our Solvay Chemicals' Deer Park, Texas production facility. For more information, or to place an order, please contact Solvay Chemicals at 1-800-SOLVAY-C, 1-800-765-8292 or 713-525-6500.

Stability

INTEROX 35% PFP Grade Hydrogen Peroxide loses less than 1% assay per year if stored in approved material of construction, away from sources of direct heat and sunlight.

Hydrogen peroxide is decomposed by a number of organic and inorganic oxidizable substances. Metals such as iron, copper, chromium, nickel, other non-ferrous metals and their salts and oxides have a strong, catalytically decomposing effect on hydrogen peroxide. During decomposition, large quantities of oxygen can form, posing a fire danger if the product comes into contact with combustible materials.

Detailed information on this topic can be found in our Safety and Handling brochure and in our Material Safety Data Sheet.

Aseptic packaging systems constructed of stainless steel must be passivated before contact with hydrogen peroxide. This process further stabilizes hydrogen peroxide, reduces the rate of metallic leaching and slows the formation of residue. Contact your Solvay Chemicals' representative for additional information about proper passivation of stainless steel surfaces.

Storage and Handling

- Store hydrogen peroxide in the original vented container, upright, in a cool, ventilated area where it is protected from damage, or in bulk storage tanks made from approved alloys of stainless steel.
- Do not store other chemicals, fuels, or combustible materials near hydrogen peroxide.
- Never return unused hydrogen peroxide to the storage container.
- When empty, rinse all peroxide containers thoroughly with clean water before discarding.
- Use only approved material for pulps, piping, and hoses.

Safety

- Persons working with hydrogen peroxide should be familiar with personal protective equipment, first aid measures and the proper safety and handling procedures. Consult the Material Safety Data Sheet (MSDS) for appropriate information.
- Prevent accidental decomposition by keeping the product free of contaminants.
- Prevent fires by avoiding accidental spills. Water is the preferred method for extinguishing fires in which hydrogen peroxide is present.
- Spills and leaks should be contained, diluted with copious amounts of water and disposed of in compliance with local regulations.
- Hydrogen peroxide storage or handling areas should be equipped with a safety shower, an eyewash station, and a water hose.

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First Aid

In case of product splashing into the eyes and face, treat eyes first.

Eye contact: Flush eyes immediately with water for at least 15 minutes. Call a physician.

Skin contact: Immediately flush skin with water while removing contaminated clothing and shoes. Call a physician if irritation persists.

Inhalation: Remove the victim from the contaminated area to fresh air. Call a physician in case of respiratory symptoms.

Ingestion: Consult with a physician immediately in all cases. DO NOT induce vomiting.

Danger: Hydrogen peroxide solutions are strong oxidizers and corrosive to the eyes, mucous membranes and skin. Consult the MSDS for the appropriate Personal Protective Equipment to wear when handling hydrogen peroxide. In case of contact with the eyes, skin or clothing, flush with large amount of water for 15 minutes. Product in contact with combustible materials may cause fires.

Before using, read Material Safety Data Sheet (MSDS) for this chemical.

Solvay Chemicals, Inc.

24 hour Emergency Phone Number - 800-424-9300 (CHEMTREC[®])

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