

SAFETY DATA SHEET

507427 VANILLIN NAT EX FERULIC (RHOVANIL NATURAL)

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1. IDENTIFICATION

Product Description:	VANILLIN NAT EX FERULIC (RHOVANIL NATURAL)	
CAS #	121-33-5	
FEMA Number	3107	
Other means of identification		
Vigon Item #	507427	
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	<u>24 Hour Emergency Response Information</u>	
Vigon International, Inc.	INFOTRAC (ACCT# 78928);	
127 Airport Road	1-800-535-5053 WITHIN THE U.S.A.	
E. Stroudsburg, PA 18301	1-352-323-3500 OUTSIDE THE U.S.A.	
For information call: 570-476-6300		
Web Site: www.vigon.com		

2. HAZARD(S) IDENTIFICATION

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3

Label elements

Signal word	Warning	
Hazard statement		
H302	Harmful if swallowed.	
H319	Causes serious eye irritation.	
H402	Harmful to aquatic life.	
H412	Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention		
P264	Wash thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product.	
P273	Avoid release to the environment.	
P280	Wear eye/face protection.	

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Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P330 Rinse mouth.
 P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

Store away from incompatible materials.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

WARNING! May form combustible dust concentrations in air. Avoid breathing dust.

Supplemental information

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and synonyms	CAS number	%
VANILLIN	4-hydroxy-3-methoxybenzaldehyde benzaldehyde, 4-hydroxy-3-methoxy-4 - formyl-2-methoxyphenol p- hydroxy-m-methoxybenzaldehyde 2- methoxy-4-formyl phenol 3- methoxy-4-hydroxybenzaldehyde vanillic aldehyde vanillaldehyde	121-33-5	100

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. Dusts may irritate the respiratory tract, skin and eyes.

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.

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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, fog, CO ₂ , 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. Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
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. Eliminate all sources of ignition. 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.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Sweep up and place in a clearly labeled container for chemical waste. Wash contaminated area with water. Use only non-sparking tools. Avoid the generation of dusts during clean-up. 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 when there is a risk of dust explosion. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Assume that this material is capable of producing a dust explosion if ignited as a dust cloud.
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.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Material	Type	Value
VANILLIN (CAS 121-33-5)	TWA	10 mg/m ³

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

Appropriate engineering controls Use only appropriately classified electrical equipment and powered industrial trucks. Use explosion-proof ventilation equipment to stay below exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

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 Dust mask.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or 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	Powder\Crystal.
Form	Powder. Crystalline powder.
Color	Refer to Spec Sheet
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	176 - 177.8 °F (80 - 81 °C)
Initial boiling point and boiling range	543.2 - 545 °F (284 - 285 °C) 101.325 kPa
Flash point	> 200.0 °F (> 93.3 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.

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Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0 mm Hg at 25 °C
Vapor density	5.2
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	1.4
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.06 g/cm ³ estimated
Flammability class	Combustible IIIB estimated
Molecular formula	C ₈ -H ₈ -O ₃
Molecular weight	152.15 g/mol

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	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Minimize dust generation and accumulation. 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	Irritating to respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

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Acute toxicity Harmful if swallowed.

Product	Species	Test Results
VANILLIN (CAS 121-33-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5010 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Food intake (animal). Gastrointestinal:Peritonitis.
<i>Oral</i>		
LD50	Rat	1580 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Eyes - rabbit - Irritating to eyes. - 72 h

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization Maximisation Test - guinea pig - Directive 67/548/EEC, Annex V, B.6. - Does not cause skin sensitisation.

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

Carcinogenicity

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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 Harmful to aquatic life with long lasting effects.

Product	Species	Test Results
VANILLIN (CAS 121-33-5)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 53 - 61.3 mg/l, 96 hours Leuciscus idus (Golden orfe) 123 mg/l, 96 hours

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Product	Species	Test Results
Other	EC50 Activated Sludge	1800 mg/l, 49 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Sturm test, OECD 301-B, (CO₂)
Results: Readily biodegradable
77.6 %

Bioaccumulative potential

Partition coefficient n-octanol / water (log K_{ow})
1.37

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

14. TRANSPORT INFORMATION

ADN

Not regulated as dangerous goods.

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

DOT

BULK

Not regulated as dangerous goods.

DOT

NON-BULK

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.



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IMDG

Not regulated as dangerous goods.

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.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

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

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.



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US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

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

*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 01-18-2016

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Further information Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

HMIS® ratings
Health: 2
Flammability: 1
Physical hazard: 0



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Disclaimer

Vigon 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, 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.