

## SAFETY DATA SHEET



Strawberry Furanone

MSDS No.

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Complying with 1907/2006/EEC Regulation of 18 December 2006 ("REACH Regulation") and REGULATION (EC) No 1272/2008 (CLP)

### Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

**Product name:** Strawberry Furanone

**Chemical name (e.g. IUPAC name):** 4-Hydroxy-2,5-Dimethyl-3(2H)-furanone

**Chemical formula:** C<sub>6</sub>H<sub>8</sub>O<sub>3</sub>

**Product type:** Powder

**CAS number:** 3658-77-3

**EC number:** 222-908-8

**Product code:** 33016

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

N/A

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

##### **Company/undertaking identification**

Aromor Flavors & Fragrances

560 Sylvan Avenue, Englewood Cliffs, NJ 07632

Tel: 201-503-1662

Fax: 201-503-1663

**E-mail address of person responsible for this SDS:** sales@aromor-usa.com

#### 1.4 Emergency telephone number

**Emergency telephone number (including hours of operation):** N/A

### Section 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification in accordance to Regulation(EC) No. 1272/2008 (CLP/GHS)**

<b>Product name</b>	<b>GHS Classification</b>
<b>Strawberry Furanone</b>	Eye irritation H320 Mild Skin Sens. H316 Harmful if swallowed H302

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## Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC

Product name	EU Classification
Strawberry Furanone	

### 2.2 Label elements

Labeling in accordance with Regulation 1272/2008 (CLP)

Hazard pictograms:



Signal word: Warning

#### Hazard statements:

H302: Harmful if swallowed

H317: May cause an allergic skin reaction

#### Precautionary Statements:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P264: Wash thoroughly after handling

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330: Rinse mouth.

### 2.3 Other hazard

N/A

## Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation:

Product/ Ingredient name	Identifiers	%	EU Classification	GHS Classification
Strawberry Furanone	CAS number: 3658-77-3 EC number: 222-908-8			Eye Irritation 2B Skin Irritation 3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

See section 16 for the full text of the H-statements and R-phrases declared above.

## Section 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

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- Eyes contact:** In case of contact with eyes rinse thoroughly with plenty of water for at least 15 minutes and seek medical advice.
- Skin contact:** In case of contact with skin wash off immediately with soap and plenty of water, and seek medical advice.
- Inhalation:** Remove the casualty into fresh air and keep him calm. Apply artificial respiration if necessary and get medical attention immediately.
- Ingestion:** Wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

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

#### **Potential acute health effects**

Inhalation: May be harmful by inhalation. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

Skin contact: May cause skin irritation. May be harmful by skin absorption.

Eyes contact: May cause eye irritation.

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

**Notes to physician:** No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**Special treatments:** No specific treatment

## **Section 5: FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

Suitable: For small incipient fires, use dry chemical, carbon dioxide, alcohol-resistant foam. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray.

Not suitable: Solid streams of water may be ineffective.

### **5.2 Special hazards arising from the substance or mixture**

Hazardous thermal decomposition products: Under fire – carbon oxides (CO, CO<sub>2</sub>) and toxic fumes.

### **5.3 Advice for firefighters**

**Special protective equipment for fire fighters:** Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode.

**Remark:** Move containers from fire area if possible to do so without risk. Cool all affected containers with flooding quantities of water.

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### Section 6: ACCIDENTAL RELEASE MEASURES

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

Wear protective clothing. Ventilate area of spill.

#### **6.2 Environmental precautions**

Keep away from drains, surface and groundwater and soil.

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

Small spill: Absorb the chemical onto sand, vermiculite, or any other non-combustible absorbent, and collect into containers for later disposal.

Large spill: As for small spill

**Personal Protection in Case of Large Spill:** Safety glasses. Full suit. Suitable respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

#### **6.4 Reference to other sections**

See Section 13 for additional waste treatment information

### Section 7: HANDLING AND STORAGE

#### **7.1 Precautions for safe handling**

**Handling:** Do not breathe vapor. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

**Hygiene Measures:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

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

**Storage:** Keep containers tightly closed, in dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Do not store together with strong oxidizing agents.

**7.3 Specific end use(s):** N/A

### Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

#### **8.1 Control parameters**

**Occupational exposure limit values:** N/A

#### **Derived effects levels:**

Recommended occupational and consumer exposure limit values (following from the preformed CSA): N/A

#### **8.2 Exposure controls**

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### **Engineering Measures**

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### **Person Protective measures**

Respiratory protection: Suitable respirator. Be sure to use an approved/certified or equivalent. Wear appropriate respirator when ventilation is inadequate.

Eye/face protection: Wear chemical safety goggles.

Skin protection:

Hand protection: Wear compatible chemical resistant gloves.

