Product Specification

Product Name: ACETALDEHYDE DIETHYL ACETAL
Vigon Code: 500674
CAS Number: 105-57-7  FEMA Number: 2002

Characteristic: Specification:
Purity % 98.00 100.00
Gas Chromatograph PASSES TEST
Odor FRUITY, GREEN ODOR.
Refractive Index (@20c) 1.3790 1.3840
Specific Gravity (@25c) 0.8210 0.8270
Color/appearance CLEAR, COLORLESS TO PALE YELLOW LIQUID.

Additional Product Information:
Flash Point: -5 °F
Shelf Life: 12 Months
Storage Conditions: Stable when stored in its original package, tightly sealed under refrigeration (35-45°F).
Effective Date: August 10, 2016

Printed Date: February 4, 2020
Vigon International, Inc.
127 Airport Road East Stroudsburg, PA 18301-9629 USA | Tel: +1 570-476-6300 | Fax: +1 570-476-1110 | Email: regulatory@vigon.com | Web: vigon.com
# SAFETY DATA SHEET

## 500674 ACETALDEHYDE DIETHYL ACETAL

**Revision Date:** 07-17-2018  
**Version #:** 03  
**Print Date:** 07-17-2018  
**Page 1 of 11**

## 1. IDENTIFICATION

**Product Description:** ACETALDEHYDE DIETHYL ACETAL  
**CAS #** 105-57-7  
**FEMA Number** 2002  
**Other means of identification**  
**Vigon Item #** 500674  
**Recommended use** Concentrated flavor ingredient which may be used in flavor compounds according to legal and FEMA GRAS/FDA guidelines. Cosmetic material for FDA regulated product use.  
**Recommended restrictions** For Manufacturing Use Only  
**Company** Vigon International, Inc.  
**Address** 127 Airport Road  
**E. Stroudsburg, PA 18301**  
**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.**  
**For information call:** 570-476-6300  
**Web Site:** www.vigon.com  
**Manufacturer/Importer/Supplier/Distributor information**  
**Company name** Vigon International, Inc.  
**Address** 127 Airport Road  
**E. Stroudsburg, PA 18301**  
**United States**  
**Telephone** For information call: 570-476-6300  
**Website** www.vigon.com  
**E-mail** Not available.  
**Emergency phone number**  
**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 2  
**Health hazards**  
Acute toxicity, oral  
Category 5  
Skin corrosion/irritation  
Category 2  
Serious eye damage/eye irritation  
Category 2A  
**Environmental hazards** Not classified.  
**Label elements**

**Signal word** Danger
SAFETY DATA SHEET

500674 ACETALDEHYDE DIETHYL ACETAL

Hazard statement
Highly flammable liquid and vapor. May be harmful if swallowed. Causes skin irritation. Causes skin and eye irritation. Causes serious eye irritation.

Precautionary statement
Prevention

Response
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.

Storage and Disposal
Store in a well-ventilated place. Keep cool.
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>ACETALDEHYDE DIETHYL</td>
<td>diethyl acetal</td>
<td>105-57-7</td>
<td>100</td>
</tr>
<tr>
<td>ACETAL</td>
<td>1,1-DIAETHOXYAETHAN ACETAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACETALDEHYDE, DIETHYL ACETAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethylidenediethyl ether</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
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
500674 ACETALDEHYDE DIETHYL ACETAL

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.

Conditions for safe storage, including any incompatibilities
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store under refrigeration (35-50°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits
This substance has no PEL, TLV, or other recommended exposure limit.

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. 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. Keep away from food and drink. 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.

Melting point/freezing point
-148 °F (-100 °C)

Initial boiling point and boiling range
216.86 °F (102.7 °C) 101.325 kPa

Flash point
-5.0 °F (-20.6 °C) Closed Cup

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Flammability limit - lower
Not available.
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 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
No adverse effects due to inhalation are expected.

Skin contact
Causes skin irritation.

Eye contact
Causes serious eye irritation.

Ingestion
May be harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity
May be harmful if swallowed.

Product  Species  Test Results

ACETALDEHYDE DIETHYL ACETAL (CAS 105-57-7)

Acute

Dermal

LD50  Rabbit  > 5 g/kg

Skin corrosion/irritation
Causes 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.

