PROTEC™ 2000

SDS – FCN 1465

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name: Protec™ 2000

Synonyms: Peroxyacetic Acid, Acetyl Hydroperoxide, PAA

Recommended use: As an antimicrobial to control microorganisms in process water and ice used in the production and preparation of fish and seafood, meat, and poultry.

Producer: Safe Foods Corporation
4801 North Shore Drive
North Little Rock, AR 72118

Telephone: (501) 758-8500

Emergency: CHEMTREC (US) (800) 424-9300

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification:
OXIDIZING LIQUIDS - Category 2
ORGANIC PEROXIDES - Type F
ACUTE TOXICITY: ORAL - Category 3, DERMAL – Category 3, INHALATION – Category 2
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY, single exposure; respiratory tract irritation – Category 3
HAZARDOUS TO THE AQUATIC ENVIRONMENT, Acute toxicity – Category 2

GHS Label:

Hazard Statements:
H242 Heating may cause a fire
H272 May intensify fire; oxidizer
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause damage to the respiratory tract.
H401 Toxic to aquatic life.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P220 Keep/store away from clothing/combustible materials, oxidizing agents, reducing agents, organic materials, metals, acids, alkalis or other non-compatible materials
P221 Take any precaution to avoid mixing with combustibles, oxidizing agents, reducing agents, organic materials, metals, acids, alkalis or other non-compatible materials
P233 Keep container tightly closed.
P234 Keep only in original container
P235 Keep cool
P260 Do not breathe dust/fume/gas/mist/vapor/spray
P264 Wash hands and any other body part that may have contacted product thoroughly after handling.
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P273 Avoid release into the environment
P280 Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection
P283 Wear fire/flame resistant/retardant clothing
P285 In case of inadequate ventilation wear respiratory protection.
P391 Collect spillage

Response:

P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water
P362 Take off contaminated clothing and wash before reuse. See supplementary info on this label
P321 Specific treatment. See supplementary info on this label
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P320 Specific treatment is urgent. See supplementary info on this product's label.
P370+378: In case of fire: Use large quantities of water for extinction.
P370 + P283 In case of fire: Wear fire/flame resistant/retardant clothing

Storage:

P401 Store in original container with vented cap ONLY.
P403 Store in a dry place.
P405 Store locked up.
P410 Protect from sunlight
P404 + P233 Store in a well-ventilated place. Keep container tightly closed.
P411 Store at temperatures not exceeding 30°C/86°F
P420 Store away from other materials

Disposal:

P501 Dispose of contents/container to meet all federal, state, and local laws and regulations. Contact a professional hazardous waste disposal service for disposal.

Symbols:

Signal Word:

DANGER

OSHA:

Combustible liquid, organic peroxide, target organ effect, toxic by inhalation, toxic by ingestion, harmful by skin absorption, corrosive.

HMIS:

Health 3
Flammability 2

Physical Hazard 2
Personal Protection (PPE) H
H= Safety goggles, gloves, apron, use of supplied SCBA respirator is required in lieu of vapor cartridge respirator)

NFPA:

Health 3

Flammability 1

Reactivity 2

Special OX

SECTION 3: COMPOSITION/INFORMATION ON INDREDIENTS

Chemical Identity	CAS-No.	Concentration
Peracetic Acid	79-21-0	14%-17%
Acetic Acid	64-19-7	14%-22%
Hydrogen Peroxide	7722-84-1	5%-14%
1-hydroxyethane 1,1-diphosphonic acid (HEDP)	2809-21-4	<1%
Water	7732-18-5	Balance

SECTION 4: FIRST AID MEASURES

Inhalation

Remove the person from exposure. Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped. Transfer promptly to a medical facility. Medical observation is recommended for 24 to 48 hours after breathing overexposure, as pulmonary edema may be delayed.

Skin Contact

Quickly remove contaminated clothing. Immediately wash area with large amounts of water. Seek medical attention.

Eye Contact

Immediately flush with large amounts of water. Continue without stopping for at least 30 minutes, occasionally lifting upper and lower lids. Seek medical attention immediately.

Ingestion
Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. See a medical doctor immediately.

SECTION 5: FIRE-FIGHTING MEASURES

Effective media
Use large quantities of water. Traditional chemical based fire extinguishers will not be effective. Cool exposed containers by spraying with water.

Fighting fire safely
Fight fire either from protected location or farthest effective distance. Utilize personal protective equipment and self-contained breathing apparatus. Contact fire department.

*Product decomposes in fire conditions to produce oxygen gas which intensifies fire

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remain upwind from spill. Contain spill and allow to be absorbed by noncombustible material such as sand, earth, or other noncombustible material. Keep product from being discharged into sewers/drains or the environment.

