Safety Data Sheet

Version 7.0
Revision Date: 11/12/2020

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	**Deuterated Propionic-d_5 acid**
Product abbreviation:	d5PA
Product use:	For laboratory research purposes.
Supplier / Manufacturer:	Polymer Source, Inc.
Address:	124 Avro street, Dorval (Montreal), Quebec H9P 2X8, Canada
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E-mail:	info@polymersource.com

2. HAZARDS IDENTIFICATION

Emergency overview:

GHS classification:

Flammable liquids (Category 3);
Skin corrosion (Category 1B);
Serious eye damage (Category 1);
Specific target organ toxicity – Single exposure: Respiratory system (Category 3).

GHS Label elements, including precautionary statements:

Pictogram:

Signal word: Danger

Hazard statements:

H226. Flammable liquid and vapour.
H314. Causes severe skin burns and eye damage.
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.

P280. Wear protective gloves / protective clothing / eye protection / face protection.

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 INHALE*D: Remove person to fresh air and keep comfortable for breathing. Immediately call a Poison Center / doctor.

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 / doctor.

P363. Wash contaminated clothing before reuse.

P370 + P378. *In case of fire*: Use dry sand, dry chemical or 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 an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Formula:	$C_3D_5HO_2$
Synonyms:	Propionic-d_5 acid, propanoic-d_5 acid, propanyl-d_5 acid
Molecular weight:	79.1 mg/mL
Concentration:	≤ 100 %
CAS registry number:	60153-92-6

4. FIRST AID MEASURES

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. 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

Conditions of flammability: Flammable liquid and vapour.

Suitable extinguishing media: Dry powder. Dry sand.

Unsuitable extinguishing media: Do NOT use water jet.

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.

Explosion data: Sensitivity to mechanical impact: no data available

Sensitivity to static discharge: no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. 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 non-combustible absorbent material, (*e.g*. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

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. Storage class (TRGS 510): 3: Flammable liquids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters: Ingredients with workplace control parameters:

Components	*CAS #*	*Value*	*Control parameters*	*Basis*	*Remarks*
Propionic-d5 acid	60153-92-6	TWAEV	10 ppm *or* 30 mg/m^3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants.	

Components	*CAS #*	*Value*	*Control parameters*	*Basis*	*Remarks*
Propionic-d5 acid	60153-92-6	TWA	10 ppm *or* 30 mg/m^3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL).	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
		TWA	10 ppm	Canada. British Columbia OEL.	
		TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV).	

Exposure control:

Personal protective equipment:

- 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.
- Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a fullface 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 / face 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).
- Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- Specific engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form:	Liquid
	Colour:	no data available
Safety data:	pH:	no data available
	Melting point / Freezing point:	m.p.(lit.): -24 – -23 °C (-11 – -9 °F)
	Initial boling point:	b.p.(lit.): 141 °C (286 °F)

Flash point:	(lit.): 54 °C (286 °F) – closed cup
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:	no data available
Partition coefficient: n-octanol/water:	no data available
Relative vapour density:	no data available
Odour:	no data available
Odour threshold:	no data available
Evaporation rate:	no data available

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage conditions.
Radioactivity:	Stable isotope compound. Not radioactive.
Possibility of hazardous reactions:	no data available
Conditions to avoid:	Heat, flames and sparks.
Materials to avoid:	Strong bases. Strong oxidizing agents.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Carbon oxides.
	Other decomposition products: no data available.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Oral LD50:	no data available
	Inhalation LC50:	no data available
	Dermal LD50:	no data available
	Other information on acute toxicity:	no data available
Skin corrosion/irritation:	no data available	
Serious eye damage/eye irritation.	no data available	
Respiratory or skin sensitization:	no data available	
Germ cell mutagenicity:	no data available	
Carcinogenicity:	IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

	ACGIH:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
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	
Synergistic effects:	no data available	
Potential health effects:	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting, may cause an asthmatic-like bronchitis, dizziness, blood disorders, stomach irregularities (based on human evidence).	
Additional information:	RTECS:	not available

12. ECOLOGICAL INFORMATION

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:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effects:	no data available

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

DOT (US):	UN number: 3463 Class: 8 (3) Packing group: II Proper shipping name: Propionic acid Reportable Quantity (RQ): 5000 lbs Poison Inhalation Hazard: No

IMDG:	UN number: 3463 Class: 8 (3) Packing group: II EMS-No: F-E, S-C Proper shipping name: Propionic acid
IATA:	UN number: 3463 Class: 8 (3) Packing group: II Proper shipping name: Propionic acid

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR), (SOR/2015-17) and the SDS contains all the information required by the HPR.

16. OTHER INFORMATION

Date of the latest revision:	11 December 2020
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 for additional terms and conditions of sale.