

1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER	FoodDefend™ 25 Brock Street Stoughton, MA 02072
REVISION DATE	November 10, 2016
EMERGENCY TELEPHONE	HAZMAT Services, Inc. 800-373-7542, Contract # 1055
TO REQUEST AN SDS	dpaulshock@fooddefend.com
CUSTOMER SERVICE	570-233-0565
PRODUCT IDENTIFIER	Coil Cleaner™ ZeoAir™ Air Filtration Media
SYNONYMS	ZC Impregnate, Air Filtration Media, Blower Media
RECOMMENDED USES	To Create Chlorine Dioxide
USES ADVISED AGAINST	Anything inconsistent with package instructions.

2. HAZARDS IDENTIFICATION

CLASSIFICATION	This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
COLOR	Off-white to light brown
PHYSICAL STATE	Solid
APPEARANCE	Granules
ODOR	Slight chlorine odor

GHS CLASSIFICATION

Table A3.1.2 (p. 270) G.H.S. of Classifying and Labeling Chemicals; Sixth Revised Edition		
HEALTH HAZARD STATEMENT	HAZARD CLASS (GHS. CHAPTER)	HAZARD CATEGORY
MAY BE HARMFUL IF SWALLOWED	Acute Toxicity, Oral (Ch. 3.1)	Category 5
CAUSES SKIN IRRITATION	Skin corrosion/irritation (Ch. 3.2)	Category 2
CAUSES SERIOUS EYE IRRITATION	Serious Eye Damage/eye irritation(Ch. 3.3)	Category 2A
HARMFUL IF INHALED	Acute toxicity , inhalation (Ch. 3.1)	Category 4

UNKNOWN ACUTE TOXICITY

0% of the mixture consists of ingredient(s) of unknown toxicity

GHS SYMBOL



SIGNAL WORD

WARNING

PHYSICAL HAZARDS

Oxidizer. Avoid contact with organic matter. Direct contact with acids will result in release of chlorine dioxide gas.

PRECAUTIONARY STATEMENTS

PREVENTION

Do not eat, drink, or smoke when using this product. Do not breathe dust, fumes, gas, mist, vapor, or spray. Wear respiratory protection. Wear protective gloves, protective clothing, eye, and face protection. Keep away from heat. Keep/store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles.

RESPONSE

Seek medical attention for any persistent symptom or if you feel unwell.

IF SWALLOWED

Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

IF ON SKIN (OR HAIR)

Brush off loose particles. Rinse with water for at least 15 minutes.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for as long as possible or at least 15 minutes.

IF INHALED

Move person to fresh air and keep comfortable for breathing.

STORAGE

Store in original container. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Protect from moisture and water. Store at or below 75° F.

DISPOSAL

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

REV 161110

MAJOR HEALTH HAZARDS

Premature or accidental product activation, mishandling, and/or improper storage of the package or the contact of package components with acids and/or reducing agents may result in the release of Chlorine Dioxide gas. Direct contact with or inhalation of Chlorine Dioxide gas will result in skin and/or eye irritation and/or inflammation of the respiratory system and/or mucous membranes. Extended inhalation of Chlorine Dioxide gas in high concentrations may lead to coughing, bronchitis, pulmonary edema and oxidative burns.

HAZARDS NOT OTHERWISE CLASSIFIED

None Identified

ADDITIONAL HAZARD INFORMATION

Product formulations contain low levels of sodium chlorite and are less reactive than the pure chemical, but as a precaution should be treated in a similar fashion. Sodium chlorite is a known oxidizer; avoid contact with organic matter.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Synonyms	CAS No.	Weight % Range
Technical Sodium Chlorite Solution	Sodium Chlorite Solution, Chlorous Acid, Sodium Salt, Active Sodium Chlorite	7758-19-2	10-30
Zeolite	---	12173-10-3	65-100
Other Ingredients - Not Classified	---	---	1-5

4. FIRST AID MEASURES**GENERAL ADVICE**

When medical attention is required, show this SDS to the attending physician.

INGESTION (IF SWALLOWED)

Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

SKIN CONTACT (IF ON SKIN OR HAIR)

Brush off loose particles from skin and clothing. Wash skin with plenty of water for at least 15 minutes. Wash any contaminated clothing before reuse. If irritation develops or persists call a physician.

EYE CONTACT (IF IN EYES)

Immediately flush with plenty of water, including under the eyelids. Remove any contact lenses if present and easy to do. Continue to rinse for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention.

INHALATION (IF INHALED)

Move person to fresh air. Evaluate **ABC's** - Is **A**irway constricted, Is **B**reathing occurring, and is blood **C**irculating - and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY.

SIGNS AND SYMPTOMS OF EXPOSURE

Signs and symptoms of exposure vary, and are dependent on the route, degree, and duration of exposure.

INGESTION (IF SWALLOWED)

Exposure by ingestion may cause irritation, nausea, and vomiting.

