

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

**Product Name** BIOACT™ 108

**Other means of identification**

**Product Code** PC108

**UN-No** UN3295

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Technical cleaning solvent.

**Details of the supplier of the safety data sheet**

**Manufacturer Address** Vantage Specialties, Inc.  
3938 Porett Drive  
Gurnee, IL 60031 USA  
847-244-3410

**Emergency Telephone Number**

**Emergency Telephone Number** CHEMTREC US: 1-800-424-9300  
CHEMTREC International: +1-703-527-3887

## 2. HAZARDS IDENTIFICATION

**Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Reproductive Toxicity	Category 1B
Aspiration toxicity	Category 1
Flammable Liquid	Category 3

**Label Elements**

### EMERGENCY OVERVIEW

**DANGER**

**Hazard statements**

Causes eye irritation  
Causes skin irritation  
May cause an allergic skin reaction  
May damage fertility or the unborn child  
May be fatal if swallowed and enters airways  
Flammable liquid and vapor



**Color** Colorless to light Yellow

**Physical State** Liquid

**Odor** Citrus

**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Keep away from flames and hot surfaces. — No smoking.  
 Use only outdoors or in a well ventilated area  
 Take precautionary measures against static discharge  
 Wash hands thoroughly after handling

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
 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  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention  
 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell  
 IF SWALLOWED: DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician  
 INCASE OF FIRE USE: dry chemical. foam. carbon dioxide. water spray, class ABC fire extinguisher.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool  
 Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with applicable regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
D-Limonene	5989-27-5	60 - 90
2-Propanol, 1-propoxy-	1569-01-3	10 - 30
(2-methoxymethylethoxy)propanol	34590-94-8	5 - 15
1-Methyl-2-pyrrolidone	872-50-4	1 - 10

### 4. FIRST AID MEASURES

**FIRST AID MEASURES**

<b>Eye contact</b>	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, consult a physician.
<b>Skin contact</b>	IF ON SKIN: Rinse exposed skin with plenty of water. Remove contaminated clothing. If irritation or rash occurs, get medical attention.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Ingestion</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
<b>Self-protection of the first aider</b>	Use personal protective equipment.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Headache/dizziness. Skin irritation, allergic reaction.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<u>Suitable extinguishing media</u>	Dry chemical. Foam. Carbon dioxide. Water spray or fog. Class ABC/BC fire extinguisher.
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter and spread fire.
<u>Specific hazards arising from the chemical</u>	Discarded towels or wipes soaked with solvent may smolder if not properly contained.
<b>Hazardous combustion products</b>	Carbon oxides.
<u>Explosion Data</u> Sensitivity to Mechanical Impact Sensitivity to Static Discharge	None. May be ignited by heat, sparks or flames.
<u>Protective equipment and precautions for firefighters</u>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.
<u>Environmental precautions</u>	
<b>Environmental precautions</b>	Prevent release to surface water. Prevent product from entering drains.
<u>Methods and material for containment and cleaning up</u>	
<b>Methods for Containment</b>	Dike to collect large liquid spills.
<b>Methods for Cleaning Up</b>	Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

**7. HANDLING AND STORAGE**

Precautions for safe handling

<b>Handling</b>	Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Do not breathe mist/vapors/spray. Ensure adequate ventilation. Take precautionary measures against static discharges.
<u>Conditions for safe storage, including any incompatibilities</u>	
<b>Storage</b>	Keep away from open flames, hot surfaces and sources of ignition. Keep containers tightly closed in a cool, well-ventilated place.
<b>Incompatible materials</b>	Strong acids. Strong oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

**Exposure Guidelines** .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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(2-methoxymethylethoxy)propanol 34590-94-8	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm(skin)	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> STEL: 150 ppm STEL: 900 mg/m <sup>3</sup>
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**Appropriate engineering controls**

**Engineering Measures**                      Safety Shower  
    Eyewash station  
    Ventilation system.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**                      Safety glasses with side-shields.  
**Skin and Body Protection**                Long sleeved clothing. Wear protective gloves/clothing.  
**Respiratory Protection**                    In case of insufficient ventilation, wear suitable respiratory equipment.

**Hygiene Measures**                            Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Citrus
<b>Appearance</b>	Clear	<b>Odor threshold</b>	Not determined
<b>Color</b>	Colorless to light Yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		Not Applicable
Melting point / freezing point		No data available
Boiling point / boiling range	151 - 189 °C / 304 - 372 °F	
Flash Point	49 °C / 120 °F	CC (closed cup)
Evaporation Rate	<1	(BUAC = 1)
Flammability (solid, gas)		Flammable liquid and vapor
Flammability Limit in Air		Published data for d-Limonene
Upper flammability limit	6.1%	
Lower Flammability Limit	0.7%	
Vapor pressure	< 2	mm Hg
Vapor Density	>1	(air = 1)
Specific Gravity	0.86	@ 25°C
Water Solubility	Partially soluble	
Solubility in other solvents		Not determined
Partition coefficient		No data available
Autoignition Temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Explosive Properties	None	
Oxidizing Properties	None	

**Other Information**

**10. STABILITY AND REACTIVITY**

**Reactivity**                                      Not reactive  
**Remarks**

**Chemical stability**                            Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

**Hazardous Reactions** None under normal processing.  
**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to Avoid** Extremes of temperature and direct sunlight.

