



Section 1: Identification

PRODUCT AND COMPANY INFORMATION

Product Name: Poly(vinyl butyrate), solution in toluene
Catalog Number(s): 283 **Molecular Formula:** (C₆H₁₀O₂)_x
Company: Scientific Polymer Products, Inc.
6265 Dean Parkway
Ontario, NY 14519
Telephone: 585/265-0413
Fax: 585/265-1390
Website: www.scipoly.com
Emergency Phone Number: 800-255-3924 (CHEM TEL)

Section 2: Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids, Category 2, H225
Skin irritation, Category 2, H315
Reproductive toxicity, Category 2, H361
Specific target organ toxicity- single exposure, Category 3, Central nervous system, H336
Specific target organ toxicity- repeated exposure, Category 2, H373
Aspiration hazard, Category 1, H304

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.

P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P308+P313	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol resistant foam for extinction.
P391	Collect spillage.
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.

Hazards not otherwise classified (HNOC) or not covered by GHS – none

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

Section 3: Composition/Information on Ingredients

Ingredient	CAS Number	Concentration (%)
Toluene	108-88-3	50%
Poly(vinyl butyrate)	24991-31-9	50%

Section 4: First Aid Measures

Description of 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. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

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

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-Fighting Measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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)

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion proof equipment. Keep away from sources of ignition-No smoking. Take measure to prevent the buildup of electrostatic charge. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

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.

Specific end use(s)

Laboratory chemicals, Manufacture of substances

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Component	CAS No.	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluene	108-88-3	TWA: 20ppm	(Vacated)TWA: 100 ppm (Vacated)TWA: 375mg/m ³ Ceiling: 300ppm (Vacated)STEL: 150ppm (Vacated)STEL: 560mg/m ³ TWA: 200ppm	IDLH: 500ppm TWA: 100ppm TWA: 375mg/m ³ STEL: 150ppm STEL: 560mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Toluene	TWA: 50ppm TWA: 188mg/m ³ Skin	TWA: 50ppm TWA: 188mg/m ³	TWA: 20ppm

Legend:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.

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 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).

Control of environmental exposure

Prevent further leakage of spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

- | | | |
|----|---|------------------------------|
| a) | Appearance | Form: Liquid |
| b) | Odor | Sweet, pungent, Benzene like |
| c) | Odor Threshold | No data available |
| d) | pH | No data available |
| e) | Melting point/freezing point | No data available |
| f) | Initial boiling point and boiling range | 110 – 111°C (230 – 232° F) |
| g) | Flash point | 4.44°C/ 40.0° F |
| h) | Evaporation rate | No data available |
| i) | Flammability (solid, gas) | No data available |
| j) | Flammability or explosive limits | |
| | Upper | 7.1% |
| | Lower | 1.1% |
| k) | Vapor pressure | No data available |
| l) | Vapor density | No data available |
| m) | Relative density | No data available |
| n) | Water solubility | No data available |
| o) | Partition coefficient: n- octanol/water | No data available |
| p) | Auto-ignition temperature | 535.0° C (995.0° F) |

- | | | |
|----|---------------------------|-------------------|
| q) | Decomposition temperature | No data available |
| r) | Viscosity | No data available |
| s) | Explosive properties | No data available |
| t) | Oxidizing properties | No data available |

Other safety information

No data available

Section 10: Stability and Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapors may form an explosive mixture with air

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Other decomposition products- no data available
In the event of fire: see section 5

Section 11: Toxicological Information

Acute toxicity

Product information

No acute toxicity information is available for this product

Oral LD50

Based on ATE data, the classification criteria are not met. ATE>2000mg/kg

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE>2000mg/kg

Vapor LC50

Based on ATE data, the classification criteria are not met. ATE>2000mg/kg

Component information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Toluene	>5000mg/kg (Rat)	12000mg/kg (Rabbit)	26700ppm (Rat) 1 h

Toxicologically synergistic Products

No data available

Delayed and immediate effects as well as chronic effects from short and long term exposure

Irritation

No data available

Sensitization

No data available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No.	IARC	NTP	ACGIH	OSHA	Mexico
Toluene	108-88-3	Not listed	Not listed	Not listed	Not listed	Not listed
Poly(vinyl butyrate)	24991-31-9	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic effects

No data available

Reproductive effects

No data available

Developmental effects	No data available
Teratogenicity	No data available
STOT- single exposure	Central Nervous System (CNS)
STOT- repeated exposure	None known
Aspiration hazard	No data available
Symptoms/effects, both acute and Delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Endocrine disruptor information	No data available
Other adverse effects	The toxicological properties have not been fully investigated

Section 12: Ecological Information

Ecotoxicity

Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Toluene	12.5mg/L EC50 = 72h 433 Mg/L EC50 > 96 h	50-70mg/L LC50 96 h 5-7mg/L LC50 96 h 15-19mg/L LC50 96 h 28mg/L LC50 96 h 12mg/L LC50 96 h	EC50 = 19.7mg/L 30 min	11.5mg/L EC50 = 48 h 5.46 - 9.83mg/L EC50 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Component	log Pow
Toluene	2.65

Section 13: Disposal Considerations

Waste treatment methods

Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional and national hazardous waste regulations to ensure complete and accurate classification.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information

DOT (US)

UN number: 1294 Class: 3 Packing group: II
 Proper shipping name: Toluene, solution
 Reportable quantity (RQ): 167 lbs
 Poison Inhalation Hazard: No

IMDGUN number: 1294 Class: 3
Proper shipping name: TOLUENE, SOLUTION

Packing group: II

EMS-No: F-E, S-D

IATAUN number: 1294 Class: 3
Proper shipping name: Toluene, solution

Packing group: II

Section 15: Regulatory Information**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS No.
Toluene	108-88-3

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS No.
Toluene	108-88-3

Pennsylvania Right To Know Components

	CAS No.
Toluene	108-88-3
Poly(vinyl butyrate)	24991-31-9

New Jersey Right To Know Components

	CAS No.
Toluene	108-88-3
Poly(vinyl butyrate)	24991-31-9

California Prop. 65 Components

WARNING This product contains a chemical known to the State of California to cause birth defects or other reproductive harm

	CAS No.
Toluene	108-88-3

Section 16: Other Information**HMIS Rating**

Health:	2
Flammability:	3
Reactivity:	0

NFPA Rating

Health:	2
Flammability:	3
Reactivity:	0

This material is intended for laboratory use only. It is not sold or intended for drug, household or other uses. The information represents the most accurate and complete data currently available to us. However, we make no warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.