

Material Safety Data Sheet

Data Information as Required by OSHA Regulations

Product:

**ATTACK SUPER STRONG OXIDIZER
WITH OXY-CRYSTALS®
For Crystal Clear Sparkling Water**



BIO-DEX LABORATORIES

**4212 W. INNOVATIVE DR.
PHOENIX, ARIZONA 85086**



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 1.	CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
-------------------	--

Product Name:
BIO-DEX ATTACK
SUPER STRONG OXIDIZER
WITH OXY-CRYSTALS®

Company Identification:
Bio-Dex Laboratories
4212 W. INNOVATIVE DR.
Phoenix, AZ 85086
(623) 582-2400
Fax: (623) 582-2405

Medical Emergency – 24 Hr:
(602) 253-3334
Samaritan Regional Poison
Center

Section 2.	COMPOSITION/INFORMATION ON INGREDIENTS
-------------------	---

Components	Formula	CAS No.	WT Percent
Sodium Carbonate Peroxyhydrate	$2\text{Na}_2\text{CO}_3 \cdot 1.5\text{H}_2\text{O}$	15630-89-4	>85
Sodium Carbonate	Na_2CO_3	497-19-8	12.7
Sodium Metasilicate	$\text{Na}_2\text{SiO}_3 \cdot 9\text{H}_2\text{O}$	6834-92-0	1.4



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 3.	HAZARDS IDENTIFICATION
-------------------	-------------------------------

Emergency Overview: Toxicity effects principally related to its irritating properties. Does not present any significant hazard for the environment. Supports combustion of other substances (oxidizing product).

3.1 Route of Entry: **Inhalation:** Yes **Skin:** Yes **Ingestion:** Yes

3.2 Potential Health Effects:

General: Irritation to mucous membrane, eyes and skin.

Inhalation: Slight nose and throat irritation. At high concentrations, cough. In case of repeated or prolonged exposure; risk of sore throat, nose bleeds and chronic bronchitis.

Eye Contact: Severe eye irritation, watering and redness, can cause burns to the eye. Risk of serious or permanent eye lesions.

Skin Contact: Slight irritation. In case of repeated contact; risk of dermatitis.

Ingestion: Severe irritation of the mouth, throat, esophagus and stomach. Bloating of stomach, belching, nausea, vomiting.

Carcinogenicity: See section 11.3.

Section 4.	FIRST AID MEASURES
-------------------	---------------------------

General Recommendations: Do not dry soiled clothing near an open flame or incandescent heat source.

Inhalation: Remove the subject from dusty environment. Consult with a physician in case of respiratory symptoms.

Eye Contact: Flush eyes with running water for 15 minutes, while keeping the eyelids wide open. Consult with an ophthalmologist in all cases.

Skin Contact: Remove contaminated shoes, socks and clothing; wash the affected skin with running water. Clean clothing. Consult a physician in case of persistent pain or redness.

Ingestion: Consult with a physician in all cases. If the subject is completely conscious, rinse mouth and administer fresh water. Do not induce vomiting.

If the subject is unconscious: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Loosen collar and tight clothing, lay the victim on his/her side, give nothing by mouth. Keep warm with blanket. Do not induce vomiting.

MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 5.	FIRE FIGHTING MEASURES
-------------------	-------------------------------

Flash Point: Not Applicable

Flammability: Non-flammable

Auto-ignition Temperature: Not Applicable

Unusual Fire and Explosion Hazard: Oxidizer

Common Extinguishing Methods: Water, water spray. In case of fire in close proximity, all means of extinguishing are acceptable (subject to sections below). Inappropriate extinguishing means: No restriction.

Specific Hazards: . Oxygen released on exothermic decomposition may support combustion in case of surrounding fire. Pressure burst may occur due to decomposition in confined spaces or containers. Wet product decomposes exothermically and may cause combustion of organic materials. Do not spray the dry product w2ith water, except in case of fire.

Fire Fighting Instructions: Evacuate all non-essential personnel. Intervention should only be made by personnel who are trained and aware of the hazards of product.

Other precautions: If safe to do so, remove the exposed containers.

Section 6.	ACCIDENTIAL RELEASE MEASURES
-------------------	-------------------------------------

Precautions: Observe the protection measures given in sections 5 and 8. Avoid materials and products which are incompatible with the product (see section 10). Avoid direct contact of the product with water.

