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 SiO2/Na2O		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

	- Sweep up to prevent slipping hazard.
Environmental Precautions:	**- 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:	**- 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/m3**	**American Conference of Governmental Industrial Hygienists (ACGIH) (Respirable fraction)**
	10 mg/m^3	**ACGIH (Inhalable fraction)**
	5 mg/m3	**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/m3	**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.

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**		
pH:	**10.4-10.6**		**> 131 °F (> 55 °C) 50 kg**
Relative Density:	**Bulk Density: 950 – 1,200 kg/m3**	**Viscosity**	**Not applicable**
Melting Point:	**No data available**	**Other information**	
Freezing Point:	**Not applicable**	**Molecular weight**	**314.06 g/mol**
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.**

13. Disposal Considerations

Waste Treatment Methods

Product Disposal	**- 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	**- Environmental Protection Agency** **- Hazardous Waste – YES** **- RCRA Hazardous Waste (40 CFR 302)** **- D001 - Ignitable waste – (I)**
Advice on cleaning and disposal of packaging	**- 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:

California Proposition 65:	**This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.**

16. Other Information

HMIS		**NFPA**	
HEALTH	2 moderate	HEALTH HAZARD	2 moderate
FLAMMABILITY	0 minimal	FIRE HAZARD	0 minimal
REACTIVITY	1 slight	INSTABILITY HAZARD	1 slight
PROTECTIVE EQUIPMENT	Determined by User; dependent on local conditions	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.