



Material Safety Data Sheet

Coumarin, 99+% (GC)

Section 1 - Chemical Product

MSDS Name: **Coumarin**, 99+% (GC)

Catalog Numbers: AC110530000, AC110530010, AC110530050, AC110531000, AC110532500, AC110535000 AC110535000

Synonyms: 2H-1-Benzopyran-2-One; O-Hydroxycinnamic Lactone; Benzo-Alpha-Pyrone.

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
91-64-5	Coumarin	99	202-086-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear almost colorless crystals.

Warning! Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause central nervous system depression. May cause liver damage.

Target Organs: Liver, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. May cause chemical conjunctivitis.

Skin: Causes skin irritation. Harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver damage. May cause central nervous system depression.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. May cause drowsiness, unconsciousness, and central nervous system depression.

Chronic: May cause cancer according to animal studies. Chronic exposure may cause liver damage. Repeated exposure may cause central and peripheral nervous system damage and digestive tract disturbances. Limited evidence of a carcinogenic effect.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Flash Point: 162 deg C (323.60 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower:N/A

Upper: N/A

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Coumarin	none listed	none listed	none listed

OSHA Vacated PELs: Coumarin: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149

approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystals
Appearance: clear almost colorless
Odor: vanilla-like
pH: Not available.
Vapor Pressure: 1 hPa @ 106 C
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 298 deg C @ 760.00mm Hg
Freezing/Melting Point: 68 - 71 deg C
Decomposition Temperature: Not available.
Solubility: Slightly soluble.
Specific Gravity/Density: .9350g/cm³
Molecular Formula: C₉H₆O₂
Molecular Weight: 146.15

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation, excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, strong acids.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 91-64-5: GN4200000
LD50/LC50:
CAS# 91-64-5:
Oral, mouse: LD50 = 196 mg/kg;
Oral, rat: LD50 = 293 mg/kg;

Carcinogenicity:

CAS# 91-64-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: Mutagenic effects have occurred in experimental animals.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC SOLIDS, ORGANIC, N.O.S.	TOXIC SOLIDS, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN2811	UN2811
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 91-64-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 91-64-5: immediate, delayed.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 91-64-5 can be found on the following state right to know lists: California.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 91-64-5: 0

Canada - DSL/NDSL

CAS# 91-64-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the **MSDS** contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

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