SKIN CONTACT (IF ON SKIN OR HAIR)

Skin exposure may cause redness, rash or irritation.

EYE CONTACT (IF IN EYES)

Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

INHALATION (IF INHALED)

Inhalation of airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. The pulmonary edema may develop several hours after a severe acute exposure.

NOTES TO PHYSICIAN

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. There is no specific antidote. Treat symptomatically. Pulse oximetry may not be reliable.

SELF-PROTECTION FOR FIRST AID PERSONNEL

Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing.

5. FIRE-FIGHTING MEASURES**FIRE HAZARD**

Negligible fire hazard. This product may represent an explosion hazard if it contacts acids, chlorine, or organic materials (Refer to Section 10).

SUITABLE EXTINGUISHING MEDIA

Use water to extinguish. Use measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA

Dry chemical, CO₂

FIRE FIGHTING

Wear NIOSH approved positive-pressure self-contained breathing apparatus. Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

HAZARDOUS COMBUSTION PRODUCTS	Chlorine, Oxides of sodium
SENSITIVITY TO MECHANICAL IMPACT	Not Sensitive
SENSITIVITY TO STATIC DISCHARGE	Not Sensitive
LOWER FLAMMABILITY LEVEL (AIR)	Not Flammable
FLASH POINT	Not Flammable
AUTO-IGNITION TEMPERATURE	Not Applicable

6. ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing. Keep people away from and upwind of spill/leak.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Pick up spilled material and place in appropriate containers for disposal. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. Keep collected material damp and put into drums. Dispose of in accordance with all applicable regulations.

ENVIRONMENTAL PRECAUTIONS

Spills exceeding the Reportable Quantity (RQ) of 1000 pounds or more must be reported to the National Response Center, (800) 424-8802. Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system.

7. HANDLING AND STORAGE**PRECAUTIONS FOR SAFE HANDLING**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Avoid contact with skin, eyes, or clothing. Wash hands after use. Do not eat, drink, or smoke when handling this product.

SAFE STORAGE CONDITIONS

Store and handle in accordance with all current regulations and standards. Store in tightly closed, labeled containers away from combustible materials. Store in a cool, dry area. Store in a well-ventilated area. Store below 75 °F. Avoid exposure to sunlight or ultraviolet light. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

INCOMPATIBILITIES/MATERIALS TO AVOID

Acids, reducing agents, combustible material, oxidizing agents, hypochlorite, organic solvents and compounds, garbage, dirt, organic materials, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

ENGINEERING CONTROLS

Use proper Personal Protective Equipment when utilizing the product to avoid exposure to vapors, mist, dust, gas, etc. Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational exposure limits. Ensure adequate ventilation, especially in confined areas.

GENERAL HYGENE CONSIDERATIONS

Do not eat, drink, or smoke while using this product. Keep away from food, drink, and animal feeding stuffs. Regular cleaning of equipment, work area, and clothing is recommended.

SKIN AND BODY PROTECTION

Wear protective clothing to minimize skin contact. Contaminated clothing should be removed and laundered before reuse. Discard contaminated leather goods.

HAND PROTECTION

Impervious gloves are recommended.

PROTECTIVE MATERIAL TYPES

Neoprene

EYE AND FACE PROTECTION

Safety glasses or goggles; face protection shield. Provide an emergency eye wash station in the immediate work area.

RESPIRATORY PROTECTION

A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If chlorine or chlorine dioxide is present, an acid gas cartridge is also required. An approved self-contained breathing apparatus operated in the pressure demand mode or an airline respirator with escape pack is required when an air purifying respirator is not adequate or for spills/emergencies of unknown concentrations. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granules
Color	Off-white, tan, light brown
Odor	Slight chlorine odor
Melting Point/Freezing Point	Not Applicable to Solids
Boiling Point/Range	Not Applicable to Solids
Flammability (solid, gas)	No Information available
Lower Flammability Level (air)	Not Applicable to Solids
Upper Flammability Level (air)	Not Applicable to Solids
Flash point	None
Auto-ignition Temperature	Not Applicable to Solids
Decomposition Temp.	250° - 300° Centigrade
pH	Not Applicable to Solids
Kinematic Viscosity	Not Applicable to Solids
Water Solubility	1% to 10% at 25° Centigrade
Partition Coefficient	Not Applicable
Vapor Pressure	No Information available
Density	Range 80 to 110 lbs./ft ³
Vapor Density (air=1)	No Information available
Particle Characteristics	Median = 30 mesh, Range = 6 - 80 mesh
Molecular Weight	No Information available
Molecular Formula	No Information available
Evaporation Rate (ether=1)	Not Applicable to Solids
(n-octanol/water)	No Information available

10. STABILITY AND REACTIVITY

REACTIVITY	Not reactive under recommended storage temperature and pressure conditions.
CHEMICAL STABILITY	Stable under recommended storage conditions.
POSSIBILITY OF HAZARDOUS REACTIONS	Strong gas may be generated upon contact with reducing agents, acids, and /or oxidizers, or through mishandling of packages or improper storage of packages. Never mix/use in closed containers that do not allow the release of chlorine dioxide gas.
CONDITIONS TO AVOID	Extremes of temperature and direct sunlight. Do not combine or mix with acidifiers in unapproved or closed containers.
INCOMPATIBLE MATERIALS	Acids and reducing agents except as provided for in the "Directions for Use".
HAZARDOUS DECOMPOSITION PRODUCTS	Mixing with acids or other chemicals will cause evolution of chlorine dioxide gas, which may be poisonous and explosive.
HAZARDOUS POLYMERIZATION	Will not occur.

