

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Substance name : 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO  
 Product form : Substance  
 CAS No : 194204-51-8

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pharmaceutical intermediate

#### 1.3. Details of the supplier of the safety data sheet

Dixie Chemical Company, Inc.  
 10601 Bay Area Blvd  
 Pasadena TX 77507  
 Phone: 281-474-3271  
 Email: msds@dixiechemical.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC® (800) 424-9300 Domestic, (703) 527-3887 International

### SECTION 2: Hazards identification

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

##### GHS-US classification

Flam. Liq. 4 H227  
 Eye Irrit. 2A H319  
 STOT SE 3 H335

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

**Warning**

Hazard statements (GHS-US) :

H227 - Combustible liquid  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
 P261 - Avoid breathing vapours, mist, spray  
 P264 - Wash hands, forearms and face thoroughly after handling  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear eye protection, face protection, protective clothing, protective gloves  
 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 if you feel unwell  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P370+P378 - In case of fire: Use water, carbon dioxide (CO<sub>2</sub>), alcohol resistant foam to extinguish  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
 P403+P235 - Store in a well-ventilated place. Keep cool  
 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

No additional information available

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

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name : 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO

# 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO

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CAS No : 194204-51-8

Name	Product identifier	%
3-Benzyloxy-1-propionyloxy-2-propylmethyl propionate	(CAS No) 194204-51-8	60 - 100

### 3.2. Mixture

Not applicable

## 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. 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 or medical professional. Get medical attention if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes serious eye irritation. May cause respiratory irritation.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : May cause skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Carbon dioxide. Alcohol-resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- Explosion hazard : Product is not explosive.
- Reactivity : No reactivity hazard other than the effects described in sub-sections below.

### 5.3. Advice for firefighters

- Firefighting instructions : Use cold water spray to cool fire-exposed containers to minimize risk of rupture. Do not dispose of fire-fighting water in the environment. Dispose of in accordance with relevant local regulations. Prevent human exposure to fire, fumes, smoke and products of combustion.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

- General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

#### 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 : For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

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

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

- For containment : Stop leak if safe to do so. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Remove all sources of ignition.

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Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Flush residual spill area with water.

### 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 : Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment.

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

Storage conditions : Store in a cool, dry place. Keep away from heat, sparks, and flames. Store away from incompatible materials.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

3-Benzoyloxy-1-propionyloxy-2-propylmethyl propionate (194204-51-8)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established

### 8.2. Exposure 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. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Protective goggles. Protective clothing. Insufficient 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-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 : Liquid  
Color : Clear to yellow.  
Odor : Mild.  
Odor Threshold : No data available  
pH : No data available  
Relative evaporation rate (butylacetate=1) : < 1  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : 71 °C (160 °F) Seta Closed Tester, ASTM D 3828  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapour pressure : No data available  
Relative vapour density at 20 °C : > 1 (air = 1)

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Relative density	: 1.07 (water = 1)
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

### 10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Prolonged heating above 428°F (220 °C).

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agents. Nucleophiles.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>). Formaldehyde.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : No data available.

### 12.2. Persistence and degradability

#### 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO (194204-51-8)

Persistence and degradability	No data available.
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### 12.3. Bioaccumulative potential

#### 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO (194204-51-8)

Bioaccumulative potential	No information available.
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### 12.4. Mobility in soil

No additional information available

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### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment 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.

Waste 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

In accordance with DOT

Transport document description : NA1993 Combustible liquid, n.o.s. (Contains: 3-Benzyloxy-1-propionyloxy-2-propylmethyl propionate), 3, III

DOT NA no. : NA1993

Proper Shipping Name (DOT) : Combustible liquid, n.o.s.  
3-Benzyloxy-1-propionyloxy-2-propylmethyl propionate

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### Additional information

Other information : No supplementary information available.

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 3-Benzyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO (194204-51-8)

All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard
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### 15.2. International regulations

One or more of the chemical substances in this product are not listed on the Canadian Domestic Substances List (DSL) or Non-domestic Substances List (NDSL)

One or more of the chemical substances in this product are not listed on the Japanese New and Existing Chemical Substances inventory (ENCS)

One or more of the chemical substances in this product is not listed on the Chinese Chemical Inventory of Existing Chemical Substances (IECSC)

One or more of the chemical substances in this product are not listed on the European EINECS inventory or ELINCS list)

One or more of the chemical substances in this product are not listed on the Taiwan Chemical Substance Inventory (TSCI)

One or more of the chemical substances in this product is not listed on the Australian Inventory of Chemical Substances (AICS)

One or more of the chemical substances in this product is not listed on the Korean Existing Chemicals Inventory (KECI)

One or more of the chemical substances in this product is not listed on the New Zealand Inventory of Chemicals (NZIoC)

One or more of the chemical substances in this product is not listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)

### 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

## SECTION 16: Other information

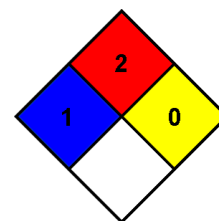
Indication of changes : Revision 1.0: New SDS Created.  
: 09/23/2015

# 3-Benzoyloxy-1-propionyloxy-2-propyloxymethyl propionate, BPrO

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Other information	: Author: ANF.
NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	: 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health	: 1
Flammability	: 2
Physical	: 0
Personal Protection	:

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