



your partner in food safety

SDS

Safety Data Sheet

Revision Date: 02/01/2018

1. Product Identification

Product Name: Acto 140
Product Code: I00200
Recommended Uses: Powdered, oxygen bleach safe to use in food processing operations.
Cleaning agent for food and beverage processing facilities and equipment
Manufacturer: Birko Corporation
9152 Yosemite Street
Henderson, CO 80640-8027
Contact Information: (303) 289-1090 or 1-800-525-0476
Emergency Number: CHEMTREC 1-800-424-9300

2. Hazard(s) Identification

Health	Environmental	Physical
Oxidizing solids, Category 3 Acute toxicity, Category 4 Serious eye damage, Category 1		

Label Elements:

Symbols:



Signal Word: DANGER

Hazard Statement(s):

May intensify fire; oxidizer. Harmful if swallowed. Causes serious eye damage.

Precautionary Statement(s):

Prevention Keep away from heat. Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ eye protection/ face protection. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Response IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

3. Composition/ Information on Ingredients

Name(s)	Synonym(s)	CAS Number	Weight %
Sodium carbonate peroxyhydrate		15630-89-4	>= 85

Carbonic acid sodium salt (1:2)		497-19-8	<= 13
Sodium silicate SiO ₂ /Na ₂ O		1344-09-8	<= 1.5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-Aid Measures

4.1 General Advice:

If inhaled:	Move to fresh air. If symptoms persist, call a physician.
In case of skin contact:	Remove and wash contaminated clothing before re-use. Wash off with plenty of water. If symptoms persist, call a physician.
In case of eye contact:	Call a physician or poison control center immediately. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
If ingested	Rinse mouth with water. Do NOT induce vomiting. If accidentally swallowed obtain immediate medical attention. Oxygen or artificial respiration if needed. If victim is conscious: If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. If victim is unconscious: Artificial respiration and/or oxygen may be necessary.

4.2 Most important symptoms and effects, both acute and delayed

In case of skin contact	Effects Prolonged skin contact may cause skin irritation.
In case of eye contact	Symptoms Redness, Lachrymation, Swelling of tissue. Effects Severe eye irritation. Risk of serious damage to eyes.
In case of ingestion	Symptoms Severe irritation, Nausea, Abdominal pain Vomiting, Diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting Measures

Suitable Extinguishing Media:	Water, water spray
Unsuitable Extinguishing Media:	None.
Flash Point:	NA
Specific Hazards:	- Oxidizing - Oxygen released in thermal decomposition may support combustion - Contact with combustible material may cause fire. - Contact with flammables may cause fire or explosions. - Risk of explosion if heated under confinement.
Hazardous combustion products:	Oxygen
Special Protective Actions for Fire-Fighters:	- In the event of fire, wear self-contained breathing apparatus. - Use personal protective equipment. - Cool containers/tanks with water spray.
Further Information	Keep product and empty container away from heat and sources of ignition.

6. Accidental Release Measures

Personal Precautions:	Advice for non-emergency personnel - Keep away from incompatible products Advice for emergency responders
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	- Sweep up to prevent slipping hazard.
Environmental Precautions:	<ul style="list-style-type: none"> - Should not be released into the environment. - Limited quantity - Flush into sewer with plenty of water. - Large quantities: - If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and Materials for Containment and Clean-Up:	<ul style="list-style-type: none"> - Sweep up and shovel into suitable containers for disposal. - Do not mix waste streams during collection. - Avoid dust formation. - Treat recovered material as described in the section "Disposal considerations". - All receiving equipment should be clean, vented, dry, labeled and made of material that is compatible with the product.

7. Handling and Storage

Precautions for Safe Handling:	Avoid dust formation. Ensure adequate ventilation. Keep away from heat and sources of ignition. Use only clean and dry utensils. Never return unused material to storage receptacle. Keep away from water. Keep away from incompatible products
Hygiene Measures	Use only in an area equipped with a safety shower. Eye wash bottle with pure water Handle in accordance with good industrial hygiene and safety practice for diagnostics.
Conditions for Safe Storage including any incompatibilities:	Keep in a dry place. Keep in a cool, well ventilated place. Keep only in the original container. Keep away from direct sunlight. Store in a receptacle equipped with a vent. Keep away from heat. The container must be used exclusively for the product. Keep in container fitted with safety valve or vent. Avoid dust formation. Refer to protective measures listed in sections 7 and 8. In industrial installations, apply the rules for the prevention of major accidents (consult an expert). Keep away from heat/sparks/open flames/hot surfaces. No smoking. To avoid thermal decomposition, do not overheat. Keep away from: Incompatible products
Appropriate Engineering Controls:	Suitable material Stainless steel Polyethylene Paper + PE coating.

