

# BIO SYSTEMS, Inc. Bio Pro Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 6/19/2015 Supersedes: 01/27/2011 Version: 1.0

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

### 1.1 Product identifier

Product Name: Bio Pro

Product Form: Mixture

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

Uses of the substance/mixture: Biodegradable tar and asphalt remover, degreaser

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

BioSystems, Inc.

667 Technology Circle

Windsor, CO 80550

T (970)686-6595, Toll Free (800)224-4605

F (970)686-6594 [www.biosystemsinc.com](http://www.biosystemsinc.com)

Emergency telephone number PERS: (800)633-8253

## SECTION 2: Hazards Identification

### 2.1 Classification of the substance or mixture

#### GHS-US Classification

Flam. Liq.	3	H226
Skin Sens.	1	H317
Asp. Tox.	1	H304
Skin Irrit.	2	H315

### 2.2 Label Elements

#### GHS-US labelling

Hazard pictograms (GHS-US):



Signal word (GHS-US): Danger

Hazard Statements (GHS-US):

H226 – Flammable liquid and vapour

H304 – May be fatal if swallowed and enters airways

H315 – Causes serious eye damage

H317 – May cause an allergic skin reaction

Precautionary statements (GHS-US):

P210 – Keep away from heat, open flames, sparks, No smoking

P233 – Keep container tightly closed

P240 – Ground/bond container and receiving equip.

P241 – Use explosion-proof electrical, lighting, ventilating equipment

P242 – Use only non-sparking tools

P243 – Take precautionary measures against static discharge

P261 – Avoid breathing vapours

P264 – Wash hands, forearms and face thoroughly after handling

P272 – Contaminated work clothing must not be allowed out of the workplace

P280 – Wear eye protection, face protection, protective clothing, protective gloves

P301+P310 – IF SWALLOWED: immediately call a doctor, a POISON CENTER

P302+P352 – If on skin: Wash with plenty of soap and water

P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P321 – Specific treatment (see first aid instructions on this label)

P331 – Do NOT induce vomiting

P333+P313 – If skin irritation or rash occurs: Get medical advice/attention

P362+P364 – Take off contaminated clothing and wash it before reuse

P370+P378 – In case of fire: Use dry sand, foam, sand, dry extinguishing powder to extinguish

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: Not applicable

3.2 Mixture:

Name	Product identifier	%
d-Limonene	(CAS No) 5989-27-5	60-100

## 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 SDS to the doctor in attendance. Wash contaminated clothing before reuse. 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.

**First-aid measures after eye contact:** IF IN EYES: immediately flush with plenty of water for at least 15 min. remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.

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*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 & delayed

*Symptoms/injuries after inhalation:* May be fatal if swallowed and enters airways.

*Symptoms/injuries after skin contact:* Causes skin irritation. May cause an allergic skin reaction

*Symptoms/injuries after eye contact:* Direct contact with eyes likely to be irritating.

*Symptoms/injuries after ingestion:* May cause gastrointestinal irritation.

**4.3 Indication of any immediate medical attention and special treatment needed:** No additional information.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

*Suitable extinguishing media:* Water spray. Foam. Dry Powder. Sand. Water fog.

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

*Fire hazard:* Flammable liquid and vapour

*Explosion hazard:* Product is not explosive

*Reactivity:* Flammable liquid and vapour

#### 5.3 Advice for firefighters

*Firefighting instructions:* Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment. 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:* Ventilate area and avoid breathing vapors. Put on protective equipment (See section 8).

**6.2 Environmental precautions:** Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Avoid use of any ignition source near spill.

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

*For containment:* Contain any spills with non-combustible materials (e.g. sand, earth, and vermiculite) to prevent migration and entry into sewers streams. Place in a suitable container for disposal in accordance with the waste regulation (See Section 13).

### SECTION 7: Handling and storage

Store in original container in well ventilated areas at temperatures below 140°F. Store in closed containers away from heat or sources of ignition and oxidizing materials. Protect damage to containers.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control Parameters

##### d-Limonene (5989-27-5)

Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established

#### 8.2 Exposure Controls

*Appropriate engineering controls:* Provide adequate ventilation. This should be achieved by the use of local exhaust ventilation and good general extraction. Ensure eyewash and shower stations are available in workplace.



*Personal protective equipment:*

*Skin and body protection:* Oil resistant gloves and apron are recommended. Suggested glove materials are: Neoprene, Nitrate/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Minimize bodily exposure. Promptly remove soiled clothing and wash before reuse.

*Eye protection:* Protective safety goggles recommended.

