SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 9,10-Anthraquinone

Product Number : PS926
Brand : Supelco

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Anthraquinone

Formula : $C_{14}H_8O_2$
Molecular Weight : 208.21 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Anthraquinone			
84-65-1	201-549-0	-	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Toxic by inhalation., Harmful by skin absorption., Skin sensitiser

Target Organs

Kidney, Liver, Bladder

HMIS Classification
Health Hazard: 3
Chronic Health Hazard: *
Flammability: 1
Physical hazards: 0

NFPA Rating
Health Hazard: 2
Fire: 1
Reactivity Hazard: 0

Potential Health Effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point	185 °C (365 °F) - closed cup
Ignition temperature	650 °C (1,202 °F)

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains.

Methods for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	powder
Colour	light yellow

Safety data

pH	no data available
Melting point	284 - 286 °C (543 - 547 °F) - lit.
Boiling point	379 - 381 °C (714 - 718 °F) - lit.
Flash point	185 °C (365 °F) - closed cup
Ignition temperature	650 °C (1,202 °F)
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	1.3 hPa (1.0 mmHg) at 190 °C (374 °F)
Density	1.44 g/cm3 at 20 °C (68 °F)
Water solubility	0.00013 g/l at 22 °C (72 °F)
Partition coefficient: n-octanol/water	log Pow: 3.39

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
Oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - mouse - > 5,000 mg/kg

LC50 Inhalation - rat - 4 h - > 1,300 mg/m3

LD50 Dermal - rat - > 1,000 mg/kg

Irritation and corrosion

Skin - rabbit - No skin irritation - OECD Test Guideline 404

Eyes - rabbit - No eye irritation - OECD Test Guideline 405

Sensitisation

May cause allergic skin reaction.

Chronic exposure

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Genotoxicity in vitro - Hamster - Embryo
Micronucleus test

Genotoxicity in vivo - mouse - Feed - Laboratory experiments have shown mutagenic effects.
Micronucleus test

Genotoxicity in vivo - mouse - Intraperitoneal
DNA damage

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	Toxic if inhaled. May cause respiratory tract irritation.
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Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	Kidney, Liver, Bladder,

Additional Information
RTECS: CB4725000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability	aerobic Result: 75 % - Readily biodegradable. Method: Modified Sturm Test

Ecotoxicity effects

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 2,650 mg/l - 96 h

Further information on ecology

Chemical Oxygen Demand (COD)	ca. 2,300 mg/l

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Toxic by inhalation., Harmful by skin absorption., Skin sensitiser

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Anthraquinone	84-65-1	1989-12-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Anthraquinone	84-65-1	1989-12-01

California Prop. 65 Components

WARNING! This product contains a chemical known in the State of California to cause cancer.	CAS-No.	Revision Date
Anthraquinone	84-65-1	2007-09-28

16. OTHER INFORMATION

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.