

Safety Data Sheet per OSHA HazCom 2012

1 Identification
Product identifier Product name: <b>2,5-Dimethyl-3(2H)-furanone</b>
Stock number: A12182
CAS Number: 14400-67-0
EC number: 238-365-5
Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development
Details of the supplier of the safety data sheet
Manufacturer/Supplier: Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street
Ward Hill, MA 01835-8099 Tel: 800-343-0660
Fax: 800-322-4757 Email: tech@alfa.com
www.alfa.com Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.
2 Hazard(s) identification Classification of the substance or mixture in accordance with 20 CEB 1010 (OSHA HCS)
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) H227 Combustible liquid.
Hazards not otherwise classified No information known. Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms Not applicable Signal word Warning Hazard statements
H227 Combustible liquid.
Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P280 Wear protective gloves/protective clothing/eye protection/face protection. P370+P378 In case of fire: Use for extinction: CO2, powder or water spray. P403+P235 Store in a well-ventilated place. Keep cool. P403+P235 Store in a well-ventilated place. Keep cool.
P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification B3 - Combustible liquid
$(\mathfrak{b})$
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)
(Hazardous Materials Identification System) MEALTH 1 Health (acute effects) = 1
PRE     Preservice energy = 1       PRE     Preservice energy = 1       Preservice energy = 1     Physical Hazard = 1
Other hazards
Results of PBT and vPvB assessment PBT: Not applicable.
vPvB: Not applicable.
3 Composition/information on ingredients
Chemical characterization: Substances
CAS# Description: 14400-67-0 2,5-Dimethyl-3(2H)-furanone
Identification number(s): EC number: 238-365-5
4 First-aid measures
Description of first aid measures
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice. After skin contact
Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
After swallowing Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.
5 Fire-fighting measures
Extinguishing media
Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:

Special nazaros arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide

## Product name: 2,5-Dimethyl-3(2H)-furanone

Advice for firefighters **Protective equipment:** Wear self-contained respirator. Wear fully protective impervious suit.

#### 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away Ensure adequate ventilation

Environmental percautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). **Prevention of secondary hazards:** Keep away from ignition sources. **Reference to other sections** See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

### 7 Handling and storage

Handling Precautions for safe handling

Keep container tightly sealed. Store in cool, dry place in tightly closed containers.

Information about protection against explosions and fires: Keep ignition sources away.

Conditions for safe storage, including any incompatibilities Storage

Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions:

Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

Specific end use(s) No further relevant information available.

### 8 Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

#### Control parameters

#### Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data

Exposure controls

Personal protective equipment General protective and hygienic measures

General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Recommended filter device for short term use: Use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (FU). CEN (EU).

#### Protection of hands:

Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. **Penetration time of glove material (in minutes)** Not determined **Eye protection:** Safety glasses **Body protection:** Protective work clothing.

### 9 Physical and chemical properties

3 Filysical and chemical properties	3
Information on basic physical and ch General Information Appearance: Form: Color: Odor: Odor: Odor threshold:	nemical properties Liquid Pale yellow Sweet Not determined.
pH-value:	Not determined.
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	Not determined 259-261 °C (498-502 °F) Not determined
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	68 °C (154 °F) Not determined Not determined Not determined Not determined.
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density at 20 °C (68 °F): Relative density	Not determined. Not determined Not determined 1.06 g/cm <sup>3</sup> (8.846 lbs/gal) Not determined.
	(Contd. on page 3)

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# Product name: 2 5-Dimethyl-3(2H)-furanone