*Respiratory protection:* Under normal circumstances, when adequate ventilation exists, no protective equipment is necessary. If workers are exposed to concentrations above the exposure limit, use NIOSH approved respirators.

### SECTION 9: Physical and chemical properties

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

*Physical state:* Liquid

*Color:* Orange

*Odor:* Citrus

*Odor Threshold:* Not measured

*pH:* Not measured

*Relative evaporation (butylacetate=1):* <1

*Melting point:* Not measured

*Freezing point:* Not measured

*Boiling point:* 175.5 – 176.5

*Flash point:* (closed cup) 122°F

*Auto-ignition temperature:* Not measured

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*Decomposition temperature:* Not measured

*Flammability (solid, gas):* Not measured

*Vapour pressure:* 2

*Relative vapor density (air = 1):* 4.7

*Solubility:* emulsifiable

*Log Kow:* Not measured

*Viscosity, kinematic:* Not measured

*Viscosity, dynamic:* Not measured

*Oxidising properties:* Not measured

*Explosive limits:* Not measured

**9.2 Other Information:** No additional information available

## SECTION 10: Stability and reactivity

**10.1 Reactivity:** Flammable liquid and vapour

**10.2 Chemical stability:** Stable under recommended handling and storage conditions (See section 7).

**10.3 Possibility of hazardous reactions:** No additional information available

**10.4 Conditions to avoid:** No flames, no sparks. Eliminate all sources of ignition. Temperatures over 49° C (120° F).

**10.5 Incompatible materials:** None known.

**10.6 Hazardous decomposition products:** None known.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

*Acute toxicity:* Not classified

*Skin corrosion/irritation:* Causes skin irritation

*Serious eye damage/irritation:* Not classified

*Respiratory or skin sensitization:* May cause an allergic reaction.

*Germ cell mutagenicity:* Not classified

*Carcinogenicity:* Not classified

*Reproductive toxicity:* Not classified

*Specific target organ toxicity (single exposure):* Not classified.

*Specific target organ toxicity (repeated exposure):* Not classified

*Aspiration hazard:* May be fatal if swallowed and enters airways.

*Symptoms/injuries after inhalation:* May be fatal if swallowed and enters airways

*Symptoms/injuries after skin contact:* Causes skin irritation. May cause an allergic reaction.

## SECTION 12: Ecological information

**12.1 Toxicity Ecology – general:** No information available

**12.2 Persistence and degradability**

Bio Pro

Persistence and degradability

Biodegradable

**12.3 Bioaccumulative potential:** No additional information

**12.4 Mobility in soil:** No additional information available

**12.5 Other adverse effects:** No additional information

## SECTION 13: Disposal Considerations

**13.1 Waste treatment methods**

*Waste treatment methods:* Do not discharge 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:* UN2319 Terpene Hydrocarbons, N.O.S. (Citrus terpene), 3, III

*UN-No. (DOT):* 2319

*DOT NA no.:* UN2319

*Proper Shipping Name (DOT):* Terpene hydrocarbons, n.o.s. (Citrus terpene)

*Department of Transportation (DOT) Hazard Classes:* 3 – Class 3

*Packing group (DOT):* III – Minor Danger

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

*DOT Quantity Limitations Cargo aircraft/rail (49 CFR 175.75):* 220L

*DOT Vessel Stowage Location:* A – The material may be stowed on deck or under deck on cargo/passenger vessels

In accordance with ADR / RID / IMDG / IATA / AND

**UN Number**

*UN-No. (ADR):* Not applicable

*UN-No. (IMDG):* 2319

*UN-No. (IATA):* Not applicable

*UN-No. (AND):* Not applicable

*UN-No. (RID):* Not applicable

**UN proper shipping name**

*Proper Shipping Name (ADR):* Not applicable

*Proper Shipping Name (IMDG):* Terpene Hydrocarbons, N.O.S.

*Proper Shipping Name (IATA):* Not applicable

*Proper Shipping Name (AND):* Not applicable

*Proper Shipping Name (RID):* Not applicable

*Transport Document description (IMDG):* UN 2319 TERPENE HYDROCARBONS, N.O.S., 3, III

*Marine Pollutant:* No

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## SECTION 15: Regulatory information

### 15.1 US Federal regulations

Bio Pro

Not listed on the US TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard classes	Immediate (acute) health hazard
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15.2 International regulations: No additional information

### 15.3 US State regulations

**California Proposition 65:** This product contains no chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

## SECTION 16: Other information

Indication of changes: Revision 1.0: New SDS created

Revision date: 08/15/2015

\*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.\*



