SAFETY DATA SHEET (SDS)

Version: 1.0
Issue Date: 01/15/2026

SECTION 1. IDENTIFICATION

1.1 Product Identifier

- **Product Name:** BOREALIS 12% HYDROGEN PEROXIDE CONCENTRATE
- **Product Code (SKU):** A017
- **Recommended Use:** Multi-purpose cleaning agent and high-potency technical oxidizer (12% concentration).
- **Restrictions on Use:** For professional use only. Not recommended for use at full strength; must be diluted before use. Do not mix with other cleaning products, vinegar, acids, bleach, or ammonia.

1.2 Supplier Details

- **Company Name:** BOREALIS LLC
- **Address:** 4653 Nall Rd. Farmers Branch, TX 75244, USA
- **Website:** www.borealisproclean.com
- **Email:** info@borealisproclean.com
- **Telephone:** [+1 787 468 5388]

1.3 Emergency Phone Numbers

- **Medical Emergency / Poison Control (24/7):** 1-800-222-1222
- **Fire / Police / Ambulance:** 911

SECTION 2. HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance or Mixture (GHS-US)

- **Oxidizing Liquids:** Category 3.
- **Acute Toxicity (Oral):** Category 4.
- **Skin Corrosion/Irritation:** Category 2.
- **Serious Eye Damage/Eye Irritation:** Category 1.

2.2 GHS Label Elements

- **Hazard Pictograms:**

- **Signal Word: DANGER**
- **Hazard Statements:**
  - **H272:** May intensify fire; oxidizer.
  - **H318:** Causes serious eye damage.

    - **H302:** Harmful if swallowed.
    - **H315:** Causes skin irritation.
- **Precautionary Statements:**
    - **Prevention:** Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Wash skin thoroughly after handling. Wear protective gloves (nitrile/vinyl), protective clothing, and eye/face protection.
    - **Response:** * **IF SWALLOWED:** Rinse mouth. DO NOT induce vomiting. Call a physician if you feel unwell.
        - **IF ON SKIN:** Wash with plenty of water. If skin irritation or bleaching occurs: Get medical advice/attention. Take off contaminated clothing.
        - **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a physician or Poison Control Center.
        - **IN CASE OF FIRE:** Use large quantities of water for extinction.
    - **Storage:** Store in a cool place. Protect from sunlight.
    - **Disposal:** Dispose of contents/container in accordance with applicable local, state, and federal regulations.

2.3 Other Hazards

- Release of oxygen due to heating may intensify fires.
- Closed containers may burst due to overpressure if exposed to heat.
- **Fall Hazard:** Spilled product on traffic surfaces creates extremely slippery conditions.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Concentration (%)
Hydrogen Peroxide	7722-84-1	12.0 %
Etidronic Acid (Diphosphonic)	2809-21-4	0.1 – 1.0 %
Water	7732-18-5	Balance

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. The hazards associated with these components are reflected in Section 2.

SECTION 4. FIRST-AID MEASURES

- **General Advice:** Prompt treatment is essential. Show this sheet to the doctor. Do not leave the victim unattended.
- **Inhalation:** Move to fresh air immediately. If breathing is difficult, give oxygen (trained personnel only). Keep victim warm and at rest. If symptoms worsen seek immediate medical attention.
- **Skin Contact:** Wash immediately with plenty of water for at least 15 minutes.

Contact may cause characteristic **temporary bleaching** of the skin (tissue oxidation). If irritation persists or tissue damage is noted, consult a dermatologist. Remove and decontaminate shoes and clothing before reuse.

- **Eye Contact:** Immediate emergency flushing with low-pressure running water for a minimum of **20 minutes**, keeping eyelids wide open. Rotate eyes during flushing. **Delay in flushing may cause irreversible blindness.** Obtain immediate ophthalmologic attention.
- **Ingestion:** Rinse mouth with water. **DO NOT induce vomiting** due to the risk of aspiration and sudden release of oxygen gas in the stomach (gastric distension). If the victim is conscious, give small sips of water. Seek immediate emergency medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

