



# Safety Data Sheet

Version 1.0  
Revision Date: 26/10/2023

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **Deuterated n-butyl acrylate-*d*9**  
Product abbreviation: D9BuA  
Product use: For laboratory research purposes.  
Supplier / Manufacturer: Polymer Source, Inc.  
Address: 124 Avro street, Dorval (Montreal), Quebec H9P 2X8, Canada  
Telephone: (+1) 514-421-5517  
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## 2. HAZARDS IDENTIFICATION

Emergency overview: Other hazards which do not result in classification: N/A  
GHS classification: Flammable liquids (Category 3).  
Acute toxicity, Oral (Category 5).  
Acute toxicity, Inhalation (Category 4)  
Serious eye damage / eye irritation (Category 2A).  
Skin Corrosion/Irritation (Category 2).  
Hazardous to the aquatic environment (Category 3)

GHS Label elements, including precautionary statements:

Pictogram:



Signal word: Danger

- Hazard statements: H226. Flammable liquid and vapour.  
H301. Toxic if swallowed.  
H315. Causes skin irritation  
H319. Cause serious eye irritation  
H317. May cause an allergic skin reaction.  
H335. May cause respiratory irritation
- Precautionary statements: P210. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233. Keep container tightly closed.  
P240. Ground and bond container and receiving equipment.  
P241. Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242. Use non-sparking tools.  
P243. Take action to prevent static discharges.  
P261. Avoid breathing dust, fume, gas, mist, vapours, spray.  
P264. Wash skin thoroughly after handling.  
P270. Do not eat, drink or smoke when using this product.  
P272. Contaminated work clothing should not be allowed out of the workplace.  
P280. Wear protective gloves, protective clothing, eye protection, and face protection.  
P284. Wear respiratory protection.  
P301 + P310 + P330. *If swallowed:*  
Immediately call a POISON CENTER or doctor / physician. Rinse mouth.  
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.  
P304 + P340 + P310. *If inhaled:*  
Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor / physician.  
P305 + P351 + P338 + P310. *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 / physician.

- P333 + P313. *If skin irritation or rash occurs:*  
Get medical advice/ attention.
- P342 + P311. *If experiencing respiratory symptoms:*  
Call a POISON CENTER or doctor / physician.
- P362 + P364. Take off contaminated clothing and wash it before reuse.
- P370 + P378. *In case of fire:* Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P235. Store in a well-ventilated place. Keep cool.
- P501. Dispose of contents/ container to an approved waste disposal plant.

HMIS classification:	Health hazard:	2
	Flammability:	3
	Physical hazards:	2
Potential health effects:	Inhalation:	Toxic if inhaled. Causes respiratory tract irritation.
	Skin:	Causes skin irritation.
	Eyes:	Causes eye irritation.
	Ingestion:	Toxic if swallowed.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Formula:	n-butyl- <i>d9</i> acrylate	C <sub>7</sub> H <sub>3</sub> D <sub>9</sub> O <sub>2</sub>
Concentration:		≥ 99 %
CAS registry number:	Deuterated n-butyl- <i>d9</i> acrylate:	n/a
	n-butyl acrylate (C <sub>7</sub> H <sub>12</sub> O <sub>2</sub> ):	141-32-2

### 4. FIRST AID MEASURES

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General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
If swallowed:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

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Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters:	Wear self contained breathing apparatus for firefighting if necessary.
Hazardous combustion products:	Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides.
Explosion data:	Sensitivity to mechanical impact: no data available Sensitivity to static discharge: no data available
Further information:	Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions:	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up:	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

## 7. HANDLING AND STORAGE

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Precautions for safe handling:	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic. Recommended storage temperature -20 °C.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Personal protective equipment:	
• Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

- Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Eye protection: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin and body protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
- Specific engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	Form:	Liquid
	Colour:	Clear
Safety data:	pH:	no data available
	Melting point / Freezing point:	no data available
	Boling point:	(expected): 145-150 °C
	Flash point:	(expected.): 97-98 °C
	Ignition temperature:	no data available
	Auto-ignition temperature:	no data available
	Lower explosion limit:	no data available
	Upper explosion limit:	no data available
	Vapour pressure:	no data available
	Density:	no data available
	Water solubility:	Slightly soluble
	Partition coefficient: n-octanol/water:	no data available
	Relative vapour density:	no data available
	Odour:	Strong oder (fruity like)
	Odour threshold:	0.035 ppm
	Evaporation rate:	no data available

## 10. STABILITY AND REACTIVITY

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Chemical stability:	Stable under recommended storage conditions.
Radioactivity:	Stable isotope compound. Not radioactive.

Possibility of hazardous reactions:	no data available
Conditions to avoid:	Temperatures above 30°C, heat, flames and sparks.
Materials to avoid:	Strong oxidizing agents , strong acids , strong bases, peroxides
Hazardous decomposition products:	no data available

## 11. TOXICOLOGICAL INFORMATION

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Acute toxicity:	Oral LD50 (expected):	Rat: 3.1 mg/kg
	Inhalation LC50 (expected):	Rat: 10.3 mg/L over 4h
	Dermal LD50 (expected)	2000-3024 mg/kg
	Other information on acute toxicity:	Moderate toxicity after short-term inhalation
Skin corrosion/irritation:	Low toxicity after short-term skin contact	
Serious eye damage/eye irritation:	no data available	
Respiratory or skin sensitization:	May cause allergic respiratory and skin reactions.	
Germ cell mutagenicity:	no data available	
Carcinogenicity:	IARC: Group 3 not classifiable as to human carcinogenicity	
Reproductive toxicity:	no data available	
Teratogenicity:	no data available	
Specific target organ toxicity:	Single exposure (Globally Harmonized System):	no data available
	Repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available	
Potential health effects:	Inhalation:	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
	Ingestion:	Toxic if swallowed.
	Skin:	May be harmful if absorbed through skin. Causes skin burns.
	Eyes:	Causes eye burns.
Signs and symptoms of exposure:	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.	
Synergistic effects:	no data available	
Additional information:	RTECS:	not available

## 12. ECOLOGICAL INFORMATION

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Toxicity:	no data available
Persistence and degradability:	no data available
Bioaccumulative potential:	no data available
Mobility in soil:	no data available
PBT and vPvB assessment:	no data available
Other adverse effects:	no data available

## 13. DISPOSAL CONSIDERATIONS

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Product:	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging:	Dispose of as unused product.

## 14. TRANSPORT INFORMATION

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DOT (US):	UN number: 2348 Class: 3 Packing group: III Proper shipping name: n-butyl- <i>d9</i> acrylate Reportable Quantity (RQ): - Marine pollutant: No (identification as dangerous not needed) Poison Inhalation Hazard: Yes
IMDG:	UN number: 2348 Class: 3 Packing group: III EMS-No: F-E, S-C Proper shipping name: n-butyl- <i>d9</i> acrylate Marine pollutant: No (identification as dangerous not needed)
IATA:	UN number: 2348 Class: 3 Packing group: III Proper shipping name: n-butyl- <i>d9</i> acrylate

## 15. REGULATORY INFORMATION

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Hazardous Products Regulation classification (Canada):	Part 1, Group A Substance  Part 4, Substance
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

## **16. OTHER INFORMATION**

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Date of the latest revision: 26 October 2023

Further information: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Polymer Source, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.polymersource.ca](http://www.polymersource.ca) for additional terms and conditions of sale.