



# BHQ-3 Succinimidyl Ester

## Safety Data Sheet

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

Issue date: 12/17/2021

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : BHQ-3 Succinimidyl Ester  
Product code : BHQ-3000S

#### 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 : 1-415-883-8400 (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. 3 (Inhalation) H331  
Skin Corr. 1B H314  
Eye Dam. 1 H318  
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) :

Danger

Hazard statements (GHS US) :

H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H331 - Toxic if inhaled.  
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS US) :

P260 - Do not breathe dust/fume/gas.  
P261 - Avoid breathing dust/fume/gas.  
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.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, protective clothing, chemical goggles, & face protection.  
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
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  
P314 - Get medical advice/attention if you feel unwell.  
P330 - Rinse mouth.

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P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - 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

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	%
3-Amino-7-diethylamino-5-phenylphenazinium chloride	(CAS-No.) 4569-86-2	30 – 60
Phosphate(1-), hexafluoro-, potassium	(CAS-No.) 17084-13-8	10 – 30
Ethyl 4-bromobutyrate	(CAS-No.) 2969-81-5	7 – 15
N-methylaniline	(CAS-No.) 100-61-8	7 – 15
N-hydroxysuccinimide	(CAS-No.) 6066-82-6	7 – 15
Sodium nitrite	(CAS-No.) 7632-00-0	1 – 5

\*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 difficult, supply oxygen. If breathing has stopped, give artificial respiration.

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 immediately.

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. Get medical attention immediately. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention immediately.

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

Symptoms/effects : Toxic if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Toxic if inhaled.

Symptoms/effects after skin contact : Causes severe skin burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes severe eye damage.

Symptoms/effects after ingestion : Harmful if swallowed.

Chronic symptoms : 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. Carbon dioxide. Dry powder. Water spray.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable.

Explosion hazard : Product is not explosive.

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Reactivity : Air and moisture sensitive.

### 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.

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 : Avoid dust formation. Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Clean up by scraping or collecting as material will be solid at room temperature.

Methods for cleaning up : Avoid dust formation. Scoop solid spill into closing containers or bags. 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 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. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in a dry, cool and well-ventilated place.

Incompatible materials : Moisture. Air.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>3-Amino-7-diethylamino-5-phenylphenazinium chloride (4569-86-2)</b>		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
<b>Ethyl 4-bromobutyrate (2969-81-5)</b>		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
<b>N-methylaniline (100-61-8)</b>		
ACGIH	ACGIH OEL TWA [ppm]	0.5 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: MeHb-emia; CNS impair. Notations: Skin; BEIM
ACGIH	Regulatory reference	ACGIH 2021

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<b>N-methylaniline (100-61-8)</b>		
OSHA	OSHA PEL TWA [1]	9 mg/m <sup>3</sup> (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 <sup>3</sup>
NIOSH	NIOSH REL TWA [ppm]	0.5 ppm
NIOSH	US-NIOSH chemical category	Potential for dermal absorption
<b>Sodium nitrite (7632-00-0)</b>		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
<b>N-hydroxysuccinimide (6066-82-6)</b>		
ACGIH	Remark (ACGIH)	OELs not established
OSHA	Remark (OSHA)	OELs not established
<b>Phosphate(1-), hexafluoro-, potassium (17084-13-8)</b>		
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. Wear chemically impervious apron over labcoat and full coverage clothing.

#### Hand protection:

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Be aware that the chemical may penetrate the gloves. Frequent changes are advisable. 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.

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### SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Powder.
Color	: Purple
Odor	: No data available
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
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	: No data available
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

Air and moisture sensitive.

#### 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 under normal use.

#### 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)	: Toxic if inhaled.

#### N-methylaniline (100-61-8)

LD50 oral rat	280 mg/kg
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#### Sodium nitrite (7632-00-0)

LD50 oral rat	85 mg/kg
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<b>Sodium nitrite (7632-00-0)</b>	
LC50 Inhalation - Rat	5.5 mg/l/4h
<b>Phosphate(1-), hexafluoro-, potassium (17084-13-8)</b>	
LD50 oral rat	≈ 1400 mg/kg bodyweight Animal: rat, Animal sex: male

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
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	: Toxic if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: Causes severe skin burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes severe eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.
Chronic symptoms	: 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

Not regulated for transport

#### Transport by sea (IMDG)

Not regulated for transport

#### Air transport (IATA)

Not regulated for transport

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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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 the following:

3-Amino-7-diethylamino-5-phenylphenazinium chloride	(CAS-No.) 4569-86-2
Phosphate(1-), hexafluoro-, potassium	(CAS-No.) 17084-13-8

SARA Section 311/312 Hazard Classes

Health hazard - Skin corrosion or Irritation  
Health hazard - Serious eye damage or eye irritation  
Health hazard - Respiratory or skin sensitization  
Health hazard - Acute toxicity (any route of exposure)  
Health hazard - Specific target organ toxicity (single or repeated exposure)

##### Sodium nitrite (7632-00-0)

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	100 lb

#### 15.2. International regulations

No additional information available

#### 15.3. US State regulations

Component	State or local regulations
Sodium nitrite(7632-00-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
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

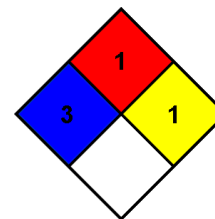
### SECTION 16: Other information

Other information : Author: JAD.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



#### HMIS Hazard Rating

Health : 3  
Flammability : 1  
Physical : 1

#### 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.*