11. TOXICOLOGICAL INFORMATION
LIKELY ROUTES OF EXPOSURE AND POTENTIAL HEALTH EFFECTS

<i>Table A3.1.2 (p. 270) G.H.S. of Classifying and Labeling Chemicals; Sixth Revised Edition</i>			
	HAZARD CLASS	HEALTH HAZARD STATEMENT	CATEGORY
(a.)	Acute Toxicity, Oral	MAY BE HARMFUL IF SWALLOWED	5
(b.)	Skin corrosion/irritation	CAUSES SKIN IRRITATION	2
(c.)	Serious Eye Damage/eye irritation	CAUSES SERIOUS EYE IRRITATION	2A
(d.)	Acute toxicity , inhalation	HARMFUL IF INHALED	4
(e.)	Germ Cell Mutagenicity	No information available	
(f.)	Carcinogenity	Category 3 - Not classifiable as a carcinogen by IARC	
(g.)	Reproductive Toxicity	No information available	
(h.)	STOT - Single Exposure	No information available	
(i.)	STOT-repeated exposure	No information available	
(j.)	Aspiration Hazard	No information available	

SIGNS AND SYMPTOMS OF EXPOSURE

Signs and symptoms of exposure vary, and are dependent on the route, degree, and duration of exposure.

INGESTION

Exposure by ingestion may cause irritation, nausea, and vomiting.

SKIN

Skin exposure may cause redness, rash or irritation.

EYE

Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged

INHALATION

Inhalation of airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. The pulmonary edema may develop several hours after a severe acute exposure.

12. ECOLOGICAL INFORMATION
ECOTOXICITY DATA

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Zeolite 12173-10-3	18: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	1800: 96 h <i>Brachydanio rerio</i> mg/L LC50 semi-static 3200-5600: 96 h <i>Oryzias latipes</i> mg/L LC50 semi- static 1800-3200: 96 h <i>Poecilia</i> <i>reticulata</i> mg/L LC50 semi-static.	1000-1800: 48 h <i>Daphnia magna</i> mg/LEC50
Sodium Chlorite 7758- 19-2	---	100 - 500: 96 h <i>Brachydanio rerio</i> mg/L LC50 static 100: 96 h <i>Lepomis</i> <i>macrochirus</i> mg/L LC50 static 100: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	0.026: 48 h <i>Daphnia magna</i> mg/L EC50 0.25 - 0.33: 48 h <i>Daphnia</i> <i>magna</i> mg/L EC50 Flow through 0.012 - 0.018: 48 h <i>Daphnia magna</i> mg/L EC50 Static

BIODEGRADATION

Chlorite ions are reduced by some bacteria under anaerobic conditions.

PERSISTENCE

This material will eventually degrade to sodium chloride.

BIOACCUMULATIVE POTENTIAL

This material will not bioaccumulate.

MOBILITY IN SOIL

No Information Available.

OTHER ADVERSE EFFECTS

None Known.

13. DISPOSAL CONSIDERATIONS
CONTAINER MANAGEMENT

Do not reuse container.

WASTE FROM MATERIAL

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Avoid sewage disposal.

14. TRANSPORT INFORMATION
DOT

Not regulated.

15. REGULATORY INFORMATION
INTERNATIONAL INVENTORIES

TSCA	United States Toxic Substances Control Act Section 8(b) Inventory	COMPLIES	This product is not subject to export notification.
DSL/NDSL	Canadian Domestic Substances List/Non-Domestic Substances List	COMPLIES	All components of this product are listed on either the DSL or the NDSL.
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances	COMPLIES	---
AICS	Australian Inventory of Chemical Substances	COMPLIES	---

US FEDERAL REGULATIONS

CWA (CLEAN WATER ACT)	This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)
CERCLA	This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material
SARA 311/312	Acute Health Hazard

16. OTHER INFORMATION

Prepared by FoodDefend™

IMPORTANT

The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESSED OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal, and other factors that may involve other or additional legal, environmental, safety or performance considerations, and FoodDefend™ assumes no liability whatsoever for the use of or reliance upon this information. While our technical personnel will be happy to respond to questions, safe handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local, or foreign laws.

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees.

End of Safety Data Sheet