

SAFETY DATA SHEET

504022 COUMARIN NATURAL

Revision Date: 04-12-2014

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Version # 01

Print Date: 11-28-2015

1. IDENTIFICATION

Product Description:	COUMARIN NATURAL
CAS #	91-64-5
Other means of identification	
Vigon Item #	504022
Recommended use	Concentrated aromatic ingredient which may be used fragrance compounds according to legal and IFRA guidelines.
Recommended restrictions	For Manufacturing Use Only
<u>Company</u>	<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 3
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 2 (kidney, liver)
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**

Danger

Hazard statement

H301	Toxic if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

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H373	May cause damage to organs (kidney, liver) through prolonged or repeated exposure.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

P280	Wear eye/face protection.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see this label).
P330	Rinse mouth.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and synonyms	CAS number	%
COUMARIN	COUMARINIC LACTONE COUMARINIC ANHYDRIDE 2H-Benzopyran-2-one chromen-2-one	91-64-5	100

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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	Irritation of eyes and mucous membranes. May cause allergic skin reaction. Edema. Liver enlargement. Jaundice. Proteinuria. Prolonged exposure may cause chronic effects.
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, 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.
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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor.
Methods and materials for containment and cleaning up	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. Collect and dispose of spillage as indicated in section 13 of the SDS.



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Environmental precautions 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. Retain and dispose of contaminated wash water.

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 prolonged exposure. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing.

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 No exposure limits noted for ingredient(s).

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.

Individual protection measures, such as personal protective equipment

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

Skin protection

Hand protection Chemical resistant gloves.

Other Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic dust cartridge.

Thermal hazards Not available.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Refer to Spec Sheet

Physical state Powder\Crystal.

Form Crystalline powder.

Color Refer to Spec Sheet

Odor Characteristic.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 159.8 °F (71 °C)

Initial boiling point and boiling range 573.8 °F (301 °C)

Flash point > 200.0 °F (> 93.3 °C) Closed Cup

Evaporation rate Not available.

Flammability (solid, gas) Not available.

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Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 0 kPa at 25 °C
0.1 mm Hg at 20 °C

Vapor density 5.1

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 informationDensity 0.93 g/cm³ estimatedMolecular formula C₉H₆O₂

Molecular weight 146.14 g/mol

Specific gravity 0.94 at 20 °C

10. STABILITY AND REACTIVITY

Reactivity Not available.

Chemical stability May form explosive peroxides.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Incompatible materials Not available.

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 Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Ingestion Toxic if swallowed.

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Symptoms related to the physical, chemical and toxicological characteristics

Edema. Liver enlargement. Jaundice. Proteinuria. Irritant effects.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
COUMARIN NATURAL (CAS 91-64-5)		
<i>Acute</i>		
<i>Oral</i>		
LD50	Guinea pig	202 mg/kg
	Mouse	196 mg/kg
	Rat	293 mg/kg
<i>Other</i>		
LD50	Mouse	220 mg/kg

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

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization

Due to lack of data the classification is not possible.

Skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Due to lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

COUMARIN (CAS 91-64-5)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure

Respiratory tract irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs (kidney, liver) through prolonged or repeated exposure.

Aspiration hazard

Not applicable.

Chronic effects

May cause damage to organs through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

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Product			Species	Test Results
COUMARIN (CAS 91-64-5)				
Aquatic				
Crustacea	LC50		Water flea (<i>Daphnia magna</i>)	10 - 18 mg/l, 48 hours
Fish	LC50		Guppy (<i>Poecilia reticulata</i>)	32 - 100 mg/l, 96 hours

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

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

1.39

Bioconcentration factor (BCF)

< 10

Species: *Leuciscus idus* (Golden orfe)

Test Duration: 3 d

Mobility in soil Not available.

Other adverse effects Not available.

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.

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

UN number 2811
 UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
 Transport hazard class(es) 6.1(PGIII)
 Subsidiary class(es) -
 Packing group III
 Environmental hazards No
 Labels required 6.1

ADR

UN number 2811
 UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
 Transport hazard class(es) 6.1(PGIII)
 Subsidiary class(es) -



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Packing group III
Environmental hazards No
Labels required 6.1

RID

UN number 2811
UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
Transport hazard class(es) 6.1(PGIII)
Subsidiary class(es) -
Packing group III
Environmental hazards No
Labels required 6.1

DOT

BULK

UN number 2811
Proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
Hazard class 6.1(PGIII)
Packing group III
Environmental hazards
Marine pollutant No
Packaging exceptions 153
Packaging bulk 240
Labels required 6.1

DOT

NON-BULK

UN number 2811
Proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
Hazard class 6.1(PGIII)
Packing group III
Environmental hazards
Marine pollutant No
Packaging exceptions 153
Packaging non bulk 213
Labels required 6.1

IATA

UN number 2811
UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)
Transport hazard class(es) 6.1(PGIII)
Subsidiary class(es) -
Packing group III
Environmental hazards No
Labels required 6.1

IMDG

UN number 2811
UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (COUMARIN)

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Transport hazard class(es) 6.1(PGIII)
Subsidiary class(es) -
Packing group III
Environmental hazards
Marine pollutant No
Labels required 6.1
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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

**15. REGULATORY INFORMATION****US federal regulations****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 - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes



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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.

Food and Drug Administration (FDA) Barred from use in human food

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

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

Not listed.

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).



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

Issue date	11-28-2015
Revision date	04-12-2014
Version #	01
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0

Disclaimer

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.