**Incompatible materials** Strong acids. Strong oxidizing agents.

**Hazardous Decomposition Products**

None identified.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

**Inhalation** May cause drowsiness and dizziness.  
**Eye contact** Irritating to eyes.  
**Skin contact** May cause sensitization by skin contact. Irritating to skin.  
**Ingestion** Potential for aspiration if swallowed.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
D-Limonene 5989-27-5	= 4400 mg/kg ( Rat ) = 5200 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	-
2-Propanol, 1-propoxy- 1569-01-3	= 2490 mg/kg ( Rat ) = 2504 mg/kg ( Rat )	= 3550 mg/kg ( Rabbit )	-
(2-methoxymethylethoxy)propanol 34590-94-8	= 5.35 g/kg ( Rat )	= 9500 mg/kg ( Rabbit )	-
1-Methyl-2-pyrrolidone 872-50-4	= 3914 mg/kg ( Rat )	= 8 g/kg ( Rabbit )	> 5.1 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** No information available.

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

**Skin corrosion/irritation** dry skin, eczema.  
**Serious eye damage/eye irritation** pain, tearing.  
**Sensitization** Repeated or prolonged contact may cause allergic reactions in very susceptible persons.  
**Mutagenic Effects** No known hazard.  
**Carcinogenicity** Contains no listed human carcinogens at greater than 0.1%.

Chemical Name	ACGIH	IARC	NTP	OSHA
D-Limonene 5989-27-5				X

**Reproductive Toxicity** 1-methyl -2-pyrrolidone (CAS 872-50-4) has shown evidence of reproductive toxicity in animal studies.

**Developmental Toxicity** 1-methyl -2-pyrrolidone (CAS 872-50-4) has shown evidence of developmental toxicity in animal studies.

**STOT - single exposure** Inhalation of vapors may cause dizziness and drowsiness.

**STOT - repeated exposure** No known hazard.  
**Aspiration hazard** May be fatal if swallowed and enters airways.

**Numerical measures of** Not determined

**toxicity-Product Information**

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Very toxic to aquatic life

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
D-Limonene 5989-27-5		LC50= 35 mg/L Oncorhynchus mykiss 96 h LC50 0.619 - 0.796 mg/L Pimephales promelas 96 h		LC50 (48h): 0.58 - 0.92 mg/l Daphnia magna
(2-methoxymethylethoxy)propanol 34590-94-8		LC50> 10000 mg/L Pimephales promelas 96 h		LC50 = 1919 mg/L 48 h
1-Methyl-2-pyrrolidone 872-50-4	EC50 > 500 mg/L 72 h	LC50= 832 mg/L Lepomis macrochirus 96 h LC50= 1400 mg/L Poecilia reticulata 96 h LC50= 4000 mg/L Leuciscus idus 96 h LC50= 1072 mg/L Pimephales promelas 96 h		EC50 = 3135 mg/L 96 h EC50 = 4897 mg/L 48 h

**Persistence and degradability**

No data available.

**Bioaccumulation/Accumulation**

d-Limonene BCF: 683

**Mobility**

No data available.

Chemical Name	Partition coefficient
(2-methoxymethylethoxy)propanol 34590-94-8	= -0.064 20 °C
1-Methyl-2-pyrrolidone 872-50-4	= -0.46 25 °C

**Other Adverse Effects**

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste Disposal Method** Dispose of in accordance with applicable regulations.

**Contaminated Packaging** Dispose of in accordance with applicable regulations.

**US EPA Waste Number** D001

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
D-Limonene 5989-27-5	Toxic

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, N.O.S.

**Hazard Class** 3  
**Packing Group** III  
**Special Provisions** Exempt from regulation by US DOT when shipped in the USA solely by land in containers less than 119 gallons, refer to 49 CFR 173.150(f).

**TDG**

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, N.O.S.  
**Hazard Class** 3  
**Packing Group** III

**MEX**

**UN-No** UN3295  
**Proper Shipping Name** HIDROCARBUROS LÍQUIDOS, N.E.P.  
**Hazard Class** 3  
**Packing Group** III

**IATA**

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, N.O.S.  
**Hazard Class** 3  
**Packing Group** III

**IMDG / IMO**

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, N.O.S.  
**Hazard Class** 3  
**Packing Group** III  
**Marine Pollutant** Yes  
**Description** d-Limonene

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** Complies  
**DSL** Complies  
**ENCS** Complies  
**IECSC** Complies  
**KECL** Complies  
**PICCS** Complies  
**AICS** Complies

**Legend**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*  
*DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List*  
*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*  
*ENCS - Japan Existing and New Chemical Substances*  
*IECSC - China Inventory of Existing Chemical Substances*  
*KECL - Korean Existing and Evaluated Chemical Substances*  
*PICCS - Philippines Inventory of Chemicals and Chemical Substances*  
*AICS - Australian Inventory of Chemical Substances*

**U.S. Federal Regulations**

**SARA 313**

This product contains chemicals that may be present at levels which make it subject to reporting under SARA section 313:

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
(2-methoxymethylethoxy)propanol - 34590-94-8	34590-94-8	5 - 15	1.0
1-Methyl-2-pyrrolidone - 872-50-4	872-50-4	1 - 10	1.0

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**U.S. State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
1-Methyl-2-pyrrolidone - 872-50-4	Developmental

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
(2-methoxymethylethoxy)propanol 34590-94-8	X	X	X
1-Methyl-2-pyrrolidone 872-50-4	X	X	X

**Additional information**

N-methyl pyrrolidone (CAS 872-50-4) is the subject of a TSCA section 6 risk management rule.

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazard 2</b>	<b>Flammability 2</b>	<b>Instability 0</b>	<b>Physical and Chemical Hazards n/a</b>
<b>HMIS</b>	<b>Health Hazard 2*</b>	<b>Flammability 2</b>	<b>Physical hazards 0</b>	<b>Personal Precautions B</b>

Prepared by Product Steward  
 Issuing Date 18-Jun-2020  
 Revision Date 18-Jun-2020  
 Revision Note  
 Reason for Revision Periodic review and update

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

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