2-Acetylfuran

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Description: 2-Acetylfuran

Cat No. : A14938
Synonyms 2-Furyl methyl ketone; 1-(2-Furanyl)ethanone
CAS-No 1192-62-7
Molecular Formula C6 H6 O2

Supplier
Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham, Lancashire LA3 2XY
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608

Emergency Telephone Number
Call Carechem 24 at
+44 (0) 1865 407333 (English only);
+44 (0) 1235 239670 (Multi-language)

E-mail address
uktech@alfa.com
www.alfa.com
Product Safety Department

Recommended Use
Laboratory chemicals.

Uses advised against
No Information available

SECTION 2. HAZARD IDENTIFICATION

Physical State
Liquid

Appearance
Yellow

Odor
sweet

Emergency Overview
Combustible liquid. Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled.

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Flammable liquids</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Oral Toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute Dermal Toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 3</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label Elements
Signal Word  Danger

Hazard Statements
H227 - Combustible liquid
H319 - Causes serious eye irritation
H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

Precautionary Statements
Prevention
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/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
P311 - Call a POISON CENTER or doctor/physician
P330 - Rinse mouth
P361 - Remove/Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

Storage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up

Disposal
P501 - Dispose of contents/container to an approved waste disposal plant

Physical and Chemical Hazards
Combustible material.

Health Hazards
Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled.

Environmental hazards
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its volatility. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

Toxic to terrestrial vertebrates.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanone, 1-(2-furanyl)-</td>
<td>1192-62-7</td>
<td>99</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation
Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion
Clean mouth with water. Get medical attention.

Most important symptoms and effects
Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Self-Protection of the First Aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Notes to Physician
Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons
No information available.

Specific Hazards Arising from the Chemical
Combustible material. Containers may explode when heated.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions
See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up
Sweep up and shovel into suitable containers for disposal. Remove all sources of ignition.

Refer to protective measures listed in Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

Handling
Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Specific Use(s)
Use in laboratories

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Exposure Controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection
Goggles (European standard - EN 166)

Hand Protection
Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viton (R)</td>
<td>See manufacturers recommendations</td>
<td>-</td>
<td>EN 374</td>
<td>(minimum requirement)</td>
</tr>
</tbody>
</table>

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Yellow

Physical State
Liquid

Odor
sweet

Odor Threshold
No data available

pH
No information available

Melting Point/Range
29 - 30 °C / 84.2 - 86 °F

Softening Point
No data available

Boiling Point/Range
67 °C / 152.6 °F

Flash Point
71 °C / 159.8 °F

Evaporation Rate
No data available

Flammability (solid, gas)
Not applicable

Explosion Limits
Lower 2.1

Upper 15.2

Vapor Pressure
<1 mmHg @ 20 °C

Vapor Density
No information available

Specific Gravity / Density
1.098

Bulk Density
Not applicable

Water Solubility
Insoluble

Solubility in other solvents
No information available

Partition Coefficient (n-octanol/water)

Autoignition Temperature
370 °C / 698 °F

Decomposition Temperature
No data available

Viscosity
No data available

Explosive Properties
explosive air/vapour mixtures possible

Oxidizing Properties
No information available

Molecular Formula
C₆H₆O₂

Molecular Weight
110.11

SECTION 10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Hazardous Reactions
No information available.

Hazardous Polymerization
No information available.

Conditions to Avoid
Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Materials to avoid

Hazardous Decomposition Products
Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION

Product Information

(a) acute toxicity:

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanone, 1-(2-furanyl)-</td>
<td></td>
<td></td>
<td>LC50 = 1130 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>
(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;
   Respiratory No data available
   Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available
   There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available
   Target Organs No information available.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Persistence and Degradability
   Persistence Persistence is unlikely, based on information available.

   Bioaccumulative Potential Bioaccumulation is unlikely

Mobility in soil The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air

Endocrine Disruptor Information
   Persistent Organic Pollutant This product does not contain any known or suspected endocrine disruptors
   Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Waste is classified as hazardous. Dispose of in accordance with the European Directives
SECTION 14. TRANSPORT INFORMATION

Road and Rail Transport

UN-No
Proper Shipping Name
Technical Shipping Name
Hazard Class
Packing Group

IMDG/IMO

UN-No
Proper Shipping Name
Technical Shipping Name
Hazard Class
Packing Group

IATA

UN-No
Proper Shipping Name
Technical Shipping Name
Hazard Class
Packing Group

Special Precautions for User
No special precautions required

SECTION 15. REGULATORY INFORMATION

International Inventories
X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Australia (AICS), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>The Inventory of Hazardous Chemicals (2015 Edition)</th>
<th>List of dangerous goods GB 12268 - 2012</th>
<th>Taiwan Toxic Chemicals Substances Inventory</th>
<th>IECSC</th>
<th>EINECS</th>
<th>TSCA</th>
<th>DSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanone, 1-(2-furanyl)-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>214-757-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-1736</td>
</tr>
</tbody>
</table>

National Regulations

SECTION 16. OTHER INFORMATION
**SAFETY DATA SHEET**

**2-Acetylfuran**

Prepared By: Health, Safety and Environmental Department  
Creation Date: 17-May-2010  
Revision Date: 18-Jan-2021  

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

### Legend

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Chemicals and Chemical Substances</td>
</tr>
<tr>
<td>IECSC</td>
<td>Chinese Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>KECL</td>
<td>Korean Existing and Evaluated Chemical Substances</td>
</tr>
<tr>
<td>WEL</td>
<td>Workplace Exposure Limit</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect Level</td>
</tr>
<tr>
<td>RPE</td>
<td>Respiratory Protective Equipment</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative, Toxic</td>
</tr>
<tr>
<td>ADR</td>
<td>European Agreement Concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>International Maritime Organization/International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>TSCA</td>
<td>United States Toxic Substances Control Act Section 8(b) Inventory</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Canadian Domestic Substances List/Non-Domestic Substances List</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japanese Existing and New Chemical Substances</td>
</tr>
<tr>
<td>AICS</td>
<td>Australian Inventory of Chemical Substances</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>POW</td>
<td>Partition coefficient Octanol:Water</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent, very Bioaccumulative</td>
</tr>
<tr>
<td>ADR</td>
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</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>ICAO/IATA</td>
<td>International Civil Aviation Organization/International Air Transport Association</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compound</td>
</tr>
</tbody>
</table>

### Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**