Product name: 2,5-Dimethyl-3(2H)-f	furanone	
		(Contd. of page 2)
Vapor density Evaporation rate	Not determined. Not determined.	
Solubility in / Miscibility with Water:	Slightly soluble	
Partition coefficient (n-octanol/water Viscosity:	): Not determined.	
dynamic:	Not determined.	
kinematic: Other information	Not determined. No further relevant information available.	
40 Stability and reactivity		
10 Stability and reactivity Reactivity No information known.		
Chemical stability Stable under recom	nmended storage conditions. <b>to be avoided:</b> Decomposition will not occur if used and stored according to specifications. Pacts with strong oxidizing agents	
Possibility of hazardous reactions R	eacts with strong oxidizing agents	
Possibility of hazardous reactions R Conditions to avoid No further relevan Incompatible materials: Oxidizing age	n monnauon available. Ants	
Hazardous decomposition products:		
11 Toxicological information		
Information on toxicological effects Acute toxicity: No effects known.		
LD/LC50 values that are relevant for Skin irritation or corrosion: May caus	se irritation	
Eye irritation or corrosion: May caus Sensitization: No sensitizing effects kr Germ cell mutagenicity: No effects kr	e irritation nown.	
Germ cell mutagenicity: No effects kr Carcinogenicity: No classification data	nown. a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
<b>Reproductive toxicity:</b> No effects know	wn. / - repeated exposure: No effects known.	
Specific target organ system toxicity	<i>· single exposure:</i> No effects known.	
Aspiration hazard: No effects known. Subacute to chronic toxicity: No effe	cts known.	
	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
12 Ecological information		
Toxicity Aquatic toxicity: No further relevant in	iformation available.	
Persistence and degradability No fun Bioaccumulative potential No further Mobility in soil No further relevant info	ther relevant information available.	
Mobility in soil No further relevant info Additional ecological information:	ormation available.	
General notes:	the environment without proper governmental permits.	
Do not allow undiluted product or large Avoid transfer into the environment.	quantities to reach ground water, water course or sewage system.	
<b>Results of PBT and vPvB assessmer</b> <b>PBT:</b> Not applicable.	nt	
vPvB: Not applicable. Other adverse effects No further relev		
	ant information available.	
13 Disposal considerations		
Waste treatment methods Recommendation Consult state, local	or national regulations to ensure proper disposal.	
Uncleaned packagings: Recommendation: Disposal must be r	nade according to official regulations.	
14 Transport information		
UN-Number	Ale Carrie Practic	
DOT, ADN, IMDG, IATA UN proper shipping name	Not applicable	
DOT, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group DOT, IMDG, IATA	Not applicable	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Anne. Transport/Additional information:	x II of MARPOL73/78 and the IBC Code Not applicable.	
DOT		
Marine Pollutant (DOT):	No	
UN "Model Regulation":	-	
15 Regulatory information		
	<b>gulations/legislation specific for the substance or mixture</b> assified and labeled in accordance with 29 CFR 1910 (OSHA HCS)	
GHS label elements The product is cla Hazard pictograms Not applicable Signal word Warning	ISSINEU ANU IADENEU IN ACCOLUANCE WILN 29 CFK 1910 (USHA HUS)	
Signal word Warning Hazard statements		

Hazard statements H227 Combustible liquid.

#### 2 5\_Dim thv/\_2/24\\_fr

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(Contd. of page P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P280 Wear protective gloves/protective clothing/eye protection/face protection. P370+P378 In case of fire: Use for extinction: CO2, powder or water spray. P403+P235 Store in a well-ventilated place. Keep col. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed in the Canadian Domestic Substances List (DSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed. Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, the Substance is not listed. Prop 65 - Developmental toxicity, the Substance is not listed. Prop 65 - Developmental toxicity, for the canadiations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not li		TREMEWED ON 10/10/2010
Precautionary statements           P210         Keep away trom heat/sparks/open flames/hot surfaces. No smoking.           P220         Wear protective gloves/protective clohing/eye protection/face protection.           P370+P37         Icase of Itrue. Use for exhibition: CO2, powder or water spray.           P4372-83         Store in a veil-ventiletide place. Keep cool.           Pational regulations         Mic components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.           All components of this product are listed on the Canadian Domestic Substances is (DSL).         SARA Section 313 (specific toxic chemical listings) Substance is not listed.           Prop 65         Chemicals known to cause cancer Substance is not listed.         Prop 65           Prop 65         Developmental toxicity, female Substance is not listed.         Prop 65           Prop 65         Developmental toxicity, female Substance is not listed.         Prop 65           Prop 65         Developmental toxicity, female Substance is not listed.         Prop 65           Other regulations, limitations and prohibitive regulations for use protections of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006. Substance is not listed.           The conditions of restrictions according to the REACH Regulations for use protection and use must be observed.         Substance is not listed.           Annex XVI of the REACH Regulations (reguiring	Product name: 2,5-Dimethyl-3(2H)-furanone	
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