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

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

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

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

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

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
Partition coefficient n-octanol / water (log Kow)
0.84
SAFETY DATA SHEET
500674 ACETALDEHYDE DIETHYL ACETAL

Mobility in soil  No data available.
Other adverse effects  The product contains volatile organic compounds which have a photochemical ozone creation potential.

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
- UN number 1088
- UN proper shipping name ACETAL
- Transport hazard class(es) 3
- Subsidiary class(es) -
- Packing group II
- Environmental hazards No
- Labels required 3

ADR
- UN number 1088
- UN proper shipping name ACETAL
- Transport hazard class(es) 3
- Subsidiary class(es) -
- Packing group II
- Environmental hazards No
- Labels required 3

RID
- UN number 1088
- UN proper shipping name ACETAL
- Transport hazard class(es) 3
- Subsidiary class(es) -
- Packing Group II
- Environmental Hazards No
- Labels required 3
- Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

DOT

BULK
- UN number 1088
Proper shipping name  ACETAL
Hazard class  3
Packing group  II
Environmental hazards
  Marine pollutant  No
  Packaging exceptions  150
  Packaging bulk  242
  Labels required  3

DOT
NON-BULK
  UN number  1088
  Proper shipping name  ACETAL
  Hazard class  3
  Packing group  II
  Environmental hazards
    Marine pollutant  No
    Packaging exceptions  150
    Packaging non bulk  202
    Labels required  3

IATA
  UN number  1088
    UN proper shipping name  ACETAL
  Transport hazard class(es)  3
  Subsidiary class(es)  -
  Packing group  II
  Environmental hazards
    Marine pollutant  No
    Labels required  3

IMDG
  UN number  1088
    UN proper shipping name  ACETAL
  Transport hazard class(es)  3
  Subsidiary class(es)  -
  Packing group  II
  Environmental hazards
    Marine pollutant  No
    Labels required  3
  Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
  Not applicable.
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)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 (TRI reporting)
Not regulated.

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>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
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<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
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<tr>
<td>Taiwan</td>
<td>Taiwan Toxic Chemical Substances (TCS)</td>
<td>Yes</td>
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<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

<table>
<thead>
<tr>
<th>Issue date</th>
<th>11-30-2015</th>
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</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>07-17-2018</td>
</tr>
<tr>
<td>Version #</td>
<td>03</td>
</tr>
<tr>
<td>HMIS® ratings</td>
<td></td>
</tr>
<tr>
<td>Health: 2</td>
<td></td>
</tr>
<tr>
<td>Flammability: 3</td>
<td></td>
</tr>
<tr>
<td>Physical hazard: 0</td>
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</tr>
</tbody>
</table>
Disclaimer

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.

Revision information

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>500674</td>
<td>ACETALDEHYDE DIETHYL ACETAL</td>
<td>Parve</td>
<td>Kof-K symbol required</td>
<td>KFJ3UU9MF1</td>
</tr>
</tbody>
</table>

Date: February 3, 2020
Kof-K ID: K-0000507
Certificate ID: RXBN7-19VE3
Product Count: 1
Rabbi Avram Ossey
Rabbinic Administrator

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.

Date: November 15, 2019
Document #: 6718.12506.II194217

Company Name & Address: Vigon International, Inc. 127 Airport Road East Stroudsburg, Pennsylvania 18301 USA

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Code</th>
<th>Halal-ID</th>
<th>Product Certificate #</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETALDEHYDE DIETHYL ACETAL</td>
<td>500674</td>
<td>A63650</td>
<td>HC-19VIY128</td>
</tr>
</tbody>
</table>

This Certificate is valid until January 31, 2021 and subject to renewal at that time.
Food Grade Certification

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674
FEMA #: 2002

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 4, 2020
### Allergen/Sensitive Agents Identification Sheet

