

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Acequinocyl

Product Number : 32527  
Brand : Sigma-Aldrich

CAS-No. : 57960-19-7

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

#### 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin sensitisation (Sub-category 1A), H317  
Specific target organ toxicity - single exposure, Inhalation (Category 1), Lungs, H370  
Specific target organ toxicity - repeated exposure (Category 2), Blood, H373  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H317 : May cause an allergic skin reaction.  
H370 : Causes damage to organs (Lungs) if inhaled.  
H373 : May cause damage to organs (Blood) through prolonged or repeated exposure.  
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260 : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 : Wash skin 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/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/ physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Synonyms : 3-Acetoxy-2-dodecyl-1,4-naphthoquinone  
2-(Acetyloxy)-3-dodecyl-1,4-naphthalenedione  
3-Dodecyl-1,4-dihydro-1,4-dioxo-2-naphthyl acetate

Formula : C<sub>24</sub>H<sub>32</sub>O<sub>4</sub>  
Molecular weight : 384.51 g/mol  
CAS-No. : 57960-19-7

#### Hazardous components

Component	Classification	Concentration
<b>1,4-Naphthalenedione, 2-(acetyloxy)-3-dodecyl-</b>		
	Skin Sens. 1A; STOT SE 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H317, H370, H373, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### 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. Take victim immediately to hospital. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

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

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

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

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

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

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature 2 - 8 °C

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| a) Appearance                                   | Form: crystalline<br>Colour: yellow      |
| b) Odour  | characteristic                           |
| c) Odour Threshold                              | No data available                        |
| d) pH   | No data available                        |
| e) Melting point/freezing point                 | 59.6 °C (139.3 °F)                       |
| f) Initial boiling point and boiling range      | 200 °C (392 °F) - Decomposes on heating. |
| g) Flash point                                  | No data available                        |
| h) Evaporation rate                             | No data available                        |
| i) Flammability (solid, gas)                    | No data available                        |
| j) Upper/lower flammability or explosive limits | No data available                        |
| k) Vapour pressure                              | 16.9 hPa (12.7 mmHg) at 25 °C (77 °F)    |
| l) Vapour density                               | No data available                        |
| m) Relative density                             | 1.15 g/cm <sup>3</sup> at 25 °C (77 °F)  |
| n) Water solubility                             | practically insoluble                    |
| o) Partition coefficient: n-octanol/water       | log Pow: > 6.2 at 25 °C (77 °F)          |
| p) Auto-ignition temperature                    | No data available                        |
| q) Decomposition temperature                    | 200 °C (392 °F) -                        |
| r) Viscosity                                    | No data available                        |
| s) Explosive properties                         | No data available                        |
| t) Oxidizing properties                         | No data available                        |

### 9.2 Other safety information

Solubility in other solvents	Toluene 450 g/l at 20 °C (68 °F) Acetone 220 g/l at 20 °C (68 °F) Methanol 7.8 g/l at 20 °C (68 °F) Ethanol 23 g/l at 20 °C (68 °F)
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

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

LC50 Inhalation - Rat - > 0.84 mg/l

LD50 Dermal - Rat - > 2,000 mg/kg

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

#### Carcinogenicity

Animal testing did not show any carcinogenic effects.

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.

#### Reproductive toxicity

Did not show teratogenic effects in animal experiments.

No toxicity to reproduction

**Specific target organ toxicity - single exposure**

Inhalation - The substance or mixture is classified as specific target organ toxicant, single exposure, category 1. - Lungs

**Specific target organ toxicity - repeated exposure**

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2. - Blood

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity - Rat - No observed adverse effect level - 9.0 mg/kg

RTECS: QJ5375500

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

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish	LC50 - Cyprinus carpio (Carp) - > 100 mg/l - 96.0 h
	LC50 - Oncorhynchus mykiss (rainbow trout) - > 33 mg/l - 96.0 h
	LC50 - Cyprinodon variegatus (sheepshead minnow) - > 10 mg/l - 96.0 h
	LC50 - Lepomis macrochirus (Bluegill sunfish) - > 3.3 mg/l - 96.0 h
	LC50 - Danio rerio (zebra fish) - > 6.03 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia (water flea) - 0.0039 mg/l - 48 h
Toxicity to algae	Cell multiplication inhibition test EC50 - Algae - > 100 mg/l - 72 h

**12.2 Persistence and degradability**

Expected to be biodegradable

**12.3 Bioaccumulative potential**

Accumulation in terrestrial organisms is unlikely.

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

No data available

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

Sigma-Aldrich - 32527

Not dangerous goods

**IMDG**

UN number: 3077      Class: 9      Packing group: III      EMS-No: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,4-Naphthalenedione, 2-(acetyloxy)-3-dodecyl-)  
Marine pollutant: yes

**IATA**

UN number: 3077      Class: 9      Packing group: III  
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (1,4-Naphthalenedione, 2-(acetyloxy)-3-dodecyl-)

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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**15. REGULATORY INFORMATION**

**SARA 302 Components**

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

**SARA 313 Components**

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**

No SARA Hazards

**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
1,4-Naphthalenedione, 2-(acetyloxy)-3-dodecyl-	57960-19-7	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
1,4-Naphthalenedione, 2-(acetyloxy)-3-dodecyl-	57960-19-7	

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3.**

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
H317	May cause an allergic skin reaction.
H370	Causes damage to organs (/\$/*_ORG_SING_INHA\$/) if inhaled.
H373	May cause damage to organs (/\$/*_ORGAN_REPEAT\$/) through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure

**HMIS Rating**

Health hazard:	0
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

**NFPA Rating**

Health hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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