- **Suitable Extinguishing Media:** Use **large quantities of water** as a mist or spray to cool and extinguish. Large quantities of water are the preferred extinguishing media.
- **Unsuitable Media:** Do not use dry chemical extinguishing agents, CO2, or organic foams; these may react with the hydrogen peroxide or be ineffective against pure oxygen release.
- **Specific Hazards:** The product itself does not burn, but upon heating, it decomposes releasing **pure oxygen**, which violently accelerates and feeds any nearby fire. Internal pressure buildup from decomposition can cause explosive rupture of closed containers.
- **Protective Equipment:** Firefighters must wear positive-pressure self-contained breathing apparatus (SCBA) and full chemical-resistant protective suits. Use water to cool containers exposed to fire even after it is extinguished.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Evacuate non-essential personnel. Keep people away from and upwind of the spill. Wear full personal protective equipment (PPE) as indicated in Section 8. The product creates extremely slippery surfaces; use extreme caution to avoid falls.
- **Environmental Precautions:** Prevent concentrated product from entering sewers, drains, or watercourses. Notify competent authorities in case of massive contamination.
- **Methods for Cleanup: PROHIBITED** use of combustible materials such as sawdust, cotton rags, or paper to absorb the spill, as they may spontaneously ignite upon drying. Dilute the spill with massive amounts of water (minimum 10:1 ratio). Use inert absorbents such as sand, earth, or vermiculite. Mechanically collect and place in clean, vented plastic containers for disposal.

SECTION 7. HANDLING AND STORAGE

- **Handling:** Open closures cautiously to release any pressure buildup. Avoid contact with eyes and skin. Do not eat, drink, or smoke during handling. Avoid

contamination by metals or dirt, as they act as decomposition catalysts.
- **Storage:** Keep in original container, upright, and in a cool, dry, well-ventilated place. Protect from direct sunlight and heat sources. Keep strictly separate from combustible materials, metals, and strong bases.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters
- **Hydrogen Peroxide (7722-84-1):** OSHA PEL-TWA: 1 ppm (1.4 mg/m³); ACGIH TLV-TWA: 1 ppm.

8.2 Engineering Controls
- Ensure exhaustive general and local ventilation. Eye wash stations and safety showers must be located near the work area.

8.3 Personal Protective Equipment (PPE - HMIS Code H)
- **Eye/Face Protection:** Tight-fitting chemical splash goggles and full face shield.
- **Skin Protection:** Long-sleeve nitrile or neoprene gloves and a rubber or vinyl apron.
- **Respiratory Protection:** NIOSH-approved respirator suitable for hydrogen peroxide vapors.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Clear, colorless liquid.
- **Odor:** Slightly pungent (characteristic).
- **pH Range:** 0.5 – 3.0.
- **Apparent Density Range (as measured) (g/ml):** 1.00 – 1.05.
- **Viscosity Range (mPa·s)**: 1-4.

Unless otherwise specified, physical and chemical properties were measured at approximately 25°C. Values represent typical ranges observed during small-batch production; variability may occur due to raw material lot differences, entrained air/foam, temperature, and storage conditions.

SECTION 10. STABILITY AND REACTIVITY

- **Reactivity:** Strong oxidizing agent. Reacts dangerously with combustible and reducing materials.
- **Chemical Stability:** Stable under normal conditions if kept free of contaminants. Decomposes slowly releasing oxygen.
- **Incompatible Materials:** Metals (iron, copper, chromium), strong bases (caustic soda), metal salts, reducing agents, and organic matter.
- **Hazardous Decomposition Products:** Oxygen gas and water vapor.

SECTION 11. TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** Harmful if swallowed. The **estimated oral LD50 (rat) for this**

12% mixture is approximately 1,200 mg/kg, classifying it as Category 4.

- **Skin Corrosion/Irritation:** Causes skin irritation; prolonged exposure may cause chemical burns.
- **Serious Eye Damage:** Causes severe and permanent eye lesions. Classified as Ocular Corrosive (Category 1).
- **Sensitization:** Not expected to be a skin or respiratory sensitizer.
- **Carcinogenicity:** Hydrogen Peroxide is classified by IARC in **Group 3** (Not classifiable as to its carcinogenicity to humans).
- **Inhalation Effects:** Vapors are highly irritating to the upper respiratory tract and may cause pulmonary edema at very high concentrations.

SECTION 12. ECOLOGICAL INFORMATION

- **Ecotoxicity:** Toxic to aquatic organisms due to its intense oxidizing properties. However, environmental risk is short-lived.
- **Persistence:** Highly biodegradable. In the environment, it rapidly decomposes into water and oxygen gas without leaving persistent residues.

SECTION 13. DISPOSAL CONSIDERATIONS

- **Disposal considerations:**
  - Dispose of contents/container in accordance with local, regional, national and international regulations.
  - Hydrogen peroxide solutions may be regulated as hazardous waste depending on concentration and contamination. Evaluate waste characteristics prior to disposal.
  - Do not discharge concentrated product to drains or waterways.