8. Exposure controls/personal protection

Exposure Limits:

Name (CAS-No.)	TWA	BASIS
Sodium carbonate peroxyhydrate	5 mg/m ³	Solvay Acceptable Exposure Limit
Carbonic acid sodium salt (1:2)	10 mg/m ³	Solvay Acceptable Exposure Limit
Particles not otherwise specified (PNOS)	3 mg/m ³	American Conference of Governmental Industrial Hygienists (ACGIH) (Respirable fraction)
	10 mg/m ³	ACGIH (Inhalable fraction)
	5 mg/m ³	OSHA - Table Z-1 Limits for Air Contaminants
	Form of exposure: respirable fraction All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.	
	15 mg/m ³	OSHA - Table Z-1 Limits for Air Contaminants
	Form of exposure : total dust All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically	

	by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.
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Personal Protective Equipment

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Control Measures	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Apply technical measures to comply with the occupational exposure limits. Hygiene measures Use only in an area equipped with a safety shower. Eye wash bottle with pure water Handle in accordance with good industrial hygiene and safety practice for diagnostics.
Eye/Face:	Chemical resistant goggles must be worn.
Skin:	Protective suit
Gloves:	Wear suitable gloves. Non-recommended materials: Leather, cotton
Respiratory:	Use only respiratory protection that conforms to international/ national standards. Use NIOSH approved respiratory protection. Respirator with a dust filter
Protective Material Types:	PVC Neoprene Natural Rubber

9. Physical and Chemical Properties

Appearance:		Boiling Point:	Not applicable
Physical state	Solid	Flash Point:	Not applicable
Form	Powder	Evaporation Rate:	no data available
Color	White	Flammability:	This product is not flammable
Odor:	odorless	Partition coefficient:	Not applicable
Odor threshold:	No data available	Auto-Ignition Temperature:	Not applicable
Vapor Pressure:	Not applicable	Decomposition Temperature:	Self-Accelerating decomposition temperature (SADT)
Vapor Density:	Not applicable		> 131 °F (> 55 °C) 50 kg
pH:	10.4-10.6	Viscosity	Not applicable
Relative Density:	Bulk Density: 950 – 1,200 kg/m3	Other information	
Melting Point:	No data available	Molecular weight	314.06 g/mol
Freezing Point:	Not applicable		
Solubility:	Water solubility : 150 g/l (68 °F (20 °C))		

10. Stability and Reactivity

Possibility of Hazardous Reactions:	Decomposes when moist. Decomposes on heating. Potential for exothermic hazard
Chemical Stability:	Potential for exothermic hazard Stable under recommended storage conditions.

Possibility of hazardous reactions	Contact with combustible material may cause fire. Contact with flammables may cause fire or explosions. Risk of explosion if heated under confinement. Fire or intense heat may cause violent rupture of packages.
Conditions to Avoid:	Exposure to moisture. To avoid thermal decomposition, do not overheat.
Incompatible Material	Water, Acids, Bases, Heavy metal salts, Reducing agents, Organic materials, Flammable materials, and/or Combustible material
Hazardous Decomposition Products:	Oxygen

11. Toxicological Information

Acute Toxicity:

Test	Results
Acute oral LD50	1,034 mg/kg - rats
Acute inhalation toxicity LC0	1 h > 4,580 mg/m3 - rats
Acute dermal toxicity LD10	> 2,000 mg/kg - rabbits
Acute toxicity (other routes of administration)	No data available
Skin corrosion/irritation	Rabbit - slight irritation
Serious eye damage/eye irritation	Rabbit - Risk of serious damage to eyes.
Respiratory or skin sensitization	No data available
Mutagenicity	
Genotoxicity in vitro	
Carbonic acid sodium salt (1:2)	By analogy Ames test with metabolic activation Product is not considered to be genotoxic Published data Strain: Escherichia coli without metabolic activation negative Product is not considered to be genotoxic Published data
Carcinogenicity	No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA
ACGIH

Toxicity for reproduction and development
Toxicity to reproduction / fertility

Sodium silicate SiO2/Na2O
Repeated exposure - Rat
NOEL parent: > 159 mg/kg

Developmental Toxicity/Teratogenicity
Carbonic acid sodium salt (1:2)

Mouse, female
Application Route: Oral
NOAEL teratogenicity: >= 580 mg/kg
NOAEL maternal: >= 580 mg/kg
Method: according to a standardized method
no embryotoxic or teratogenic effects have been observed
Unpublished reports

STOT

STOT-single exposure

Carbonic acid sodium salt (1:2)

The substance or mixture is not classified as specific target organ toxicant, single exposure.
internal evaluation

Sodium silicate SiO₂/Na₂O

Routes of exposure: Inhalation

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure

Carbonic acid sodium salt (1:2)

The substance or mixture is not classified as specific target organ toxicant, repeated exposure. internal evaluation

Aspiration toxicity

No data available

Further information

Harmful if swallowed.

Risk of serious damage to eyes.

Irritating to respiratory system and skin.

12. Ecological Information

Toxicity

Aquatic Compartment

LC50 : 71 mg/l - *Pimephales promelas* (fathead minnow)

Acute toxicity to fish

NOEC - 96 h : 7.4 mg/l - *Pimephales promelas* (fathead minnow)

Acute toxicity to daphnia and other aquatic invertebrates.

