



Bio Flow Strips Lemon

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date: 12/02/2020

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Version: 2.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Bio Flow Strips Lemon

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Drain cleaner, pipe cleaner

1.3. Supplier

Manufacturer

PurposeBuilt Brands
755 Tri-State Parkway
Gurnee, IL 60031
T 800-837-8140

1.4. Emergency telephone number

Emergency number : US (Infotrac): 800-535-5053
International (Infotrac): +1 (352) 323-3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Eye Irrit. 2B
Resp. Sens. 1
Skin Sens. 1

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : May cause an allergic skin reaction
Causes eye irritation
May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS US) : Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection, protective gloves.
In case of inadequate ventilation wear respiratory protection..
If on skin: Wash with plenty of water.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a poison center or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
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 which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Sulfuric acid, calcium salt (1:1)	(CAS-No.) 7778-18-9	10 – 30
Sodium dodecylbenzenesulfonate	(CAS-No.) 25155-30-0	10 – 30
Cellulose, 2-hydroxyethyl ether	(CAS-No.) 9004-62-0	10 – 20
Lipase, triacylglycerol	(CAS-No.) 9001-62-1	0.1 – 1
Pine, extract	(CAS-No.) 94266-48-5	0.1 – 1
Citral	(CAS-No.) 5392-40-5	0.1 – 1
D-Limonene	(CAS-No.) 5989-27-5	0.1 – 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

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6.2. Environmental precautions

Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

- For containment : Pick up large pieces, then place in a suitable container. Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers. Wear recommended personal protective equipment.
- Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust, fume, gas, mist, spray, vapors. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear personal protective equipment.
- Hygiene measures : Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Bio Flow Strips Lemon	
No additional information available	
Sulfuric acid, calcium salt (1:1) (7778-18-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	10 mg/m ³ (inhalable particulate matter)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
Sodium dodecylbenzenesulfonate (25155-30-0)	
No additional information available	
Cellulose, 2-hydroxyethyl ether (9004-62-0)	
No additional information available	
Lipase, triacylglycerol (9001-62-1)	
No additional information available	
Citral (5392-40-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	5 ppm (inhalable fraction and vapor)
ACGIH chemical category	dermal sensitizer, Skin - potential significant contribution to overall exposure by the cutaneous route, Not Classifiable as a Human Carcinogen
D-Limonene (5989-27-5)	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA [ppm]	30 ppm
Pine, extract (94266-48-5)	
No additional information available	

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

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Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear eye protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid strip.
Color	: Yellow
Odor	: Lemon
Odor threshold	: No data available
pH	: 8.8
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C (68 °F)	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Bio Flow Strips Lemon	
ATE US (oral)	3326.4 mg/kg

Sulfuric acid, calcium salt (1:1) (7778-18-9)	
LD50 oral rat	> 3000 mg/kg
LC50 inhalation rat	> 3.26 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Sodium dodecylbenzenesulfonate (25155-30-0)	
LD50 oral rat	1080 – 1980 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	1080 mg/kg body weight

Citral (5392-40-5)	
LD50 oral rat	4960 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat
LD50 dermal rabbit	2250 mg/kg
ATE US (oral)	4960 mg/kg body weight
ATE US (dermal)	2250 mg/kg body weight

D-Limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5 g/kg
ATE US (oral)	4400 mg/kg body weight

Skin corrosion/irritation : Not classified.
pH: 8.8
Serious eye damage/irritation : Causes eye irritation.
pH: 8.8
Respiratory or skin sensitization : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Sulfuric acid, calcium salt (1:1) (7778-18-9)	
NOAEL (chronic,oral,animal/male,2 years)	256 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:No data, Remarks on results: other:Effect type: carcinogenicity (migrated information)
NOAEL (chronic,oral,animal/female,2 years)	284 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:No data, Remarks on results: other:Effect type: carcinogenicity (migrated information)

Citral (5392-40-5)	
NOAEL (chronic,oral,animal/male,2 years)	60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)

D-Limonene (5989-27-5)	
IARC group	3 - Not classifiable

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D-Limonene (5989-27-5)	
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity

Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Cellulose, 2-hydroxyethyl ether (9004-62-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Sulfuric acid, calcium salt (1:1) (7778-18-9)	
LOAEL (oral, rat, 90 days)	237 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	79 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Lipase, triacylglycerol (9001-62-1)	
NOAEL (oral, rat, 90 days)	≥ 1080.2 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Citral (5392-40-5)	
LOAEC (inhalation, rat, gas, 90 days)	68 ppm Animal: rat, Animal sex: female
NOAEL (oral, rat, 90 days)	100 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEC (inhalation, rat, gas, 90 days)	34 ppm Animal: rat, Animal sex: female
NOAEL (subchronic, oral, animal/male, 90 days)	60 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Sulfuric acid, calcium salt (1:1) (7778-18-9)	
LC50 fish 1	2980 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish 2	> 1970 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

Sodium dodecylbenzenesulfonate (25155-30-0)	
LC50 fish 1	10.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Lipase, triacylglycerol (9001-62-1)	
LC50 fish 1	> 402 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	> 235 mg/l Test organisms (species): Daphnia magna
LC50 fish 2	> 68.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 2	> 37.4 mg/l Test organisms (species): Daphnia magna

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Citral (5392-40-5)	
LC50 fish 1	6.78 mg/l Test organisms (species): Leuciscus idus
EC50 Daphnia 1	7 mg/l (Exposure time: 48 h - Species: Daphnia magna)
D-Limonene (5989-27-5)	
LC50 fish 1	0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.36 mg/l Test organisms (species): Daphnia magna
LC50 fish 2	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
NOEC (chronic)	0.115 mg/l Test organisms (species): other:For freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex. Duration: '16 d'

12.2. Persistence and degradability

Bio Flow Strips Lemon	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Bio Flow Strips Lemon	
Bioaccumulative potential	Not established.

Citral (5392-40-5)	
Partition coefficient n-octanol/water	2.76 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Empty containers may contain residues which are hazardous. Recycle empty containers where allowed.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not determined

Air transport

Not determined

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Issue date : 12/02/2020
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Other information : None.

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Indication of changes:
Updated manufacturer name and logo.

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