Cleanup Methods: Collect the product with suitable means, shovel or sweep, avoiding dust formation. All receiving equipment should be clean, dry, vented, labeled and made of material that is compatible with the product. Do not return spilled or contaminated material to inventory. Clean the area with large quantities of water. For disposal methods, refer to section 13.

Precautions for protection of the environment: Immediately notify the appropriate authorities in case of reportable spill.

Section 7.	HANDLING AND STORAGE
-------------------	-----------------------------

Handling: Clean and dry process piping and equipment before using this product. Never return unused product to original storage container. Keep away from incompatible products. Containers and equipment used to handle the product should be exclusively for that product. Avoid any contact with water or humidity. For more information, consult the supplier.

Storage: Store in a dry area. Protect from direct sunlight. Keep away from heat sources. Keep away from reactive products (see section 10). Store in vented containers. Store at temperatures less than 40°C (104°F). Keep in container fitted with safety valve or vent. Container must be used exclusively for the product.



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 8.	EXPOSURE CONTROLS/PERSONAL PROTECTION
-------------------	--

Engineering Controls: Provide ventilation in work areas when necessary to minimize dust and irritation and to comply with the following applicable limits:

Authorized Limit Values: ACGIH® TLV® - USA Particulates (2002)

Not Otherwise Regulated (PNOR)

Inhalable (1996) 10mg/m³ TWA

Respirable (1995) 3mg/m³ TWA

OSHA PEL Particulates Not Otherwise Regulated (PNOR)

Total dust 15mg/m³ TWA

Respirable fraction 5mg/m³ TWA

ACGIH® AND TLV® are registered trademarks of the American Conference of Governmental Industrial Hygienists.

Eyes/Face Protection: Dust proof chemical goggles.

Hand Protection: Protective gloves, chemical resistant. Recommended materials: PVC, neoprene or rubber.

Skin Protection: For brief contact, few precautions other than clean body-covering clothing should be needed. When prolonged or frequently repeated contact could occur, use protective, full body clothing, such as PVC or rubber impervious to this material.

Respiratory Protection: For many conditions, no respiratory protection may be needed, however, in dusty or unknown atmospheres or when exposures exceed limit values, use a NIOSH approved dust respirator.

Other Precautions: Safety shower and eyewash stations. Consult a health and safety expert for the selections of personal protective equipment suitable for the working conditions.

Section 9.	PHYSICAL AND CHEMICAL PROPERTIES
-------------------	---

Appearance: White granular solid.

Odor: None

Bulk Density: 1.0 – 1.2 g/cm³

Solubility: 140g/l @ 24° C (75°F)

pH, 1% solution: 10.4 – 10.6

Decomposition Temperature: ≥50°C(122°F) Self-accelerating decomposition temperature (SADT) with oxygen release.



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 10	STABILITY AND REACTIVITY
-------------------	---------------------------------

Stability: Stable, under certain conditions of use with slow gas release.

Conditions to Avoid: Heat/Sources of heat and moisture.

Materials to Avoid: Water, acids, bases, salts of heavy metals, reducing agents, organic materials, flammable substances.

Hazardous Decomposition Products: Oxygen; Decomposition releases steam and heat.

Hazardous Polymerization: Will not occur.

Other Information: None

Section 11	TOXICOLOGICAL INFORMATION
-------------------	----------------------------------

Acute Toxicity: Oral route – LD₅₀, rat (combined sexes), 1034 mg/kg.

Dermal route – LD₅₀, rabbit, > 2000 mg/kg

Inhalation, LC₅₀, 1 hour, rat, > 4580 mg/m³.

Irritation: Rabbit, Severe damage (eyes)

Rabbit, Slight irritant (skin)

Sensitization: No sensitization was noted when administered as a 75% w/v mixture during induction and as a 25% w/v mixture at challenge.

Comments: Toxic effect linked with irritating properties. Chronic toxicity: No data. Carcinogenic Designation: None.

Section 12	ECOLOGICAL INFORMATION
-------------------	-------------------------------

Acute Ecotoxicity: Fish, Pimephales promelas, LC₅₀, 70.7 mg/L.

Fish, Pimephales promelas, NOEC, 96 hours, 1 mg/L.

Crustaceans, Daphnia pulex, EC₅₀, 4.9mg/L.

Crustaceans, Daphnia pulex, NOEC, 48 hours, 1 mg/L.

Chronic ecotoxicity: No data.

