# Product Specification

**Product Name:** BUTYL LACTATE  
**Vigon Code:** 500557  
**CAS Number:** 138-22-7  
**FEMA Number:** 2205

## Characteristic:  
### Specification:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity %</td>
<td>97.00 - 100.00</td>
</tr>
<tr>
<td>Gas Chromatograph</td>
<td>PASSES TEST</td>
</tr>
<tr>
<td>Odor</td>
<td>MILD, CHARACTERISTIC ODOR.</td>
</tr>
<tr>
<td>Refractive Index (@20c)</td>
<td>1.4190 - 1.4230</td>
</tr>
<tr>
<td>Specific Gravity (@25c)</td>
<td>0.9740 - 0.9840</td>
</tr>
<tr>
<td>Color/appearance</td>
<td>COLORLESS TO LIGHT YELLOW LIQUID.</td>
</tr>
</tbody>
</table>

## Additional Product Information:

- **Flash Point:** 174 °F  
- **Shelf Life:** 36 Months  
- **Storage Conditions:** Stable when stored in its original package, tightly sealed in a cool (46-90°F) and dry location out of direct heat and light.

**Effective Date:** March 19, 2012
1. IDENTIFICATION

Product Description: BUTYL LACTATE

CAS # 138-22-7
FEMA Number 2205
Other means of identification
Vigon Item # 500557

Recommended use Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

Recommended restrictions For Manufacturing Use Only

Company
Vigon International, Inc.
127 Airport Road
E. Stroudsburg, PA 18301

For information call: 570-476-6300
Web Site: www.vigon.com

Manufacturer/Importer/Supplier/Distributor information

24 Hour Emergency Response Information
INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

2. HAZARD(S) IDENTIFICATION

Physical hazards Flammable liquids Category 4
Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards Not classified.

Label elements

Signal word Warning
SAFETY DATA SHEET

500557 BUTYL LACTATE

Hazard statement
Combustible liquid. Causes mild skin irritation. Causes serious eye irritation.

Precautionary statement
Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish.

Storage
Store in a well-ventilated place.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
100% of the mixture consists of component(s) of unknown acute inhalation toxicity. 100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL LACTATE</td>
<td>butyl alpha-hydroxypropionate</td>
<td>138-22-7</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>butyl 2-hydroxypropanoate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N-butyl lactate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact
Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

Eye contact
Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

Ingestion
Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Most important symptoms/effects, acute and delayed
Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation.

Indication of immediate medical attention and special treatment needed
Not available.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray, fog, CO2, dry chemical, or alcohol resistant foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical: Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.

Fire fighting equipment/instructions: In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

Specific methods: Use water spray to cool unopened containers.

General fire hazards: Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition.

Methods and materials for containment and cleaning up: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.
SAFETY DATA SHEET

500557 BUTYL LACTATE

Conditions for safe storage, including any incompatibilities
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL LACTATE (CAS 138-22-7)</td>
<td>TWA</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL LACTATE (CAS 138-22-7)</td>
<td>REL</td>
<td>25 mg/m3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 mg/m3</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Use explosion-proof ventilation equipment to stay below exposure limits. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection
Chemical resistant gloves.

Other
Not available.

Respiratory protection
Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Refer to Spec Sheet

Physical state
Liquid.

Form
Liquid.

Color
Refer to Spec Sheet

Odor
Characteristic.

Odor threshold
Not available.

pH
Not available.
SAFETY DATA SHEET

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Melting point/freezing point  -18.4 °F (-28 °C)
Initial boiling point and boiling range  372.2 °F (189 °C)
Flash point  174.0 °F (78.9 °C) Closed Cup
Evaporation rate  Not available.
Flammability (solid, gas)  Not applicable.
Upper/lower flammability or explosive limits
  Flammability limit - lower (%)
  Not available.
  Flammability limit - upper (%)
  Not available.
  Explosive limit - lower (%)
  Not available.
  Explosive limit - upper (%)
  Not available.
Vapor pressure  0.4 mm Hg at 20 °C
Vapor density  5.1
Relative density  Not available.
Solubility(ies)
  Solubility (water)  Insoluble
Partition coefficient (n-octanol/water)  Not available.
Auto-ignition temperature  Not available.
Decomposition temperature  Not available.
Viscosity  Not available.
Other information
  Explosive properties  Not explosive.
  Flammability class  Combustible IIIA estimated
  Molecular formula  C7H14O3
  Molecular weight  146.19 g/mol
  Oxidizing properties  Not oxidizing.
  Specific gravity  0.98 at 25 °C

