

Safety Data Sheet

Acc. To OSHA HCS (29 CFR 1910.1200)

1. PRODUCT IDENTIFICATION

Product Identifier: 877587HG32

Trade Name: Total-Shield Plus™ (Ready to Use)

Recommended use and restriction of use

Recommended use: EPA sterilant

Restrictions on use: Use only as directed.

Details of Supplier/Manufacturer of Safety Data Sheet:

ConSeal International, Inc.

90 Kerry Place, Suite 2

Norwood, MA 02062

(781) 278-0010

McGowan Industries, Inc.

12335 World Trade Drive, Suite 6

San Diego, CA 92128

(877) 910-4209

Emergency Telephone number: ChemTrec (800) 262-8200, International 1+ (703) 741-5500

2. HAZARD IDENTIFICATION

GSH pictograms:



Signal word:

Warning

GHS Class:

Eye Irritant, Category 2

Hazard Statements:

Causes Eye Irritation

Precautionary Statements:

Wash Hands thoroughly after handling.

Wear Protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Seek medical attention.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Seek medical attention.

Wash contaminated clothing before reuse.

Emergency Overview:

WARNING! Mild irritant. Irritating to eyes, respiratory system and skin.

Route of Exposure:

Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: Eye contact may cause moderate to severe irritation.

Skin: Mild skin irritation is possible upon direct contact depending on degree and duration of contact.

Inhalation: May cause respiratory tract irritation.

Ingestion: Ingestion of this product is unlikely. This product may be harmful if swallowed.

Target Organs: Eyes. Skin. Respiratory system. Digestive system.

HMIS III Classification:

Health Hazards 2

Flammability 0

Physical Hazards 0

PPE B

NFPA Rating:

Health 2

Flammability 0

Reactivity 0

Special Hazards 0

HMIS III Ratings Note: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal, B=Safety Glasses and Gloves

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterizations: Proprietary

Description: Mixture of substances

Dangerous components:

CAS No	Chemical Name	Range %
79-21-0	Peracetic Acid	<1%
7722-84-1	Hydrogen Peroxide	<7%

*Additional information: For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

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4. FIRST AID MEASURES

Description of first-aid measures

General information:

After inhalation: Move to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

After skin contact: Immediately flush with plenty of water while removing contaminated clothing and/or shoes, and thoroughly wash with soap and water. Seek immediate medical attention/advice. Wash contaminated clothing with plenty of water to prevent fire hazard.

After eye contact: Rinse opened eye(s) for several minutes with running water. If irritation continues consult a doctor.

After swallowing: Rinse out mouth and then drink plenty of water. Vomiting may occur; immediately call for medical help.

Information for doctor: None known.

Most important symptoms and effects, both acute and delayed: Can cause severe eye irritation and corrosion and dermatitis on contact with skin.

Danger issues:

Severe eye and skin irritation can occur.

Indication of an immediate medical attention and special treatment needed:

This product can be corrosive to skin, eyes, and mucous membranes. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Observations may be warranted. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing agents: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons, unsuitable extinguishing agents: Chemical type extinguishers may not be effective.

Special hazards arising from the substance or mixture: Decomposition under fire conditions may release oxygen that can intensify fire

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information: No further relevant information available

6. ACCIDENTAL RELEASE MEASURE

Personal precautions, protective equipment, and emergency procedures:

Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see Section 8.

Environmental precautions: Do not allow product to enter sewers, surface of ground water.

Methods and materials for containment and clean up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to Sec. 13

Reference to other section: Refer to Sec. 7, 8, and 13.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling:

- Use in well-ventilated areas.
- Open and handle receptacles with care.
- Avoid splashes or sprays in enclosed areas.
- Avoid contact with eyes and skin.
- Wash hands before breaks and at the end of work.
- Use personal protective equipment as required.

Information about protection against explosions and fires: No special measures required.

Storage

- Store in tightly closed container.
- Protect from freezing.
- Keep upright.
- Store at temperatures below 86°F/30°C.