Other: Wear appropriate long-sleeved clothing to minimize skin contact.

**Environmental exposure controls:** N/A

## **Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical**

**properties** Appearance: White Powder

Odour: Caramel like

Odour threshold: N/A

pH: N/A

Melting point: 75-80 °C

Initial boiling point/boiling range: N/A

Flash point: N/A method: closed cup

Evaporation rate: N/A

Flammability: N/A

Upper/lower flammability or explosive limits: N/A

Vapor pressure: N/A

Vapor density: N/A

Relative Density: N/A

Solubility(ies): 1 gram In ethanol 95%

Partition coefficient Octanol/Water: N/A

Auto-ignition temperature: N/A

Decomposition temperature: N/A

Viscosity: N/A

Explosive properties: N/A

Oxidizing properties: N/A

### **9.2 Other information:**

Molecular weight: 128.1274 g/mol

Refractive Index: N/A

C Acid Value: max. N/A

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### Section 10: STABILITY AND REACTIVITY

#### **10.1 Reactivity**

No specific test data related to reactivity available for this product or its ingredients

#### **10.2 Chemical stability**

The product is stable under normal handling and storage conditions described in Section 7.

#### **10.3 Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

#### **10.4 Conditions to avoid**

Heat, sparks and open flame.

#### **10.5 Incompatible materials**

Strong oxidizing agents.

#### **10.6 Hazardous Decomposition products:**

N/A

### Section 11: TOXICOLOGICAL INFORMATION

#### **11.1 Information on toxicological effects**

##### **Acute toxicity:**

<b>Product/ingredient name</b>	<b>Test</b>	<b>Species</b>	<b>Dose</b>
Strawberry Furanone	LD50, Oral LD50, Administration onto the skin	Rat Rabbit	>5000 mg/kg >5000 mg/kg

**Skin corrosion/irritation:** N/A

**Serious eye damage/irritation:** N/A

**Respiratory or skin sensitization:** N/A

**Germ cell mutagenicity:** N/A

**Carcinogenicity:** Not listed by NTP, IARC or OSHA.

**Reproductive toxicity:** N/A

**Specific target organ toxicity (single exposure):** N/A

**Specific target organ toxicity (repeated exposure):** N/A

**Aspiration hazard:** N/A

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### **Potential health effects:**

Inhalation: May be harmful by inhalation. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

Skin contact: May cause skin irritation. May be harmful by skin absorption.

Eyes contact: May cause eye irritation.

## **Section 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity:** N/A

**12.2 Persistence and Degradability:** N/A

**12.3 Bioaccumulative potential:** N/A

**12.4 Mobility in soil:** N/A

### **12.5 Results of PBT and vPvB assessment**

Not available

### **12.6 Other adverse effects**

Substances which have an unfavorable influence on the oxygen balance and can be measured using parameters such as BOD, COD, etc.: N/A

Substances, which contribute to eutrophication: N/A

## **Section 13: DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

**Methods of disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Hazardous waste:** N/A

## **Section 14: TRANSPORT INFORMATION**

### **International transport regulations**

#### **14.1 Un number:**

ADR/RID: -

IMDG: -

IATA: -

#### **14.2 Proper shipping name:**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

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### **14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

### **14.4 Packing group**

ADR/RID: -

IMDG: -

IATA: -

### **14.5 Environmental hazard**

ADR/RID: -

IMDG: -

IATA: -

### **14.6 Special precautions for user**

Not available

### **Additional information**

ADR/RID: -

IMDG: -

IATA: -

### **14.7 Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code**

Not applicable

## **Section 15: REGULATORY INFORMATION**

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended EU Regulation(EC) No.1907/2006 (REACH), No 1272/2008 (CLP)

### **15.2 Chemical safety assessment**

No data available

## **Section 16: OTHER INFORMATION**

### **Full text of R-phrases referred to in sections 2 and 3:**

R22: Harmful if swallowed

R43: May cause sensitization by skin contact

### **Safety phrases:**

S24: Avoid contact with skin.

S36/37: Wear suitable protective clothing and gloves

### **Full text of Hazards Statements referred to in sections 2 and 3:**

H302: Harmful if swallowed

H317: May cause an allergic skin reaction

### **Precautionary Statements:**

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P264: Wash thoroughly after handling

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330: Rinse mouth

**Training advice:** Before using/handling the product one must read carefully present MSDS.

**Recommended restriction:** N/A



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### Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

NTP- National Toxicology program

IARC- International Agency for Research on Cancer

ND- Not Determined

N/A- Not available

R-phrases- Risk phrases

S-phrases- Safety phrases

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Version no. 1

According to Regulation (EC) No. 1907/2006 (REACH), Annex II, Commission Directive 2001/59/EC and REGULATION (EC) No 1272/2008 (CLP).

To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.