Any combustible material exposed to product must be immediately and thoroughly rinsed, removing all product from combustible material. Hydrogen peroxide, a component in this product, can ignite and result in fire if allowed to dry.

SECTION 7: HANDLING AND STORAGE

HANDLING: General - Transfer product from original container to process in closed system. If not possible use effective local exhaust ventilation. If ventilation is inadequate use respirator approved for use with product.
Empty drums as thoroughly as possible. Triple rinse drum before disposal. Avoid contamination as impurities will increase the rate of decomposition. Do not return product to its original container once removed.
IBCs/Tote tanks - IBCs should be emptied as thoroughly as possible and returned without rinsing.

STORAGE: Do not store near nor allow contact with oxidizing agents, reducing agents, organic materials, metals, acids, alkalis or other non-compatible materials. Store in a cool, dry, well-ventilated area. Do not store at temperatures above 86º F. Temperatures above 86º F will cause the rate of decomposition to increase. When stored at

continuous 100° F, product shelf life is 4 months without loss in assay. Avoid storing in direct sunlight. Do not store near sources of ignition or heat. Do not double stack. Use first in, first out storage system. Containers must be vented- failure to do so can result in extreme pressure build up within container and result in serious injury or death. Use approved ventilation caps on drums and IBCs/Tote tanks even when empty as fumes will continue create pressure.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	Acetic Acid	**Hydrogen Peroxide**	**Peracetic Acid**
ACGIH TLV	STEL 15 ppm TWA 10 ppm	TWA: 1 ppm	STEL 0.4 ppm
OSHA PEL	TWA 10 ppm TWA 25 mg/m³	TWA: 1 ppm TWA: 1.4 mg/m3	
NIOSH	IDLH 50 ppm TWA 10 ppm TWA 25 mg/m³ STEL 15 ppm STEL 37 mg/m³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m3	
Mexico	TWA 10 ppm TWA 25 mg/m³ STEL 15 ppm STEL 37 mg/m³	TWA 1 ppm TWA 1.5 mg/m3 STEL 2 ppm STEL 3 mg/m3	
British Columbia	TWA 10 ppm TWA 15 ppm	TWA: 1 ppm	
Quebec	TWA 10 ppm TWA 25 mg/m³ STEL 15 ppm STEL 37 mg/m³	TWA: 1 ppm TWA: 1.4 mg/m3	
Ontario TW AEV	TWA 10 ppm STEL 15 ppm	TWA: 1 ppm	
Alberta	TWA 10 ppm TWA 25 mg/m³ STEL 15 ppm STEL 37 mg/m³	TWA: 1 ppm TWA: 1.4 mg/m³	

U.S. EPA; Acute Exposure Guideline Levels (AEGLs) (mg/m³)

Exposure Time	**AEGL 1 (Discomfort)**	**AEGL 2 (Impaired Escape)**	**AEGL 3 (Life-threatening/Death)**
10 min	0.52	1.6	60
30 min	0.52	1.6	30
60 min	0.52	1.6	15
4 hr	0.52	1.6	6.3
8 hr	0.52	1.6	4.1

Ventilation
Engineering controls that accomplish proper ventilation through local exhaust should be in place in order to prevent release of vapors and mist.

Respiratory protection
Full face respirators with the appropriate canister/cartridge should be used in addition to proper engineering controls if levels are to exceed levels stated in the table above. If breakthrough occurs use the airline supplied or self-contained breathing apparatus.

Eye and face protection
Tightly fitting, splash proof safety goggles. Full face shield may be used.

Skin protection
Rubber or neoprene footwear should be worn. Rubber or neoprene aprons or full protective wear should be utilized. Chemical proof rubber or neoprene gloves should be worn. Inspect gloves for leaks. Wash gloves with soap and water before removing. Wash any clothing having contact with product by submerging in water, removing all product, before the clothing article is allowed to dry. This product contains hydrogen peroxide and can cause combustible materials like clothing to ignite and cause a fire if allowed to dry.

Hygiene measures
Wash hands on breaks and after shifts. Do not eat, drink, or smoke in the vicinity of the product. Do not touch face or any other exposed area of skin with gloves which may have contacted the product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	colorless, transparent
Odor:	Acrid, vinegar-like
Flash point:	80ºC (176 ºF) closed cup
Odor threshold:	not available
pH-value:	<1
Auto-ignition temperature:	No information available
Oxidizing properties:	Strong oxidizer
Specific gravity:	1.13 g/cm^3 at 20ºC (68ºF)
Solubility:	Water soluble
Vapor pressure:	22 mm Hg at 25ºC (77ºF)
Density:	9.35 lb/gal at 20ºC

SECTION 10: STABILITY & REACTIVITY

Chemical stability
Stable at recommended storage condition. Contamination and heat will cause product to decompose.