10. STABILITY AND REACTIVITY

Reactivity  The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability  Material is stable under normal conditions.
Possibility of hazardous reactions  No dangerous reaction known under conditions of normal use.
Conditions to avoid  Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials  Strong acids. Strong oxidizing agents.
Hazardous decomposition products  No hazardous decomposition products if stored and handled as indicated.
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

- **Inhalation**: Prolonged inhalation may be harmful.
- **Skin contact**: Causes mild skin irritation.
- **Eye contact**: Causes serious eye irritation. Causes mild eye irritation.
- **Ingestion**: Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation.

Information on toxicological effects

**Acute toxicity**: Not known.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL LACTATE (CAS 138-22-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LD50</strong></td>
<td>Rabbit</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Causes mild skin irritation.

**Serious eye damage/eye irritation**: Causes serious eye irritation.

**Respiratory or skin sensitization**

- **Respiratory sensitization**: Not a respiratory sensitizer.
- **Skin sensitization**: This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not listed.
- **US. National Toxicology Program (NTP) Report on Carcinogens**: Not listed.

**Reproductive toxicity**: This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity**

- **Single exposure**: Not classified.
- **Repeated exposure**: Not classified.
Aspiration hazard: Not an aspiration hazard.
Chronic effects: Prolonged inhalation may be harmful.

12. ECOLOGICAL INFORMATION

| Ecotoxicity | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
| Persistence and degradability | No data is available on the degradability of this substance. |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

13. DISPOSAL CONSIDERATIONS

Disposal instructions: Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: Not established.

Waste from residues / unused products: Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADN: Not regulated as dangerous goods.
ADR: Not regulated as dangerous goods.
RID: Not regulated as dangerous goods.
DOT: Not regulated as dangerous goods.

BULK

- **UN number**: NA1993
- **Proper shipping name**: COMBUSTIBLE LIQUID, N.O.S. (BUTYL LACTATE)
- **Hazard class**: Combustible liq
- **Packing group**: III
- **Environmental hazards**: Marine pollutant: Yes
- **Packaging exceptions**: 150
- **Packaging bulk**: 241
- **Labels required**: 3
SAFETY DATA SHEET

500557 BUTYL LACTATE

DOT
NON-BULK
   Not regulated as dangerous goods.

IATA
   Not regulated as dangerous goods.

IMDG
   Not regulated as dangerous goods.

Marine pollutant

15. REGULATORY INFORMATION

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance List (40 CFR 302.4)
   Not listed.

SARA 304 Emergency release notification
   Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
   Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
   Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
   Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
   Not listed.

SARA 311/312 Hazardous chemical
   Yes

   Classified hazard categories
   Flammable (gases, aerosols, liquids, or solids)
   Serious eye damage or eye irritation

SARA 313 (TRI reporting)
   Not regulated.
SAFETY DATA SHEET

500557 BUTYL LACTATE

Revision Date: 08-07-2018
Version # 02

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

California Proposition 65

California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Toxic Chemical Substances (TCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date 03-08-2016
Revision date 08-07-2018
Version # 02
HMIS® ratings
  Health: 2
  Flammability: 2
  Physical hazard: 0
Vigon International, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, and disposal and should not be considered as a guarantee or quality specification. This product has not been evaluated for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. Vigon International, Inc. has performed no testing on these products in e-cig/vaping applications. It is the sole responsibility of the individual(s) purchasing this product to assess its’ safety in the final application. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon’s knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.

