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1. IDENTIFICATION			
Product Description:	ALDEHYDE C-11 UNDECYLIC FCC		
CAS #	112-44-7		
FEMA Number	3092		
Other means of identification Vigon Item #	500942		
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		
<u>Company</u> Vigon International, Inc.		24 Hour Emergency Response Information 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			
Manufacturer/Importer/Supplier/Dis Manufacturer	stributor information		
Company name Address	Vigon International, Inc. 127 Airport Road E. Stroudsburg, PA 18301 United States		
Telephone Website E-mail	For information call: www.vigon.com regulatory@vigon.com	570-476-6300	
Emergency phone number	INFOTRAC 1-800-535-5053 1-352-323-3500	(ACCT# 78928); WITHIN THE U.S.A. OUTSIDE THE U.S.A.	
2. HAZARD(S) IDENTIFICA	TION		
Physical hazards	Not classified.		

Health hazards Environmental hazards Label elements

Signal word

The substance does not meet the criteria for classification.

Category 2

Hazard statement Precautionary statement Prevention

Observe good industrial hygiene practices.

Skin corrosion/irritation

Not classified.

None.



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Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	After prolonged contact with highly porous materials, this product may spontaneously combust.
Supplemental information	100% of the substance consists of component(s) of unknown acute inhalation toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and synonyms	CAS number	%
Undecylaldehyde	UNDECANAL hendecanal undecyl aldehyde hendecanaldehyde	112-44-7	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	Direct contact with eyes may cause temporary 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. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.	
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.	



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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
Spacific mothodo	entering them. Keep run-off water out of sewers and water sources. Dike for water control. Use water spray to cool unopened containers.
Specific methods General fire hazards	Static charges generated by emptying package in or near flammable vapor may cause flash fire.
6. ACCIDENTAL RELEASE	E MEASURES
Personal precautions, protective equipment and emergency procedures	Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Keep unnecessary personnel away. 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	Collect and dispose of spillage as indicated in section 13 of the SDS.
	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.
	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
	Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains.
	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. 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.
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.

Precautions for safe handling	Do not handle or store near an open flame, heat or other sources of ignition. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. May auto-oxidize with sufficient heat generation to ignite if spread (as a thin film) or absorbed on porous or fibrous material. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Contaminated rags and cloths must be put in fireproof containers for disposal. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Do not store in direct sunlight. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Keep under a nitrogen blanket.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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



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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	ich as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).	
Skin protection		
Hand protection	Chemical resistant gloves.	
Other	Wear suitable protective clothing.	
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	28.4 °F (-2 °C)
Initial boiling point and boiling range	433.4 °F (223 °C)
Flash point	> 200.0 °F (> 93.3 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explos	ive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.08 mm Hg at 25 °C
Vapor density	5.9
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble



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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	C11H24O
Molecular weight	170.3 g/mol 170.29 g/mol
Oxidizing properties	Not oxidizing.
Specific gravity	0.83 at 25 °C

10. STABILITY AND REACTIVITY

Reactivity Chemical stability	The product is stable and non-reactive under normal conditions of use, storage and transport. Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.
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	Knowledge about health hazard is incomplete.		
Skin contact	Causes mild skin irritation.		
Eye contact	Knowledge about health hazard is incomplete. Cause	es mild eye irritation.	
Ingestion	Expected to be a low ingestion hazard.		
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.		
Information on toxicological effects			
Acute toxicity	Not known.		
Product	Species	Test Results	
Undecylaldehyde (CAS 112-44-7)			
Acute			
Dermal			
LD50	Rabbit	> 5000 mg/kg (OECD Test Guideline 402)	



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Product	Species	Test Results
Oral		
LD50	Rat	> 5000 mg/kg (OECD Test Guideline 401)
Skin corrosion/irritation	Irritation (dermal, rabbit)(Drai Irritation (dermal)(Human ma	k of data the classification is not possible. ze test): mildly irritating @ 100% x.): non irritant @ 5% n irritation in susceptible persons.
Serious eye damage/eye irritation	Due to partial or complete lack of data the classification is not possible. Eye irritation : Vapours may cause irritation to the eyes, respiratory system and the skin.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	Due to partial or complete lac Sensitization (Human max.):	k of data the classification is not possible. non sensitizing @ 5%
Germ cell mutagenicity	Due to partial or complete lac	k of data the classification is not possible.
Carcinogenicity	Due to partial or complete lac	k of data the classification is not possible.
IARC Monographs. Overall E	Evaluation of Carcinogenicity	
	d Substances (29 CFR 1910.100	1-1053)
Not listed.	gram (NTP) Report on Carcinoge	ane
Not listed.		
Reproductive toxicity	Due to partial or complete lac	k of data the classification is not possible.
Specific target organ toxicity - single exposure		k of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lac	k of data the classification is not possible.
Aspiration hazard	Due to partial or complete lac	k of data the classification is not possible.

12. ECOLOGICAL INFORMATION

Ecotoxicity Persistence and degradability	Readily biodegradabilty(OECD 301B mod.): readily biodegradable Biodegradability aerobic - Exposure time 28 d	
	Result: > 90 % - Readily biodegradable.	
	Biodegradability : Result: Not readily biodegradable. 72 %	
	Method: OECD Test Guideline 301 F	
	Remarks: The 10 day time window criterion is not fulfilled.	
	Result: Inherently biodegradable.	
	72%	
	Method: OECD Test Guideline 301 F	
	Remarks:	
	The 10 day time window criterion is not fulfilled.	
Bioaccumulative potential	No data available.	



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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 CONSIDE	RATIONS		
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

BULK

Not regulated as dangerous goods.

DOT

NON-BULK

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

US federal regulations

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.



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SARA 304 Emergency release	se notification
Not regulated.	
OSHA Specifically Regulated	Substances (29 CFR 1910.1001-1053)
Not listed.	
Superfund Amendments and Rea	uthorization Act of 1986 (SARA)
SARA 302 Extremely hazard	ous substance
Not listed.	
SARA 311/312 Hazardous chemical	No
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.
16. OTHER INFORMATION	I, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date	10-13-2016
Revision date	05-18-2020
Version #	03
HMIS® ratings	Health: 2
	Flammability: 1
	Physical hazard: 0



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Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.