Possibility of hazardous reactions
Reacts explosively with Acetic Anhydride.

Conditions to avoid
Heat, flames, sparks, temperatures above 86ºF.

Materials to avoid
Oxidizing agents, reducing agents, organic materials, metals, acids, alkalis

Hazardous decomposition products
Produces pressure in container if not vented properly, Acetic acid and oxygen that supports combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Oral
LD50 Rat oral 330 mg/kg bw
European Commission, ESIS; IUCLID Dataset, Peracetic acid (79-21-0) p.30 (2000 CD-ROM edition)

Dermal
LD50 Rat dermal 12,000 mg/kg bw
European Commission, ESIS; IUCLID Dataset, Peracetic acid (79-21-0) p.35 (2000 CD-ROM edition)

Inhalation – data not available for this concentration, results based on 5% solution
LC50 Rat inhalation 204 mg/cu m/4 hr
Organization for Economic Cooperation and Development; Screening Information Data Set Dossier for Peracetic acid, CAS #79-21-0 pp.83-4 (September 2008)

Eyes
Extremely irritating to eyes

Skin
Extremely irritating to skin

Carcinogenicity

IARC

Hydrogen Peroxide - Group 3
not classifiable as to its carcinogenicity in humans
*inadequate evidence available for carcinogenicity of hydrogen peroxide, but limited evidence in experimental animals

ACGIH

Hydrogen Peroxide - A3
Confirmed Animal Carcinogen with unknown Relevance to Humans

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Species: Oncorhynchus mykiss (Rainbow trout);
96 hr LC50: 2.0 mg/L
Product: 5% Peracetic acid, 14% hydrogen peroxide, 28% acetic acid
Organization for Economic Cooperation and Development; SIDS Initial Assessment Profile (SIAP) for Peracetic acid (79-21-0), p.26 (SIAM 26, April 2008)

Species: Lepomis macrochirus (Bluegill);
96 hr LC50: 3.3 mg/L for 96 hr
Product: 15.5% Peracetic acid, 22% hydrogen peroxide, 15% acetic acid
Organization for Economic Cooperation and Development; SIDS Initial Assessment Profile (SIAP) for Peracetic acid (79-21-0), p.26 (SIAM 26, April 2008)

Species: Brachydanio rerio (Zebra danio)
Conditions: freshwater, semi-static;
96 hr LC50: 1.08 mg/L
Product: 15% Peracetic acid
Organization for Economic Cooperation and Development; SIDS Initial Assessment Profile (SIAP) for Peracetic acid (79-21-0), p.26 (SIAM 26, April 2008)

Persistence and degradability

Miscible in water.

Bioaccumulative potential

Not bioaccumulable

Mobility

If released to soil, peracetic acid is expected to have very high mobility based upon an estimated Koc of 1.5. Will hydrolyze to acetic acid and hydrogen peroxide.

SECTION 13: DISPOSAL CONSIDERATIONS

Adhere to all federal, state, and local laws and regulations. Contact a professional hazardous waste disposal service for disposal.

SECTION 14: TRANSPORT INFORMATION

DOT Placards:

DOT (US)
UN3109, Class 5.2 (8), PG II
Proper shipping name: Organic peroxide, Type F, Liquid

IMDG/IMO
UN3109, Class 5.2 (8), PG II
Proper shipping name: Organic peroxide, Type F, Liquid
*required primary AND subsidiary placards

ICAO/IATA
Not permitted for air transport

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT of 1986) SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A)
Listed

SECTION 311/312 HAZARD CATEGORIES (40 CFR 370)
Acute health hazard, Fire hazard, Reactive Hazard

Threshold Planning Quantity (TPQ) for product as mixture – 10,000 lbs
Threshold Planning Quantity (TPQ) for Peracetic Acid – 500 lbs

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 370)
Peracetic Acid

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

Hazardous Substances Reportable Quantities (RQ)

Chemical name	**RQ**
Acetic Acid	5000lbs

Extremely Hazardous Substances Reportable Quantities (RQ)

Chemical name	**RQ**
Peracetic Acid	500lbs
Hydrogen Peroxide	1000lbs

SECTION 16: OTHER INFORMATION

Revision date: 06/26/2015

Disclaimer: The information contained in this SDS is believed accurate and is provided in good faith. However, no warranty is expressed or implied regarding the accuracy or completeness of the data. Since the use of this product is not within the control of Safe Foods Corporation, it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

END OF SDS