**Product Name:** ACETALDEHYDE DIETHYL ACETAL

**Vigon Code:** 500674

* 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,</td>
<td></td>
</tr>
<tr>
<td>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>
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<tr>
<td><strong>FISH</strong></td>
<td></td>
</tr>
<tr>
<td>Includes any and all species of fresh and</td>
<td></td>
</tr>
<tr>
<td>salt water fish</td>
<td></td>
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<tr>
<td><strong>GARLIC</strong></td>
<td></td>
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<tr>
<td>Dehydrated, powdered, granules, and flakes</td>
<td></td>
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<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,</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>sauce, mandelona nuts, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>SESAME SEEDS &amp; SESAME OIL</strong></td>
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</tr>
<tr>
<td><strong>CRUSTACEANS</strong></td>
<td></td>
</tr>
<tr>
<td>Shrimp, lobster, rock lobster, crab, crayfish,</td>
<td></td>
</tr>
<tr>
<td>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,</td>
<td></td>
</tr>
<tr>
<td>tofu</td>
<td></td>
</tr>
<tr>
<td><strong>SULFITES</strong></td>
<td></td>
</tr>
<tr>
<td>Includes sulfur dioxide, sodium dithionite,</td>
<td></td>
</tr>
<tr>
<td>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,</td>
<td></td>
</tr>
<tr>
<td>nutmeg, cashews, chestnuts, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>WHEAT</strong></td>
<td></td>
</tr>
<tr>
<td>Includes hydrolyzed wheat protein, flour,</td>
<td></td>
</tr>
<tr>
<td>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 4, 2020

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Vigon International, Inc.
127 Airport Road East Stroudsburg, PA 18301-9629 USA | Tel: +1 570-476-6300 | Fax: +1 570-476-1110 | Email: regulatory@vigon.com | Web: vigon.com
GMO Status Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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

Sincerely,

[Signature]

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 4, 2020
Ingredient Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

CAS #: 105-57-7 1,1-diethoxyethane 100%

Vigon Regulatory Department
Date of Issue: February 4, 2020
Irradiation and Sewage Sludge Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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 4, 2020
Heavy Metals and Pesticide Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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 4, 2020
Continuing Product Guarantee

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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 4, 2020
Dietary Preferences & Restrictions

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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

<table>
<thead>
<tr>
<th>Dietary Preference</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vegans</strong></td>
<td>Do not eat meat, poultry, fish/seafood, eggs, dairy products, honey</td>
</tr>
<tr>
<td><strong>Lacto-Vegetarians</strong></td>
<td>Do not eat meat, poultry, fish/seafood, eggs, but do eat dairy products</td>
</tr>
<tr>
<td><strong>Ovo-Vegetarians</strong></td>
<td>Do not eat meat, poultry, fish/seafood, dairy products, but do eat eggs</td>
</tr>
<tr>
<td><strong>Vegetarians</strong></td>
<td>Do not eat meat, poultry, fish/seafood, but do eat dairy products and eggs</td>
</tr>
</tbody>
</table>

Sincerely,

Amanda Moyer
Product Documentation Coordinator
Date of Issue: February 4, 2020
Animal Testing Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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 4, 2020
Proposition 65 Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

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 4, 2020
Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

We hereby confirm, to the best of our knowledge, that the above referenced product has not been formulated with engineered nanomaterials.

"Engineered nanomaterial" means any intentionally produced material that has one or more dimensions of the order of 100 nm or less or that is composed of discrete functional parts, either internally or at the surface, many of which have one or more dimensions of the order of 100 nm or less, including structures, agglomerates or aggregates, which may have a size above the order of 100 nm but retain properties that are characteristic of the nanoscale.

Vigon Regulatory Department
Date of Issue: February 4, 2020
Transmissible Spongiform Encephalopathy (TSE) and Bovine Spongiform Encephalopathy (BSE) Statement

Product Name: ACETALDEHYDE DIETHYL ACETAL

Vigon Code: 500674

Vigon International, Inc. products are manufactured wholly from synthetic, natural or manufactured materials and do not contain any raw materials produced from or substances derived of animal origin. Moreover, these products do not contain, and are not derived from, specified risk material as defined in Commission Decision 97/534/EC or mechanically recovered meat obtained from the vertebral column of bovine, ovine or caprine animals.

The manufacturing process does not use any ingredient of animal origin nor do our products come in contact with animal products during storage and transportation.

We further declare that our products are Dioxin Free.

Therefore, to the best of our knowledge the product listed above are free from Transmissible Spongiform Encephalopathy (TSE) and Bovine Spongiform Encephalopathy (BSE).

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.

Vigon Regulatory Department
Date of Issue: February 4, 2020
## International Inventories

**Product Name:** ACETALDEHYDE DIETHYL ACETAL

**Vigon Code:** 500674

<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>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>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>United States &amp; Puerto Rico</td>
<td>Toxic Substances and Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Vigon Regulatory Department  
Date of Issue: February 4, 2020