

**1. PRODUCT AND COMPANY IDENTIFICATION:**

<b>PRODUCT CODE</b>	N0315
<b>PRODUCT NAME</b>	NATURAL COUMARIN
<b>SUPPLIER</b>	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

**2. HAZARD IDENTIFICATION:**

**Physical hazards**

Not classified.

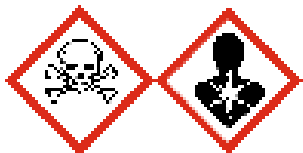
**Health hazards**

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.
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**

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

**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 AND 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

### 4. FIRST-AID GUIDE:

#### 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 GUIDE:

#### 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 firefighter's protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires.

**Firefighting 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 GUIDE:**

**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.

**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 AND 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:**

<b>Appearance</b>	Refer to Spec Sheet
<b>Physical state</b>	Powder\Crystal.
<b>Form</b>	Crystalline powder.
<b>Color</b>	Crystalline powder.
<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	159.8 °F (71 °C)
<b>Initial boiling point and boiling range</b>	573.8 °F (301 °C)
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%)</b>	Not available.
<b>Flammability limit – upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0 kPa at 25 °C 0.1 mm Hg at 20 °C
<b>Vapor density</b>	5.1
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient(n-octanol/water)</b>	1.4
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.93 g/cm <sup>3</sup> estimated
<b>Molecular formula</b>	C <sub>9</sub> H <sub>6</sub> O <sub>2</sub>
<b>Molecular weight</b>	146.14 g/mol
<b>Specific gravity</b>	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.

**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 (CAS 91-64-5) <b>Acute</b> Oral LD50	Guinea pig Mouse Rat	202 mg/kg 196 mg/kg 293 mg/kg
Other 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

**Specific target organ toxicity repeated**

Exposure

**Respiratory tract irritation.**

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.

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

**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. TRANSPORTATION INFORMATION:**

<b>ADN</b>	
<b>UN number</b>	2811
<b>UN proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Transport hazard class(es)</b>	6.1(PGIII)
<b>Subsidiary class(es)</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No
<b>Labels required</b>	6.1
<b>ADR</b>	
<b>UN number</b>	2811
<b>UN proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Transport hazard class(es )</b>	6.1(PGIII)
<b>Subsidiary class(es)</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No
<b>Labels required</b>	6.1
<b>RID</b>	
<b>UN number</b>	2811
<b>UN proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Transport hazard class(es)</b>	6.1(PGIII)
<b>Subsidiary class(es)</b>	-
<b>Packing group III</b>	
<b>Environmental hazards</b>	No
<b>Labels required</b>	6.1
<b>DOT</b>	
<b>BULK</b>	
<b>UN number</b>	2811
<b>Proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Hazard class</b>	6.1(PGIII)
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Special provisions</b>	IB8, IP3, T1, TP33
<b>Packaging exceptions</b>	153
<b>Packaging bulk</b>	240
<b>DOT</b>	
<b>NON-BULK</b>	
<b>UN number</b>	2811

<b>Proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Hazard class</b>	6.1(PGIII)
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Special provisions</b>	IB8, IP3, T1, TP33
<b>Packaging exceptions</b>	153
<b>Packaging non bulk</b>	213
<b>IATA</b>	
<b>UN number</b>	2811
<b>UN proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Transport hazard class(es)</b>	6.1(PGIII)
<b>Subsidiary class(es)</b>	-
<b>Packing group III</b>	
<b>Environmental hazards</b>	No
<b>Labels required</b>	6.1
<b>IMDG</b>	
<b>UN number</b>	2811
<b>UN proper shipping name</b> (COUMARIN)	TOXIC SOLID, ORGANIC, N.O.S.
<b>Transport hazard class(es)</b>	6.1(PGIII)
<b>Subsidiary class(es)</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Labels required</b>	6.1
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>ADN; ADR; DOT BULK; DOT NON-BULK; IATA; IMDG; RID</b>	
	

**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

**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.

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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:

The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the SDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.

**Prepared By:** M&U International LLC

**REVISED:** 02/17/2015