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1. IDENTIFICATION Product Description: DODECALACTONE GAMMA NATURA CAS# 2305-05-7 2400 **FEMA Number** Other means of identification Vigon Item # 503952 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 24 Hour Emergency Response Information Vigon International, LLC INFOTRAC (ACCT# 78928); 1-800-535-5053 WITHIN THE U.S.A. 127 Airport Road 1-352-323-3500 OUTSIDE THE U.S.A. E. Stroudsburg, PA 18301 For information call: 570-476-6300 Web Site: www.vigon.com Manufacturer/Importer/Supplier/Distributor information Manufacturer Vigon International, LLC Company name Address 127 Airport Road E. Stroudsburg, PA 18301 **United States** Telephone 570-476-6300 For information call: Website www.vigon.com E-mail regulatory@vigon.com **INFOTRAC** Emergency phone number (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 Not classified. Skin corrosion/irritation Health hazards 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





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Hazard statement	Causes skin irritation. Causes skin and eye irritation. Causes serious eye irritation. May cause respiratory irritation.
Precautionary statement	
Prevention	Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves.
Response	IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
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 oral toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity. 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. % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and synonyms	CAS number	%
DODECALACTONE GAMMA	GAMMA-N-OCTYL-GAMMA-N-BUTYRO LACTONE Dihydro-5-octylfuran-2(3H)-one 5-octyloxolan-2-one	2305-05-7	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. May cause respiratory irritation. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Not available.



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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 Fire may produce irritating, corrosive and/or toxic gases. the chemical Special protective equipment Firefighters must use standard protective equipment including flame retardant coat, helmet with and precautions for firefighters 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 In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and equipment/instructions 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). 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	Retain and dispose of contaminated wash water. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water.



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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 in a cool, well-ventilated area.	
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, su Eye/face protection	ch as personal protective equipment Wear safety glasses with side shields (or goggles).	
Skin protection		
Hand protection	Chemical resistant gloves.	
Other	Chemical resistant gloves.	
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	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.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	267.8 °F (131 °C) at 1.5 mmHg
Flash point	> 200.0 °F (> 93.3 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	

Explosive limit - lower (%) Not available.



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Explosive limit - upper (%)	Not available.
Vapor pressure	0.002 mm Hg at 25 °C
Vapor density	6.9
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	
Density	0.94 g/cm3 estimated at 25 °C
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Molecular weight	198.31 g/mol
Oxidizing properties	Not oxidizing.
Specific gravity	0.94 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 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	May cause irritation to the respiratory system.	
Skin contact	Causes 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	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.	

Information on toxicological effects

Acute toxicity

Not known.



Revision Date: 05-11-2023 Page 6 of 10 Print Date: 05-11-2023 Version # 02 Causes skin irritation. Skin corrosion/irritation Serious eye damage/eye Causes serious eye irritation. 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 1910.1001-1053) 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 -May cause respiratory irritation. single exposure Not classified. Specific target organ toxicity repeated exposure 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

	possibility that large of nequent spille can have a harmar of damaging cheet of 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.



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14. TRANSPORT INFORMATION

ADN

ADN		
UN nu	ımber	3082
UN pr	oper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DODECALACTONE GAMMA)
Trans	port hazard class(es)	9
Subsi	diary class(es)	-
Packi	ng group	III
Enviro	onmental hazards	Yes
Labels	s required	9
ADR		
UN nu	ımber	3082
UN pr	oper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DODECALACTONE GAMMA)
Trans	port hazard class(es)	9
Subsi	diary class(es)	-
	ng group	III
Enviro	onmental hazards	Yes
Labels	s required	9
RID		
UN nu	Imber	3082
UN pr	oper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DODECALACTONE GAMMA)
Trans	port hazard class(es)	9
Subsi	diary class(es)	-
Packi	ng Group	III
Enviro	onmental Hazards	Yes
Labels	s required	9
Specia	al precautions for user	Read safety instructions, SDS and emergency procedures before handling.
DOT		
BULK		
UN nu	Imber	3082
Prope	r shipping name	Environmentally hazardous substances, liquid, n.o.s. (DODECALACTONE GAMMA)
Hazar	d class	9
Packi	ng group	III
Enviro	onmental hazards	
Ν	larine pollutant	Yes
Packa	iging exceptions	155
Packa	iging bulk	241
Labels	s required	9
DOT		
NON-BUL	ĸ	
UN nu	ımber	3082
Prope	r shipping name	Environmentally hazardous substances, liquid, n.o.s. (DODECALACTONE GAMMA)
Hazar	d class	9

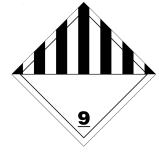


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Packing group	
Environmental hazards	
Marine pollutant	Yes
Packaging exceptions	155
Packaging non bulk	203
Labels required	9
ΙΑΤΑ	
UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (DODECALACTONE GAMMA)
Transport hazard class(es)	9
Subsidiary class(es)	-
Packing group	III
Environmental hazards	Yes
Labels required	9
IMDG	
UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DODECALACTONE GAMMA)
Transport hazard class(es)	9
Subsidiary class(es)	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Labels required	9
Transport in bulk according	Not applicable.
to Annex II of MARPOL	
73/78 and the IBC Code	

ADN; ADR; DOT BULK; DOT NON-BULK; IATA; IMDG; RID





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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.

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes
Classified hazard	Skin corrosion or irritation
categories	Serious eye damage or eye irritation
	Specific target organ toxicity (single or repeated exposure)

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 Not regulated. (SDWA)

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

Issue date	11-29-2015
Revision date	05-11-2023



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Version #	02
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0
Disclaimer	Vigon International, LLC 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 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 relates only to 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
Revision information	This document has undergone significant changes and should be reviewed in its entirety.