Conditions for safe storage, including and incompatibilities:

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Oxidizing agents; Strong reducing agents; Combustible materials; Heavy metals such as iron, copper, chromium, nickel, aluminum and cobalt. Shelf life before opening: 24 months from date of manufacture in original sealed, unopened container stored in proper conditions. 6 months after opening when stored in original container in proper condition. Store away from incompatible materials (See Section 10, Stability and Reactivity, of this SDS.)

Requirements to be met by storerooms and receptacles:

Do not store near reducing agents, fuels or other non-compatible materials. Keep in a dry, cool and well-ventilated place. Keep at temperatures below 30°C. Higher temperatures will accelerate decomposition resulting in loss of assay. Keep away from direct sunlight. Keep away from heat and sources of ignition i.e., steam pipes, radiant heaters, hot air vents or welding sparks. Use first in, first out storage system. Do not double-stack. Containers must be vented.

Information about storage in one common storage facility:

Further information about storage conditions: Store in cool, dry conditions in well-sealed receptacles.

Specific end uses: No further relevant information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetic acid (CAS 64-19-7)	PEL	25 mg/m3 10 ppm
Hydrogen peroxide (CAS 7722-84-1)	PEL	1.4 mg/m3 1 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetic acid (CAS 64-19-7)	STEL	15 ppm	
	TWA	10 ppm	
Hydrogen peroxide (CAS 7722-84-1)	TWA	1 ppm	
Peracetic acid (CAS 79-21-0)	STEL	0.4 ppm	Inhalable fraction and vapor.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetic acid (CAS 64-19-7)	STEL	37 mg/m3 15 ppm
	TWA	25 mg/m3 10 ppm
Hydrogen peroxide (CAS 7722-84-1)	TWA	1.4 mg/m3 1 ppm

Biological limit values

Appropriate engineering controls

No biological exposure limits noted for the ingredient(s).

Provide eyewash station and safety shower. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

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Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Depending on the task: Wear appropriate chemical resistant gloves. Take note of the information given by the manufacturer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Recommended materials: Nitrile rubber. Rubber (natural, latex). Neoprene. Polyvinyl chloride - PVC Butyl rubber. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

Respiratory Protection: Breathing equipment: Not normally needed when used in well-ventilated area. Avoid mist and vapor.

Thermal hazards

General hygiene considerations

None required during normal conditions. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General information

Appearance: **Form:** Liquid
 Color: Clear

Odor: Mild

Odor threshold: Not determined

pH value: 1.5 – 2.5

Melt point/ range: Not determined

Boiling point/ range: Not determined

Flash point: Not applicable

Flammability (solid, gaseous): Not applicable

Auto-ignition temp: Not determined

Decomposition temperature: Not determined

Auto igniting: Product is not self-igniting

Danger of explosion: Product does not present an explosion hazard

Explosion limits: **Lower:** Not determined

Upper: Not determined

Vapor pressure at 20 C (F): Not determined

Density at 20 C (F):

Specific Gravity: 0.979 (8.14 lbs./gal.)

Vapor density: Not determined

Evaporation rate: Not determined

Solubility/miscibility with water: soluble

Partition coefficient (n-octanol/water): Not determined

Viscosity: Not determined

Solvent content: **VOC (California):** < 20%

Other information: No further relevant information available

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10. STABILITY AND REACTIVITY

Reactivity: Reacts violently with strong alkaline substances. This product may react with reducing agents.

Chemical Stability: Material is stable under normal conditions.

Thermal decomposition/conditions to be avoided: Store in cool, dry place. Avoid freezing

Possibility of hazardous reactions: Will not occur

Conditions to avoid: Heat, flames and sparks; Temperatures above 30°C. Higher temperatures will accelerate decomposition resulting in loss of assay

Incompatible materials: Oxidizing agents; Strong reducing agents; Combustible materials.

Hazardous decomposition components: Possible oxides of carbon (CO, CO₂)

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

LD/LC 50 values that are relevant for classification: Not determined.

Primary irritant effect

Inhalation: May cause irritation to the respiratory system. Prolonged inhalation may be harmful. Causes respiratory tract burns.

Skin contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Sensitization: No sensitizing effects known

Sub-acute to chronic toxicity: No further relevant information available

Additional toxicological information:

Carcinogenic categories

NTP (National Toxicology Program): None of the ingredients is listed.