This document has undergone significant changes and should be reviewed in its entirety.
The following product(s) Manufactured By VIGON INTERNATIONAL, INC are certified kosher with the listed restrictions.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Name</th>
<th>Status</th>
<th>Restriction</th>
<th>UKD#</th>
</tr>
</thead>
<tbody>
<tr>
<td>500557</td>
<td>Butyl Lactate</td>
<td>Parve</td>
<td>Only Lot #3902HA is certified by this certificate</td>
<td>KF7J09R163N</td>
</tr>
</tbody>
</table>

To verify or for the most up to date certificate please go to www.koshercertificate.com
201 The Plaza, Teaneck, NJ 07666 | Phone 201.837.0500 | fax 201.837.0126

Disclaimer: This certificate is the private property of KOF-K Kosher Supervision and cannot be reposted without the express permission of KOF-K Kosher Supervision.
This is to certify that the following product(s) have been produced under the supervision of the Islamic Food and Nutrition Council of America (IFANCA). The production facility as well as component ingredients have been reviewed and approved. The product(s) are in compliance with the halal requirements under Islamic laws.

<table>
<thead>
<tr>
<th>ProductName</th>
<th>Product Code</th>
<th>Halal-ID</th>
<th>Product Certificate #</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL LACTATE</td>
<td>500557</td>
<td>B40315</td>
<td>HC-18VIZZ84</td>
</tr>
</tbody>
</table>

Date: November 08, 2018

Document #: 6718.12506.II187809

This Certificate is valid until **January 31, 2020** and subject to renewal at that time.

Muhammad Munir Chaudry, Ph.D.
President
Vigon International, Inc. certifies that the above flavor or ingredient is FDA/FEMA GRAS. We would like to assure you that we use only flavor ingredients that are listed as being generally recognized as safe (GRAS) on a reliable published industry association (FEMA) list and/or are approved for use in a regulation of the U.S. Food and Drug Administration. We hereby certify that this flavor or ingredient is safe for its intended use in food.

Vigon International, Inc. may terminate this certification at any time upon written notice in which this certification shall be null and void as to any material supplied after termination of the certification.

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
### Allergen/Sensitive Agents Identification Sheet

**Product Name:** BUTYL LACTATE

**Vigon Code:** 500557

* A check mark (✓) indicates the Allergen/Sensitive Agent is present. If blank it means that there is no Allergen/Sensitive present.

<table>
<thead>
<tr>
<th>ALLERGEN/SENSITIVE AGENTS</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORN &amp; CORN PRODUCTS</strong></td>
<td></td>
</tr>
<tr>
<td>Includes modified starch, hydrolyzed protein, sweeteners, sugars, spice carriers</td>
<td></td>
</tr>
<tr>
<td><strong>EGG &amp; EGG PRODUCTS</strong></td>
<td></td>
</tr>
<tr>
<td>liquid and powders</td>
<td></td>
</tr>
<tr>
<td><strong>FISH</strong></td>
<td></td>
</tr>
<tr>
<td>Includes any and all species of fresh and salt water fish</td>
<td></td>
</tr>
<tr>
<td><strong>GARLIC</strong></td>
<td></td>
</tr>
<tr>
<td>Dehydrated, powdered, granules, and flakes</td>
<td></td>
</tr>
<tr>
<td><strong>GLUTEN</strong></td>
<td></td>
</tr>
<tr>
<td>Wheat, rye, barley, oats, flour, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>MILK &amp; DAIRY PRODUCTS</strong></td>
<td></td>
</tr>
<tr>
<td>Includes whey, lactose, cheese, casein, spice carriers, milk, cream, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>MONOSODIUM GLUTAMATE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PEANUTS, PEANUT OIL &amp; PEANUT DERIVED ITEMS</strong></td>
<td></td>
</tr>
<tr>
<td>Peanut meal, flour &amp; ground nuts, szechwan sauce, mandelona nuts, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>SESAME SEEDS &amp; SESAME OIL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CRUSTACEANS</strong></td>
<td></td>
</tr>
<tr>
<td>Shrimp, lobster, rock lobster, crab, crayfish, and products made from them</td>
<td></td>
</tr>
<tr>
<td><strong>MOLLUSKS</strong></td>
<td></td>
</tr>
<tr>
<td>Clams, mussels, oysters, scallops, and products made from them</td>
<td></td>
</tr>
<tr>
<td><strong>SOY</strong></td>
<td></td>
</tr>
<tr>
<td>Includes soya powder, protein, oil, lecithin, tofu</td>
<td></td>
</tr>
<tr>
<td><strong>SULFITES</strong></td>
<td></td>
</tr>
<tr>
<td>Includes sulfur dioxide, sodium dithionite, chemicals that lists sulfite, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>TREE NUTS</strong></td>
<td></td>
</tr>
<tr>
<td>Includes almonds, beechnuts, bazil nuts, nutmeg, cashews, chestnuts, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>WHEAT</strong></td>
<td></td>
</tr>
<tr>
<td>Includes hydrolyzed wheat protein, flour, gluten flour, starches</td>
<td></td>
</tr>
<tr>
<td><strong>MUSTARD &amp; MUSTARD OIL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LUPIN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CELERY</strong></td>
<td></td>
</tr>
</tbody>
</table>

Vigon International, Inc. follows Good Manufacturing Practices and has implemented HACCP systems. Our personnel are trained on the proper handling of allergenic materials.

