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

Product identifier
Product Name: BIOACT™ 105 Pre-Saturated Wipes

Other means of identification
Product Code: BIOACT105W
UN-No: UN3175

Recommended use of the chemical and restrictions on use
Recommended Use: Technical cleaning.
Uses advised against: FOR INDUSTRIAL USE ONLY

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

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Aspiration toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Flammable Liquid</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label Elements

EMERGENCY OVERVIEW

DANGER

Hazard statements
Causes skin irritation
Causes serious eye irritation
May cause drowsiness or dizziness
May cause an allergic skin reaction
May be fatal if swallowed and enters airways
H410 - Very toxic to aquatic life with long lasting effects
Flammable liquid and vapor
BIOACT™ 105 Pre-Saturated Wipes

Precautionary Statements - Prevention
Keep away from flames and hot surfaces. — No smoking.
Use only outdoors or in a well ventilated area
Wear protective gloves
Wear eye/face protection
Avoid breathing vapors or mists
Avoid release to the environment

Precautionary Statements - Response
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: Wash with soap and water
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Get medical advice/attention if you feel unwell
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Seek immediate medical attention.
IN CASE OF FIRE: Use CO2, dry chemical, ABC fire extinguisher, or foam for extinction

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container in accordance with applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Propylene glycol propyl ether</td>
<td>1569-01-3</td>
<td>30 - 60</td>
</tr>
<tr>
<td>D-Limonene</td>
<td>5989-27-5</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

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. If irritation persists, call a physician.

Skin contact
IF ON SKIN: Wash with soap and water. If irritation or rash occurs, get medical attention.

Inhalation
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

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

Self-protection of the first aider
Use personal protective equipment.

Most important symptoms and effects, both acute and delayed
Symptoms
Skin irritation, allergic reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
Discarded towels or wipes soaked with solvent may smolder if not properly contained.

Hazardous combustion products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
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
Wear protective gloves. Ensure adequate ventilation. Remove all sources of ignition.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions
Avoid release into the environment.

Methods and material for containment and cleaning up

Methods for Cleaning Up
Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling
Handling
Wear protective gloves while using this product. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities
Storage
Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials
Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
Manufacturer recommended exposure limit (8-hour TWA) for CAS 64742-48-9: 171 ppm, 1200 mg/m³.

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**
Use nitrile, PVC, laminate, or viton gloves. DO NOT wear natural rubber gloves.

**Respiratory Protection**
In case of inadequate ventilation wear respiratory protection.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical State</strong></td>
<td><strong>Saturated wipe</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>White (towelette)</td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Colorless (solvent)</td>
<td></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic</td>
<td></td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td><strong>Melting point / freezing point</strong></td>
<td>&gt; 150 °C / &gt; 300 °F</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>&gt; 150 °C / &gt; 300 °F</td>
<td>Solvent</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>41 °C / 105 °F</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Flammable liquid and vapor</td>
<td>Flammable liquid and vapor</td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upper flammability limit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lower Flammability Limit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>&gt;1</td>
<td>(air = 1)</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>0.8</td>
<td>Solvent</td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Partially soluble</td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition Temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>1.6 cps @ 25°C</td>
<td>Solvent</td>
</tr>
<tr>
<td><strong>Dynamic viscosity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explosive Properties</strong></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing Properties</strong></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

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**
Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials**
Strong oxidizing agents.

**Hazardous Decomposition Products**
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

**Inhalation**
May cause drowsiness and dizziness.

**Eye contact**
Irritating to eyes.

**Skin contact**
Irritating to skin. May cause sensitization by skin contact.

**Ingestion**
Potential for aspiration if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy 64742-48-9</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 3160 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Propylene glycol propyl ether 1569-01-3</td>
<td>= 2490 mg/kg (Rat) = 2504 mg/kg (Rat)</td>
<td>= 3550 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>D-Limonene 5989-27-5</td>
<td>= 4400 mg/kg (Rat)</td>
<td>&gt; 5 g/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

**Symptoms**
Swelling/redness in contact with skin or eyes.

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

**Skin corrosion/irritation**
Irritating to skin.

**Serious eye damage/eye irritation**
Irritating to eyes.

**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%.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Limonene 5989-27-5</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Reproductive Toxicity**
No known hazard.

**Developmental Toxicity**
No known hazard.

**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 toxicity-Product Information

Not determined

12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Very toxic to aquatic life

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Microtox</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy 64742-48-9</td>
<td>LC50= 2200 mg/L</td>
<td>Pimephales promelas 96 h</td>
<td></td>
<td>LC50: &gt;1000 mg/l</td>
</tr>
<tr>
<td>Propylene glycol propyl ether</td>
<td>No data available</td>
<td>LC50: &gt;100 mg/l</td>
<td></td>
<td>LC50: &gt;100 mg/l</td>
</tr>
</tbody>
</table>
Persistence and degradability
No data available.

Bioaccumulation/Accumulation
D-Limonene BCF: 683

Mobility
Expected to partition to air.

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.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Limonene</td>
<td>Toxic</td>
</tr>
<tr>
<td>5989-27-5</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN3175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Solids containing flammable liquids, N.O.S. (1-propoxy 2-propanol, mixed hydrocarbons)</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>4.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

TDG

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN3175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Solids containing flammable liquids, N.O.S. (1-propoxy 2-propanol, mixed hydrocarbons)</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>4.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

IMDG / IMO

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN3175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Solids containing flammable liquids, N.O.S. (1-propoxy 2-propanol, mixed hydrocarbons)</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>4.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>No, This product contains less than 5L liquid per inner packaging (IMDG 2.10.2.7)</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION
BIOACT™ 105 Pre-Saturated Wipes

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>DSL</td>
<td></td>
</tr>
<tr>
<td>EINECS</td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td></td>
</tr>
<tr>
<td>IECSC</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td></td>
</tr>
</tbody>
</table>

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 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**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

- **Acute health hazard**: Yes
- **Chronic Health Hazard**: No
- **Fire hazard**: Yes
- **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, 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 does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

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

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Prepared by: Product Steward
Issuing Date: 23-Jul-2018
Revision Date: 23-Jul-2018
Revision Note: 

Page 7 / 8
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

BIOACT is a trademark of Vantage Specialties, Inc.