OSHA-Ca (Occupational Safety and Health Administration): No further relevant information available

Probable routes of exposure

Acute effects (acute toxicity, irritation, and corrosivity): Severe skin and eye irritation can occur

Repeated Dose Toxicity: No further relevant information available

12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity:

Persistence and degradability: Product is biodegradable.

Bio-accumulative potential: Product will not bio-accumulate.

Mobility in soil: None known.

Additional ecological information:

General notes: Do not allow undiluted product or large quantities of product to reach ground water, water course or sewage systems.

Other adverse effects: No further relevant information available

13. DISPOSAL CONSIDERATIONS

Waste treatments methods

Recommendation:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual material should be treated as hazardous.

Un-cleaned packaging:

Recommendations: Disposal must be made according to official regulations

Recommended cleansing agent: Water, if necessary, with cleansing agents

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14. TRANSPORTATION INFORMATION

DOT Shipping Name: Not required as hazardous material for transportation.

DOT Hazard Class: Not applicable.

DOT Packing Group: Not applicable.

DOT Exemption: According to UN test 0.2 for oxidizing liquids and In vitro corrosivity testing specified in 49 CFR, this material does not meet the definition of a Class 5.1 oxidizer (49 CFR 173.127) or a Class 8 corrosive material (49 CFR 173.136), and therefore, is not regulated as a dangerous good.

IATA Shipping Name: Not regulated as hazardous material for transportation.

IATA Hazard Class: Not applicable.

IATA Packing Group: Not applicable.

IMDG Shipping Name: Not regulated as hazardous material for transportation.

IMDG Hazard Class: Not applicable.

IMDG Packing Group: Not applicable.

Marine Pollutant: No

Schedule B: 29.15.000000

HS Code: 29153990

15. REGULATORY INFORMATION

US Federal: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: WARNING. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as goggles, face shield or safety glasses. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. PHYSICAL AND CHEMICAL HAZARDS: This product contains an oxidizing agent. Avoid contact with other sanitizers, cleaners or organic substances. ENVIRONMENTAL HAZARDS: This pesticide is toxic to birds, fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of a national Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without appropriate dilution.

TSCA Inventory Status: Listed

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization act of 1986 (SARA) Title III (40 CFR, Part 372.)

Section 202 EHS: EPCRA (SARA Title III) Section 302 (40 CFR Part 355) Extremely Hazardous Substances (EHS) Threshold Planning.
Quantity (TPQ) in pounds.
Peracetic Acid: RQ = 500 lbs.
Hydrogen Peroxide: TPQ = 1,000 lbs., RQ = 1,000 lbs.
Hydrogen Peroxide (<52%): 10,000 lbs.

CERCLA Section 302: Listed (Acetic Acid = 5,000 lbs.), Category D

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Section 311/312

Hazard Categories:	Acute Health Hazard:	Yes
	Chronic Health Hazard:	No
	Risk of Ignition:	No
	Sudden Release of Pressure Hazard:	No
	Reactive Hazard:	No

Section 313: Listed

OSHA Process Safety: Irritant

RCRA 261.33 Code: Not Regulated:

Canada WHMIS: Controlled – Class: D2B Toxic

Canada IDL: Listed (Hydrogen Peroxide, Peracetic Acid, Acetic Acid)

Hydrogen peroxide:

TSCA Inventory Status: Listed

Canada DSL: Listed

EC Number: 231-765-0

Acetic Acid:

TSCA Inventory Status: Listed

Canada DSL: Listed

EC Number: 200-580-7

Peroxyacetic Acid:

EC Number: 201-186-8

Water:

TSCA Inventory Status: Listed

Canada DSL: Listed

EC Number: 231-791-2

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.

The health hazards given on the Safety Data Sheet apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of overexposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

Company warrants that the product or products described herein will conform to its published specifications. The products supplied by the company and information related to them are intended for use by buyers having necessary industrial skill and knowledge. Buyers should undertake sufficient verification and testing to determine the suitability of the Company's materials for their own particular purpose. Since buyer's conditions of use of product are beyond Company's control, Company does not warrant any recommendations and information for the use of such products. Company disclaims all other warranties including the implied warranty of merchantability and fitness for any particular purpose in connection with the use of its products.

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