SECTION 14. TRANSPORT INFORMATION

- **DOT (US - Ground)**
  - **UN Number:** UN2984
  - **Proper Shipping Name:** Hydrogen peroxide, aqueous solution
  - **Hazard Class:** 5.1 (Oxidizer)
  - **Packing Group:** III
  - **Special Provisions:** Limited Quantity Exception. As per 49 CFR §173.152, this product qualifies for the Limited Quantity exception when presented in inner packagings not exceeding 5.0 L (1.3 gallons). At **3.78 L**, it fully complies.
- **IMDG (Maritime)**
  - **UN Number:** UN2984
  - **Proper Shipping Name:** Hydrogen peroxide, aqueous solution
  - **Hazard Class:** 5.1 (Oxidizer)
  - **Packing Group:** III
  - **Special Provisions:** Limited Quantity. According to Chapter 3.4 of the IMDG Code, this product qualifies for simplified transport as the inner packaging limit for UN2984 is 5.0 Liters. The **3.78 L** container meets the packaging and marking requirements (limited quantity diamond), exempting

the shipment from full dangerous goods segregation.

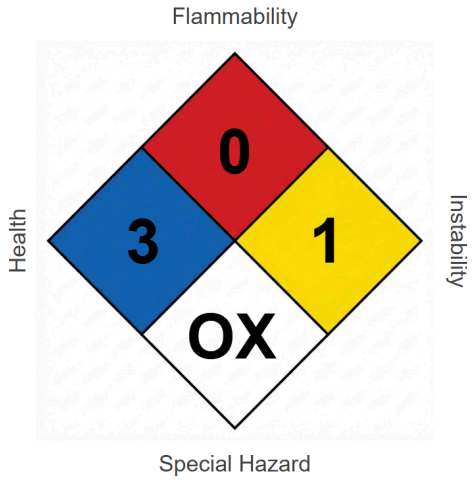
- **IATA (Air)**
  - **UN Number:** UN2984
  - **Proper Shipping Name:** Hydrogen peroxide, aqueous solution
  - **Hazard Class:** 5.1 (Oxidizer)
  - **Packing Group:** III
  - **Note:** Because the 1-gallon container (**3.78 L**) exceeds the **1.0 L** limit allowed for "Limited Quantity" in air transport under Packing Instruction Y541, for this route **it must be handled as a fully regulated Oxidizing Material**.

SECTION 15. REGULATORY INFORMATION

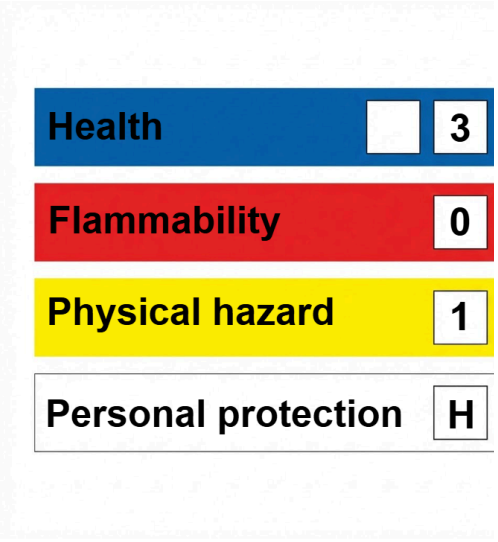
- **TSCA (USA):** All ingredients are on the national inventory.
- **SARA 311/312:** Acute health hazard and reactive hazard (oxidizer).
- **California Proposition 65:** This product does not contain chemicals known to the State of California to cause cancer or reproductive harm.

SECTION 16. OTHER INFORMATION

- **Clasificación NFPA**



- **Clasificación HMIS**



Rating Key: 0 = Minimal Hazard, 1 = Slight Hazard, 2 = Moderate Hazard, 3 = Serious Hazard, 4 = Severe Hazard. An asterisk (*) next to the Health rating indicates a potential chronic health risk.
Personal Protective Equipment (PPE) Codes: A = Safety Glasses; B = Safety Glasses + Gloves; C = Safety Glasses + Gloves + Apron; H = Splash Goggles + Gloves + Apron + Vapor Respirator.

- **Version: 1.0**
- **Issue Date: 01/15/2026**
- **Disclaimer:** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a

warranty or quality specification.