EC50 : 4.9 mg/l - *Daphnia pulex* (Water flea)

NOEC - 48 h : 2 mg/l - *Daphnia pulex* (Water flea)

Toxicity to aquatic plants

Sodium silicate SiO₂/Na₂O

EC50 - 72 h : 345.4 mg/l - *Algae* : *Desmodesmus subspicatus* (*Scenedesmus subspicatus*)

EbC50 - 72 h : 207 mg/l - *Algae* : *Desmodesmus subspicatus* (*Scenedesmus subspicatus*)

Persistence and degradability

Stability in water Photodegradation

Medium, Water, Soil, Hydrolyzes

Not applicable

Biodegradability

The methods for determining biodegradability are not applicable to inorganic substances.

Degradability assessment

Carbonic acid sodium salt (1:2)

The product is not considered to be rapidly degradable in the environment

Bioconcentration factor (BCF)

Not applicable

Mobility in soil

Adsorption potential (Koc)

Air

Not applicable

Water

considerable solubility and mobility

Soil/sediments

non-significant adsorption

Results of PBT and vPvB assessment

Carbonic acid sodium salt (1:2)

Not applicable, inorganic substance

Ecotoxicity assessment

Acute aquatic toxicity

Carbonic acid sodium salt (1:2)

Not harmful to aquatic life (LC/EC50 > 100 mg/L)

Chronic aquatic toxicity

Carbonic acid sodium salt (1:2)

Not classified due to data which are conclusive although insufficient for classification.

Remarks	Contains a(many) hazardous substance(s) for the environment., Under massive form, product is biologically inert and non-degradable., Ingestion of solids may cause harm to wildlife due to intestinal mechanical blockage or starvation from false feeling of satiation.
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13. Disposal Considerations

Waste Treatment Methods

Product Disposal	<ul style="list-style-type: none"> - Dilute with plenty of water. - Dispose of wastes in an approved waste disposal facility. - Can be landfilled, when in compliance with local regulations. - In accordance with local and national regulations.
Waste Code	<ul style="list-style-type: none"> - Environmental Protection Agency - Hazardous Waste – YES - RCRA Hazardous Waste (40 CFR 302) - D001 - Ignitable waste – (I)
Advice on cleaning and disposal of packaging	<ul style="list-style-type: none"> - Clean container with water. - Empty containers should be taken to an approved waste handling site for recycling or disposal. - Uncleaned empty packaging - Dispose of as unused product. - In accordance with local and national regulations.

14. Transport Information

DOT

UN Number:	UN 3378
UN Proper Shipping Name:	SODIUM CARBONATE PEROXYHYDRATE
Transport Hazard Class (es):	5.1
Packing Group:	III
ERG No	140
Environmental Hazard(s):	NO

TDG

UN Number:	UN 3378
UN Proper Shipping Name:	SODIUM CARBONATE PEROXYHYDRATE
Transport Hazard Class (es):	5.1
Packing Group:	III
Environmental Hazard(s):	NO

NOM

UN Number:	UN 3378
UN Proper Shipping Name:	SODIUM CARBONATE PEROXYHYDRATE
Transport Hazard Class (es):	5.1
Packing Group:	III
ERG No	140
Environmental Hazard(s):	NO

IMDG

UN Number:	UN 3378
UN Proper Shipping Name:	SODIUM CARBONATE PEROXYHYDRATE

Transport Hazard Class (es): 5.1
Packing Group: III
Environmental Hazard(s): NO
Special precautions for user
EmS F-A , S-Q

IATA

UN Number: UN 3378
UN Proper Shipping Name: SODIUM CARBONATE PEROXYHYDRATE
Transport Hazard Class (es): 5.1
Packing Group: III
Packing instructions (cargo aircraft) 563
Max net qty / pkg 100.00 kg
Packing instruction (passenger aircraft) 559
Max net qty / pkg 25.00 kg
Environmental Hazard(s): NO

15. Regulatory Information

Inventory information	Status
New Zealand. Inventory of Chemical Substances	In compliance with the inventory
United States TSCA Inventory	In compliance with the inventory
Canadian Domestic Substances List (DSL)	In compliance with the inventory
Australia Inventory of Chemical Substances (AICS)	In compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	In compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	In compliance with the inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	In compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	In compliance with the inventory

Federal Regulations:

CERCLA Sections 102a/103 Hazardous substances (40 CFR 302.4): This material does not contain any components with a CERCLA RQ.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21): Fire hazard - YES

Section 313 Toxic Chemicals (40 CFR 372.65) This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355) No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355) This material does not contain any components with a SARA 302 RQ.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355) This material does not contain any components with a section 304 EHS RQ.

State Regulations:

16. Other Information

HMIS

HEALTH	2 moderate
FLAMMABILITY	0 minimal
REACTIVITY	1 slight
PROTECTIVE EQUIPMENT	Determined by User; dependent on local conditions

NFPA

HEALTH HAZARD	2 moderate
FIRE HAZARD	0 minimal
INSTABILITY HAZARD	1 slight
SPECIFIC HAZARD	OX Oxidizer

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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.