

MATERIAL SAFETY DATA SHEET



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: StimulOX™

GENERAL USE: Groundwater remediation.

SYNONYMS AND ALTERNATE TRADE NAMES: None.

SUPPLIER: DBI Remediation Products, LLC
10420 Hague Road, Suite D
Fishers, IN 46038
Telephone: (317) 576-1998 Fax: (877) 903-1217

SECTION 2. COMPOSITION / INGREDIENTS

INGREDIENTS: StimulOX™ is a blend of peroxygens and other inorganic chemicals. The exact chemical composition of this product is proprietary. A complete disclosure will be provided to appropriate personnel in the event of an emergency.

SECTION 3. HAZARDS IDENTIFICATION

IMMEDIATE CONCERNS: Contains oxidizers: product decomposes in storage under conditions of moisture and/or excessive heat, causing release of oxygen that may support combustion.

POTENTIAL HEALTH EFFECTS: Airborne dust causes irritation to eyes and respiratory tract. Exposure to high dust levels may cause difficulty in breathing in sensitive persons.

SECTION 4. FIRST AID MEASURES

EYES

Symptoms: Severe eye irritation, watering, redness, and swelling. Risk of serious or permanent eye lesions.

Response: Flush with water for at least 15 minutes. Keep eyelids wide open. Obtain medical attention.

SKIN

- Symptoms: Irritation after prolonged exposure.
Response: Wash affected area with soap and water. Obtain medical attention if irritation occurs and persists.

INGESTION

- Symptoms: Severe irritation of mouth and digestive tract, bloating of the stomach and belching, nausea and vomiting.
Response: Rinse mouth and drink several glasses of fresh water if victim is conscious. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention immediately.

INHALATION

- Symptoms: Irritation of nose and respiratory tract, coughing, possible nose bleeds or sore throat.
Response: Remove victim to fresh air immediately and blow nose. Seek medical attention if irritation persists.

SECTION 5. FIRE FIGHTING MEASURES

PRODUCT CONTAINS OXIDIZERS.

FLAMMABLE LIMITS: Non-combustible.

FLASH POINT: Not applicable.

SELF-IGNITION TEMPERATURE: Not applicable.

EXTINGUISHING MEDIA: Deluge with water.

FIRE / EXPLOSION HAZARDS: Product is non-combustible. Upon decomposition due to heat or moisture, the product releases oxygen that may intensify a fire.

FIRE FIGHTING PROCEDURES: Carbon dioxide or other gas filled fire extinguishers have no effect on decomposing product. Wear full protective clothing and self-contained breathing apparatus.

SENSITIVITY TO STATIC DISCHARGE: Not available.

SENSITIVITY TO IMPACT: Not available.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes to oxygen that may support combustion, and oxides of sulfur and nitrogen.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Ventilate spill area. Don personal protective equipment as described in Section 8. Spilled material should be swept up, placed in DOT-approved, vented containers and isolated for disposal. Isolated material should be monitored for evidence of decomposition (fuming/smoking). If spilled material is wet, then dissolve completely with water. All disposals should be in accordance with all local, state, and federal agency procedures.

SECTION 7. HANDLING AND STORAGE

HANDLING: Operate in a well-ventilated area. Wear respiratory and eye protection to avoid nuisance dusts. Use clean plastic or stainless steel scoops/shovels only. Never return unused product to the original storage container. Protect from direct sunlight and heat sources.

STORAGE: Keep new product in a tightly-sealed container, in a cool, dry, ventilated area. Protect against physical damage. Protect from direct sunlight and heat sources. Store product separately from incompatible materials (see Section 10). The container must be used exclusively for the product. In case of fire, deluge with plenty of water to avoid decomposition.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: The minimum TWA for any component is 0.1 mg/m³.

ENGINEERING CONTROLS: Provide mechanical local and/or general room ventilation to prevent dust release or accumulation. Remove contaminated clothing and immerse in water.

PERSONAL PROTECTIVE EQUIPMENT

EYES: Use chemical and dust-proof safety goggles.

RESPIRATORY: Use a NIOSH-approved dust respirator (Type N95 or better filters) for conditions in which exposure to airborne dust cannot be avoided.

SKIN PROTECTION: Wear rubber or neoprene gloves and footwear, and otherwise normal work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Fine, white to off-white powder.

ODOR: None.

pH: Approximately 10 in saturated solution.

PERCENT VOLATILE: Not applicable.

VAPOR PRESSURE: Not applicable.

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

MELTING POINT: Not applicable (decomposes).

SOLUBILITY: Slightly soluble in water. Soluble in acid.

EVAPORATION RATE: Not applicable.

LOOSE BULK DENSITY: Approximately 1.2 g/cc

OXIDIZING PROPERTIES: Oxidizer.

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Stable unless exposed to heat, moisture, or incompatible materials.

CONDITIONS TO AVOID: Heat and moisture.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes in the presence of heat and / or water to release oxygen, hydrogen peroxide, and oxides of sulfur and nitrogen.

INCOMPATIBLE MATERIALS: Acids, reducing agents, heavy metals, combustible or flammable materials, organic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

No component is a known or suspected carcinogen or mutagen. The following data are available for individual components:

EYE EFFECTS: Minimally irritating.

SKIN EFFECTS: Non-irritating.

DERMAL LD₅₀: Minimum of >2.0 mg/kg (rat).

ORAL LD₅₀: Minimum of >2.00 mg/kg (rat).

INHALATION LC₅₀: Minimum of >2.95 mg/L (rat).

TARGET ORGANS: Gastrointestinal system, eyes, skin, respiratory system.

ACUTE EFFECTS OF OVEREXPOSURE: Dust may be harmful or irritating. Dermal and ingested toxicity is low to moderate. Product may be irritating to eyes.

CHRONIC EFFECTS OF OVEREXPOSURE: Sensitive persons may develop dermatitis and / or asthma.

SECTION 12. ECOLOGICAL INFORMATION

No data are available for the blended product. The following data are available for individual chemical components:

Fishes: Minimum 96-hr LC₅₀ = 76 mg/L

Crustaceans: Minimum 48-hr LC₅₀ = 25 mg/L

Abiotic degradation is via slow hydrolysis. No components are known to bioaccumulate. Diluted product is rapidly neutralized at environmental pH.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of residual product and packaging as a hazardous waste in accordance with regulatory agency requirements.

SECTION 14. TRANSPORT INFORMATION

PRIMARY HAZARD CLASS/DIVISION: 5.1 (Oxidizer)

PLACARDS: 5.1 (Oxidizer)

LABEL: 5.1 (Oxidizer)

UN NUMBER: 1479 (Oxidizing solid, n.o.s.)

Protect from physical damage. Do not store near acids, moisture or heat.

SECTION 15. REGULATORY INFORMATION

No data are available for the blended product. Product contains substances subject to SARA Title III (40 CFR 370) as fire hazard and immediate (acute) health hazard, listed under TSCA (40 CFR 710), and subject under RCRA waste number D001.

SECTION 16. OTHER INFORMATION

Maximum NFPA Ratings for All Components: Health = 1
Flammability = 0
Reactivity = 1
Special = OX (Oxidizer)

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