Mobility:

Air: Not Applicable

Water: Considerable solubility and mobility

Soil/sediments-: Non-significant absorption.



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 12 ECOLOGICAL INFORMATION (CONT.)

Abiotic Degradation:

Air: Not Applicable

Water: Significant hydrolysis. Degradation's products: sodium carbonate, carbon dioxide, biocarbonate, carbonate, hydrogen peroxide.

Salt: Hydrolysis

Potential for Bioaccumulation: Result: Non-bioaccumulable

Comments: Toxic for aquatic organisms. Nevertheless, hazard for the aquatic environment is limited due to product properties. Not bioaccumulable. Abiotic degradation. Low toxicity of degradation products.

Section 13 DISPOSAL CONSIDERATIONS

Waste Treatment: Dispose of in an approved waste facility operated by an authorized contractor in compliance with federal, state and local regulations.

Packaging Treatment: The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

RCRA Hazardous Waste: Listed as D001 (Ignitable).

Section 14 TRANSPORT INFORMATION

D.O.T. Proper Shipping Name: Oxidizing solid, n.o.s., (sodium carbonate peroxyhydrate)

	Inside packages >5lbs	Inside Packages <5 lbs
UN Number:	UN 3378	None
Hazard Class:	5.1	ORM-D
Label(s):	5.1 (optional)	None
Packing Group:	III	None
Hazard label(Subsidiary)	None	None
Shipping Name:	Sodium carbonate peroxyhydrate	Consumer Commodity
Emergency Info:	ERG 140	



MATERIAL SAFETY DATA SHEET

ATTACK SUPER STRONG OXIDIZER WITH OXY-CRYSTALS®

Section 15	Regulatory Information
-------------------	-------------------------------

**Proposition 65, Safe Drinking Water
and Toxic Enforcement Act of 1986 (California)**

Not Regulated

TSCA Inventory List: Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed substance: No

Unlisted substance: Yes, Reportable Quantity 100 lbs.

Reportable Quantity (RQ): 100 pounds

Characteristic(s): Ignitability (D001).

Other: None

SARA, Title III, Sections 302/303 (40 CFR Part 355 – Emergency Planning and Notification)

Extremely Hazardous Substance: No

SARA, Title III, Sections 311/312 (40 CFR Part 370 – Hazardous Chemical Reporting: Community Right-To-Know)

Extremely Hazardous Substance: No

WHMIS Classification:

C Oxidizing material

D2B – Poisonous and infection material

Materials causing other toxic effects – eye and skin irritant

Canadian DSL Registration: Listed DSL #8694

Labeling according to Directive 1999/45/EC

Symbols	O	Oxidizing.
	Xi	Irritant.
Phrases R.	8	Contact with combustible material may cause fire.
Phrases S.	3	Keep in cool place.
	8	Keep container dry.
	17	Keep away from combustible material.
	24/25	Avoid contact with skin and eyes.
	26	In case of contact with eyes, rinse immediately with plenty of water.

Section 16 OTHER INFORMATION

**Federal OSHA Hazard Communication [29 CFR 1910.1200(g)(2)
Cal/OSHA Hazard Communication [8CCR 5194 (g)]**

HMIS® Rating:

Health – 2 Flammability – 0 Reactivity – 1
HMIS® is a registered trademark of the National Paint and Coating Association.

NFPA® Rating:

Health – 2 Flammability – 0 Reactivity – 1 Special Hazards - OX
NFPA® is a registered trademark of the National Fire Protection Association.

NSF: Materials listed under NSF/ANSI Standard 60 – Drinking Water Treatment Chemicals – Health Effects has a maximum use in potable water as follows:

Material : Sodium Carbonate Peroxyhydrate
Product Function: Oxidant
Maximum Use: 4mg/L

Other Information:

The previous information is based upon our current knowledge and experience of our product and is not exhaustive.

Address contact information:

MSDS prepared by: Omni Research Corporation
DBA: Bio-Dex Laboratories

This Material Safety Data Sheet contains at least the information required by the Federal OSHA Hazard Communication Rule 29 CFR 1910. 12300(g) (2).

The responsibility to provide a safe workplace remains with user. This information gives typical properties only and is not to be used for specification purposes. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and to develop work practice procedures for a safe environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, because the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all federal, state, and local laws and regulations.

Reason for revision: Supersedes edition: March 15, 2005 due to address change and various typos.