Sincerely,

Amanda Moyer  
Product Documentation Coordinator  
Date of Issue: February 19, 2019
GMO Status Statement

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. declares that the product listed above is not derived from or produced using genetically modified organisms or their derivatives.

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
Irradiation and Sewage Sludge Statement

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. declares that the product listed above has **not** been:

a) Exposed to Ionizing Radiation  
b) Derived from Sewage Sludge  
c) Treated with Ethyl Oxide

Vigon International, Inc. may terminate this statement at any time upon written notice in which this statement shall be null and void as to any material supplied after termination of the statement.

Sincerely,

Amanda Moyer  
Product Documentation Coordinator  
Date of Issue: February 19, 2019
Heavy Metals and Pesticide Statement

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. declares that, to the best of our knowledge and belief, all ingredients in the product listed above are listed as being generally recognized as safe (GRAS) by the Food and Drug administration (FDA) when used in accordance with the FDA's good manufacturing practices (GMP) and contain no residues of heavy metals and pesticides in excess of tolerances set by the FDA and the Environmental Protection Agency (EPA).

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
Continuing Product Guarantee

Product Name: BUTYL LACTATE

Vigon Code: 500557

In accordance with the regulations promulgated under the Federal Food, Drug, and Cosmetic Act, Vigon International, Inc. hereby provides continuing guarantee for the item listed above.

The article(s) comprising each shipment or other delivery hereafter made by Vigon International, Inc. is hereby guaranteed, as of the date of shipment or delivery, to be, on such date, not adulterated or misbranded within the meaning of the Federal Food, Drug, and Cosmetic Act, and not an article which may not, under the provisions of section 404, 505, or 512 of the act, be introduced into interstate commerce.

The guarantee herein given shall be a continuing guarantee and shall remain in full force and effect until revoked in writing by the undersigned. This guarantee shall not limit or preclude the operation and effect of any and all provisions of any agreement(s) under which the articles covered by this guarantee are sold, and the provisions of such agreement(s) shall govern in the event of any conflict or inconsistency herewith. Supplier's liability for breach of this guarantee shall in no event exceed the value of such of the articles of the supplier shipped to or on the order of Purchaser hereunder as may fail to comply with this guarantee.

This guarantee shall be void and of no effect in any instance where the particular use by Purchaser of any article to which this guarantee would otherwise apply is a use which is not in accordance with the requirements of the Federal Food, Drug and Cosmetic Act. Any and all prior guarantees and/or indemnity agreements heretofore given by supplier, are hereby revoked.

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
Dietary Preferences & Restrictions

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. certifies that the product listed above is suitable for consumption by:

<table>
<thead>
<tr>
<th>Dietary Preference</th>
<th>Suitable for Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegans</td>
<td>✓</td>
</tr>
<tr>
<td>Lacto-Vegetarians</td>
<td>✓</td>
</tr>
<tr>
<td>Ovo-Vegetarians</td>
<td>✓</td>
</tr>
<tr>
<td>Vegetarians</td>
<td>✓</td>
</tr>
</tbody>
</table>

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
Animal Testing Statement

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. is not in the practice of performing or commissioning animal testing on its finished products and actively evaluates the ingredients of its products through non-animal testing methods and through computational (predictive) toxicology programs. However, some ingredients used in our products have been subjected to animal testing by the academic community, government agencies, or within the chemical industry.

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019
Proposition 65 Statement

Product Name: BUTYL LACTATE

Vigon Code: 500557

Vigon International, Inc. certifies that the product above is not listed on the California’s Safe Drinking Water and Toxic Enforcement Act of 1986, also known as Proposition 65.

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 19, 2019