

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

Product identifier

Product Name BIOACT® 200 Precision Cleaner

Other means of identification

Product Code PC200

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 International +1-703-527-3887
CHEMTREC USA: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label Elements

EMERGENCY OVERVIEW

DANGER

Hazard statements

Causes skin irritation
Causes serious eye damage
May cause respiratory irritation
May damage fertility or the unborn child
May cause damage to organs (liver, kidney) through prolonged or repeated exposure.
Suspected of causing cancer



Color Colorless to light Yellow

Physical State Liquid

Odor Amine

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves
 Wear eye/face protection
 Avoid breathing vapors or mists

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 or doctor/physician
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 If exposed or concerned: Get medical advice/attention
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
 Immediately call a POISON CENTER or doctor/physician.

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents/container in accordance with applicable regulations.

Hazards not otherwise classified (HNOC) May be absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
1-Methyl-2-pyrrolidone	872-50-4	60-100
Triethanolamine	102-71-6	5 - 10
Diethanolamine	111-42-2	1 - 5

4. FIRST AID MEASURES

FIRST AID MEASURES

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

Ingestion IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Seek immediate medical attention.

Most important symptoms and effects, both acute and delayed**Indication of any immediate medical attention and special treatment needed**

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Use extinguishing measures appropriate to local circumstances and surrounding materials.

Unsuitable extinguishing media None identified.

Explosion Data

Sensitivity to Mechanical Impact
Sensitivity to Static Discharge

None.
None.

Protective equipment and precautions for firefighters

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

Personal Precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions Prevent release to surface water.

Methods and material for containment and cleaning up

Methods for Cleaning Up Absorb with inert material and transfer to containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Triethanolamine 102-71-6	TWA: 5 mg/m ³	n/a	n/a
Diethanolamine 111-42-2	TWA: 1 mg/m ³	n/a	TWA: 3 ppm TWA: 15 mg/m ³

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, Goggles, Face-shield.

Skin and Body Protection Impervious gloves: Butyl rubber or Lamine gloves are recommended.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Clear	Odor	Amine
Color	Colorless to light Yellow		
Property	Values	Remarks • Method	
pH		Not determined	
Melting point/freezing point		Not determined	
Boiling point/boiling range	177 °C / 351 °F		
Flash Point	94 °C / 201 °F	Open cup	
Evaporation Rate		Not determined	
Flammability (solid, gas)		May burn if exposed to open flame	
Flammability Limits in Air		Not determined	
Upper flammability limits	-		
Lower Flammability Limit	-		
Vapor pressure	< 2 mm Hg	@ 20 °C	
Vapor Density		Not determined	
Specific Gravity	1.02	@ 25°C	
Water Solubility	Soluble		
Solubility in other solvents		Not determined	
Partition coefficient		Not determined	
Autoignition Temperature		Not determined	
Decomposition temperature		Not determined	
Kinematic viscosity		Not determined	
Dynamic viscosity		Not determined	
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.
Conditions to Avoid	Extremes of temperature and direct sunlight
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	None identified.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

Inhalation	Irritating to mucous membranes.
Eye contact	Causes serious eye irritation. May cause irreversible damage to eyes.
Skin contact	Irritating to skin. May be absorbed through skin.
Ingestion	May cause discomfort.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1-Methyl-2-pyrrolidone 872-50-4	= 3598 mg/kg (Rat)	= 8 g/kg (Rabbit)	= 3.1 mg/L (Rat) 4 h
Triethanolamine 102-71-6	= 4190 mg/kg (Rat)	> 20 mL/kg (Rabbit) > 16 mL/kg (Rat)	-
Diethanolamine 111-42-2	1,600 mg/kg (Rat)	= 7640 µL/kg (Rabbit)	-

Information on toxicological effects

Symptoms Irritation or pain in contact with eyes or skin.

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

Carcinogenicity Diethanolamine (CAS 111-42-2) is classified as 'Possibly Carcinogenic to Humans' by IARC (International Agency for Research on Cancer).

Chemical Name	ACGIH	IARC	NTP	OSHA
Diethanolamine 111-42-2		Group 2B		

Reproductive Toxicity Experiments with N-methyl pyrrolidone (CAS 872-50-4) have shown reproductive toxicity effects on laboratory animals.

STOT - repeated exposure Diethanolamine (CAS 111-42-2): Results of repeat exposure studies on lab animals have shown effects to the liver and kidneys.

Numerical measures of toxicity-Product Information

LD50 Oral: 3410 mg/kg
LD50 Dermal: 2475 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
1-Methyl-2-pyrrolidone 872-50-4	EC50 > 500 mg/L 72 h	LC50= 1072 mg/L Pimephales promelas 96 h LC50= 4000 mg/L Leuciscus idus 96 h LC50= 832 mg/L Lepomis macrochirus 96 h LC50= 1400 mg/L Poecilia reticulata 96 h		EC50 = 3135 mg/L 96 h EC50 = 4897 mg/L 48 h
Triethanolamine 102-71-6	EC50 = 169 mg/L 96 h EC50 = 216 mg/L 72 h	LC50 10600 - 13000 mg/L Pimephales promelas 96 h LC50 450 - 1000 mg/L Lepomis macrochirus 96 h LC50 > 1000 mg/L Pimephales promelas 96 h	EC50 > 10000 mg/L 30 min	EC50 = 1386 mg/L 24 h
Diethanolamine 111-42-2	EC50 = 7.8 mg/L 72 h EC50 2.1 - 2.3 mg/L 96 h	LC50 4460 - 4980 mg/L Pimephales promelas 96 h LC50 1200 - 1580 mg/L Pimephales promelas 96 h LC50 600 - 1000 mg/L Lepomis macrochirus 96 h	EC50 = 73 mg/L 5 min EC50 > 16 mg/L 16 h	EC50 = 55 mg/L 48 h

Persistence and degradability

The ingredients of this mixture are biodegradable.

Bioaccumulation/Accumulation

No data available

Mobility

Will likely be mobile in the environment due to its water solubility.

Chemical Name	Partition coefficient
1-Methyl-2-pyrrolidone 872-50-4	= -0.46 25 °C
Triethanolamine 102-71-6	= -2.53
Diethanolamine 111-42-2	= -2.18 25 °C

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.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

IATA Not regulated

IMDG / IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

DSL Complies

Legend

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU 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 are subject to reporting under SARA section 313:

Chemical Name	CAS-No.	Weight %	SARA 313 - Threshold Values %
1-Methyl-2-pyrrolidone - 872-50-4	872-50-4	60-100	1.0
Diethanolamine - 111-42-2	111-42-2	1 - 5	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes

Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Diethanolamine 111-42-2	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

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
Diethanolamine - 111-42-2	Carcinogen

U.S. State Right-to-Know Regulations

This product contains the following right to know chemicals:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
1-Methyl-2-pyrrolidone 872-50-4	X	X	X
Triethanolamine 102-71-6	X	X	X
Diethanolamine 111-42-2	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazard 2	Flammability 1	Instability 0	Physical and Chemical Hazards n/a
HMIS	Health Hazard 2*	Flammability 1	Physical hazards 0	Personal Precautions B

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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 MSDS