

# Broad Spectrum Microtabs

## Safety Data Sheet

according to US HazCom 2012  
Issue date: 27 October 2023

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixtures  
Trade name : Broad Spectrum Microtabs  
Product code : 953, 954

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory use

#### 1.3. Supplier

Advanced Instruments LLC  
2 Technology Way  
Norwood, Massachusetts 02062  
1 (781) 320-9000  
info@aicompanies.com

#### 1.4. Emergency telephone number

Emergency number : 1 (877) 740-5015

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (oral) Category 4	Harmful if swallowed
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Combustible Dust	May form combustible dust concentrations in air

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

May form combustible dust concentrations in air  
Harmful if swallowed  
Causes skin irritation  
Causes serious eye damage

Precautionary statements (GHS US) :

Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear eye protection, protective gloves.  
If swallowed: Call a poison center or doctor if you feel unwell.  
If on skin: Wash with plenty of water.  
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.  
Rinse mouth.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.

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Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Very toxic to aquatic life.

### 2.4. Unknown acute toxicity (GHS US)

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
bronopol (INN), 2-bromo-2-nitropropane-1,3-diol	CAS-No.: 52-51-7	10 - 30	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.
First-aid measures after skin contact	: Rinse immediately with plenty of water for 15 minutes. Take off contaminated clothing. Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse eye with clean water for 20-30 minutes, retracting eyelids often. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Thermal decomposition may produce : Hydrogen bromide. Nitrogen oxides. Sodium oxides (NaOx). Carbon oxides (CO, CO2).
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- Explosion hazard : Potential dust explosion hazard from airborne release. Dust could be formed as a result of granule degradation by impact or by abrasion during handling, grinding, or conveying operations.
- Hazardous decomposition products in case of fire : Thermal decomposition can lead to the release of irritating gases and vapors.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate unnecessary personnel. Avoid contact with skin and eyes. If dust are formed : Avoid raising powdered materials into airborne dust. May form combustible dust concentrations in air.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

- Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate area. Avoid raising powdered materials into airborne dust. Dust may form explosive mixture in air. Eliminate ignition sources.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain and collect as any solid. Avoid creating or spreading dust.
- Methods for cleaning up : Mechanically recover the product. Avoid raising powdered materials into airborne dust. Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Store away from other materials.
- Other information : Dispose in a safe manner in accordance with local/national regulations.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : May form combustible dust concentrations in air.
- Precautions for safe handling : Ensure good ventilation of the work station. Avoid dust formation. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Provide adequate ventilation to minimize dust concentrations. If dust are formed : Keep away from sources of ignition.

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Storage conditions	: Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.
Incompatible materials	: Strong acids and oxidants. Reducing agents. Bases. Aluminum. Iron. Acid chlorides. Acid anhydrides.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Broad Spectrum Microtabs

No additional information available

##### bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)

No additional information available

##### Stearic acid (57-11-4)

###### USA - ACGIH - Occupational Exposure Limits

Local name	Stearic acid
ACGIH OEL TWA	10 mg/m <sup>3</sup> (I - Inhalable particulate matter) 3 mg/m <sup>3</sup> (R - Respirable particulate matter)
Remark (ACGIH)	TLV® Basis: LRT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2023

#### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	: Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Wear suitable gloves resistant to chemical penetration. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

##### Eye protection:

Chemical goggles or safety glasses

##### Respiratory protection:

Wear suitable respiratory equipment in case of insufficient ventilation. Respiratory protective device with a particle filter. P2

##### Other information:

Do not eat, drink or smoke when using this product. Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Tablet.
Color	: Purple Pink
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available

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Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not applicable
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

VOC content	: 0 %
Percent Solids	: 100 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid dust formation. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong acids and oxidants. Reducing agents. Bases. Aluminum. Iron. Acid chlorides. Acid anhydrides.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may produce : Hydrogen bromide. Nitrogen oxides. Sodium oxides (NaOx). Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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ATE US (oral)	1971 mg/kg body weight
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<b>bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)</b>	
LD50 oral	180 mg/kg body weight
LD50 dermal	1600 mg/kg body weight
LC50 Inhalation - Rat (Dust/Mist)	> 5000 mg/l

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)

<b>bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met)
Viscosity, kinematic	: Not applicable
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: May be harmful if swallowed.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

<b>bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)</b>	
LC50 - Fish [1]	26.4 mg/l
EC50 - Crustacea [1]	1.4 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	1.4 mg/l waterflea
EC50 - Other aquatic organisms [2]	0.4 mg/l
EC50 72h - Algae [1]	0.25 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	0.37 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	0.02 mg/l Source: NCIS
LOEC (chronic)	0.88 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	21.5 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '49 d'

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### 12.2. Persistence and degradability

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Persistence and degradability Not established.

#### bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)

Not rapidly degradable

### 12.3. Bioaccumulative potential

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Bioaccumulative potential Not established.

#### bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)

Partition coefficient n-octanol/water (Log Pow) 0.18

### 12.4. Mobility in soil

#### bronopol (INN), 2-bromo-2-nitropropane-1,3-diol (52-51-7)

Mobility in soil 388.3 – 1416 Source: ECHA

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

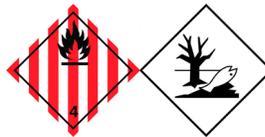
## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
 Product/Packaging disposal recommendations : Dispose of in accordance with relevant local regulations.  
 Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
<b>14.1. UN number</b>			
3241	UN3241	3241	3241
<b>14.2. Proper Shipping Name</b>			
2-Bromo-2-nitropropane-1,3-diol	2-BROMO-2-NITROPROPANE-1,3-DIOL	2-BROMO-2-NITROPROPANE-1,3-DIOL	2-Bromo-2-nitropropane-1,3-diol
<b>14.3. Transport hazard class(es)</b>			
4.1	4.1	4.1	4.1
			
<b>14.4. Packing group</b>			
III	III	III	III

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DOT	TDG	IMDG	IATA
<b>14.5. Environmental hazards</b>			
Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
Consult the associated transport regulations for available and applicable exceptions or exemptions.			
The suitable shipping classification must be evaluated at the time of shipment due to the possibility for variations in regard to the transportation of this material considering the requirements, modes of transport, packaging, packaging configuration, quantity etc. Please consult the appropriate regulation for specific shipping information and requirements.			
This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation information can be obtained through the authorized transporting corporation. It is the responsibility of the transporting corporation to follow all applicable laws, regulations and rules relating to the transportation of this product.			

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Pimaricin	CAS-No. 7681-93-8
Citric acid monohydrate	CAS-No. 5949-29-1

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### FD and C Yellow No. 6 (2783-94-0)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

#### Trisodium citrate (68-04-2)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

#### Pimaricin (7681-93-8)

Listed on the NCI (Vietnam - National Chemical Inventory)

#### Stearic acid (57-11-4)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

#### Citric acid monohydrate (5949-29-1)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

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### 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9003-39-8)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

### MAGNESIUM STEARATE (557-04-0)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

### Sodium chloride (7647-14-5)

Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on TECI (Thailand Existing Chemicals Inventory)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

according to US HazCom 2012

Revision date : 23 June 2023  
Other information : None.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.