

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : BHQ-2 Succinimidyl Ester
 Product code : BHQ-2000S

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Biosearch Technologies, Inc
 2199 South McDowell Boulevard
 Petaluma, CA 94954-6904
 USA

1.4. Emergency telephone number

Emergency number : 1-888-575-9695 (Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
STOT RE 2	H373

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H302+H332 - Harmful if swallowed or if inhaled
 H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS US) :

P260 - Do not breathe dust.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear eye protection, protective gloves, protective clothing.
 P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
 P302+P352 - If on skin: Wash with plenty of soap and water.
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P312 - Call a poison center or doctor if you feel unwell.
 P330 - Rinse mouth.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P363 - Wash contaminated clothing before reuse.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%*
Benzenediazonium, 2,5-dimethoxy-4-[(4-nitrophenyl)azo]-, (T-4)-tetrachlorozincate(2-) (2:1)	(CAS-No.) 64071-86-9	30 – 60
Ethyl 4-bromobutyrate	(CAS-No.) 2969-81-5	10 – 30
N-methylaniline	(CAS-No.) 100-61-8	10 – 30
Di(succinimido) carbonate	(CAS-No.) 74124-79-1	10 – 30

* In accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200), the specific chemical identity or exact weight % has been withheld as a trade secret

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing if pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if you feel unwell.

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

- Symptoms/effects : Harmful if swallowed or if inhaled. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause damage to organs (liver, kidneys, spleen, bone marrow) through prolonged or repeated exposure (oral, inhalation).
- Symptoms/effects after inhalation : May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Causes serious eye irritation.
- Symptoms/effects after ingestion : May cause gastrointestinal irritation.
- Chronic symptoms : May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder.
- Unsuitable extinguishing media : Carbon dioxide (CO₂). Water.

5.2. Specific hazards arising from the chemical

- Fire hazard : Not flammable.
- Explosion hazard : Product is not explosive.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Eliminate all ignition sources if safe to do so.
- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not dispose of fire-fighting water in the environment.

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain and collect as any solid. Sweep or shovel spills into appropriate container for disposal.

Methods for cleaning up : Wear suitable protective clothing. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep container closed when not in use. Avoid contact with skin and eyes. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use. Store in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethyl 4-bromobutyrate (2969-81-5)		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
N-methylaniline (100-61-8)		
ACGIH	ACGIH OEL TWA [ppm]	0.5 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: MeHb-emia; CNS impair. Notations: Skin; BEIM
ACGIH	Regulatory reference	ACGIH 2022
OSHA	OSHA PEL TWA [1]	9 mg/m ³ (Monomethyl aniline)
OSHA	OSHA PEL TWA [2]	2 ppm (Monomethyl aniline)
OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
IDLH	IDLH [ppm]	100 ppm
NIOSH	NIOSH REL TWA	2 mg/m ³
NIOSH	NIOSH REL TWA [ppm]	0.5 ppm
NIOSH	US-NIOSH chemical category	Potential for dermal absorption

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Benzenediazonium, 2,5-dimethoxy-4-[(4-nitrophenyl)azo]-, (T-4)-tetrachlorozincate(2-) (2:1) (64071-86-9)		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
Di(succinimido) carbonate (74124-79-1)		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment symbol(s):



Personal protective equipment:

Gloves. Protective goggles. Protective clothing. [In case of inadequate ventilation] wear respiratory protection.

Hand protection:

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

Eye protection:

Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection:

Use NIOSH (or other equivalent national standard) -approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder
Color	: Dark purple
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

N-methylaniline (100-61-8)

LD50 oral rat	280 mg/kg (Source: ECHA RSDB)
---------------	-------------------------------

Di(succinimido) carbonate (74124-79-1)

LD50 oral rat	< 2000 mg/kg
---------------	--------------

LD50 dermal rat	> 2000 mg/kg
-----------------	--------------

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Viscosity, kinematic	: Not applicable
Symptoms/effects	: Harmful if swallowed or if inhaled. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause damage to organs (liver, kidneys, Spleen, bone marrow) through prolonged or repeated exposure (Oral, Inhalation).
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction.

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May cause gastrointestinal irritation.
Chronic symptoms	: May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description (DOT)	: UN3077 Environmentally hazardous substances, solid, n.o.s. (contains: N-methylaniline), 9, III
UN-No.(DOT)	: UN3077
Proper Shipping Name (DOT)	: Environmentally hazardous substances, solid, n.o.s. contains: N-methylaniline
Class (DOT)	: 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 9 - Class 9 (Miscellaneous dangerous materials)



DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No limit
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 171
Other information	: No supplementary information available.

Transport by sea (IMDG)

Transport document description (IMDG)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains: N-methylaniline), 9, III, MARINE POLLUTANT
UN-No. (IMDG)	: 3077
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles

BHQ-2 Succinimidyl Ester

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 kg

Air transport (IATA)

Transport document description (IATA) : UN 3077 Environmentally hazardous substance, solid, n.o.s. (contains: N-methylaniline), 9, III
UN-No. (IATA) : 3077
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.
Class (IATA) : 9 - Miscellaneous Dangerous Substances and Articles
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

BHQ-2 Succinimidyl Ester

All chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb. 2019, as amended Feb. 2021, or are otherwise exempt or regulated by other agencies such as FDA or FIFRA, except CAS# 74124-79-1 and 2969-81-5.

SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Respiratory or skin sensitization Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)
-------------------------------------	---

15.2. International regulations

No additional information available

15.3. US State regulations

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

Component	State or local regulations
N-methylaniline (100-61-8)	U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Massachusetts - Right To Know List

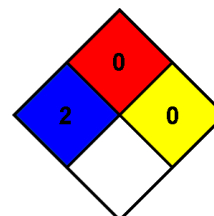
SECTION 16: Other information

Other information : Author: EMA.

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS Hazard Rating

Health : 2*
* - Chronic (long-term) health effects may result from repeated overexposure

Flammability : 0

Physical : 0

Indication of changes:

Revision 1.0: New SDS Created.

This information is disclosed to the best of LGC's knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.