



synerzine™

**SAFETY DATA SHEET****2-Pentanone, 4-methyl-4-(methylthio)-**

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

**1. Identification****Product identifier**

Product name	2-Pentanone, 4-methyl-4-(methylthio)-
Product number	W1853
Synonyms; trade names	4-Methyl-4-(methylthio)pentan-2-one 4-(Methylthio)-4-methyl-2-pentanone Pentan-2-one, 4-methyl-4-(methylthio)- 4-(Methylthio)-4-methylpentan-2-one
CAS number	23550-40-5

**Recommended use of the chemical and restrictions on use**

Application	Laboratory chemicals, Manufacture of substances.
Uses advised against	No specific uses advised against are identified.

**Details of the supplier of the safety data sheet**

Supplier	Synerzine 5340 Highway 42 Ellenwood, GA 30294 (404) 524-6744 info@synerzine.com
Contact Person	James Elliott
Emergency telephone number	
Emergency telephone	INFOTRAC 1-800-535-5053 (Reference Contract # 102471)

**2. Hazard(s) identification****Classification of the substance or mixture**

Physical hazards	Flam. Liq. 4 - H227
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Health hazards	Not Classified
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Environmental hazards	Not Classified
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**Label elements**

Signal word	Warning
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Hazard statements	H227 Combustible liquid.
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Precautionary statements	P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with national regulations.
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**Other hazards**

This substance is not classified as PBT or vPvB according to current EU criteria.

**3. Composition/information on ingredients****Substances**

## 2-Pentanone, 4-methyl-4-(methylthio)-

Product name	2-Pentanone, 4-methyl-4-(methylthio)-
CAS number	23550-40-5
Chemical formula	C <sub>7</sub> H <sub>14</sub> OS
Composition comments	Named component present at ≤100%.

### 4. First-aid measures

#### Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin Contact	Remove affected person from source of contamination. Rinse immediately with plenty of water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	Treat symptomatically.
Specific treatments	No special treatment required.

### 5. Fire-fighting measures

#### Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

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

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

#### Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak.
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## 2-Pentanone, 4-methyl-4-(methylthio)-

Special protective equipment for firefighters *Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.*

### 6. Accidental release measures

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

Personal precautions *No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.*

#### Environmental precautions

Environmental precautions *Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).*

#### Methods and material for containment and cleaning up

Methods for cleaning up *Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.*

Reference to other sections *For personal protection, see Section 8. For waste disposal, see Section 13.*

### 7. Handling and storage

#### Precautions for safe handling

Usage precautions *Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists.*

Advice on general occupational hygiene *Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.*

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

Storage precautions *Store away from incompatible materials (see Section 10). Store in accordance with local regulations.*

Storage class *Unspecified storage.*

#### Specific end uses(s)

Specific end use(s) *The identified uses for this product are detailed in Section 1.*

### 8. Exposure controls/Personal protection

Ingredient comments *No exposure limits known for ingredient(s).*

#### Exposure controls

##### Protective equipment



## 2-Pentanone, 4-methyl-4-(methylthio)-

Appropriate engineering controls	<i>Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.</i>
Eye/face protection	<i>Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. The following protection should be worn: Chemical splash goggles.</i>
Hand protection	<i>Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.</i>
Other skin and body protection	<i>Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.</i>
Hygiene measures	<i>Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.</i>
Respiratory protection	<i>Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.</i>
Environmental exposure controls	<i>Not regarded as dangerous for the environment.</i>

### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	<i>Clear liquid.</i>
Color	<i>Colorless to pale yellow.</i>
Odor	<i>Garlic Odor Sulfurous</i>
Odor threshold	<i>Not available.</i>
pH	<i>Not available.</i>
Melting point	<i>Not available.</i>
Initial boiling point and range	<i>201°C</i>
Flash point	<i>72°C/162°F Method: Closed cup.</i>
Evaporation rate	<i>Not available.</i>
Upper/lower flammability or explosive limits	<i>Not available.</i>
Vapor pressure	<i>Not available.</i>
Vapor density	<i>Not available.</i>
Relative density	<i>Not available.</i>
Solubility(ies)	<i>Not available.</i>
Partition coefficient	<i>Not available.</i>
Auto-ignition temperature	<i>Not available.</i>
Decomposition Temperature	<i>Not available.</i>
Viscosity	<i>Not available.</i>
Explosive properties	<i>Not available.</i>

## 2-Pentanone, 4-methyl-4-(methylthio)-

Oxidizing properties *Not available.*

Molecular weight *146.25 g/mol*

### 10. Stability and reactivity

Reactivity *See the other subsections of this section for further details.*

Stability *Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.*

Possibility of hazardous reactions *No potentially hazardous reactions known.*

Conditions to avoid *There are no known conditions that are likely to result in a hazardous situation.*

Materials to avoid *No specific material or group of materials is likely to react with the product to produce a hazardous situation.*

Hazardous decomposition products *Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.*

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

Summary *Based on available data the classification criteria are not met.*

##### Acute toxicity - dermal

Summary *Based on available data the classification criteria are not met.*

##### Acute toxicity - inhalation

Summary *Based on available data the classification criteria are not met.*

##### Skin corrosion/irritation

Summary *Based on available data the classification criteria are not met.*

##### Serious eye damage/irritation

Summary *Based on available data the classification criteria are not met.*

##### Respiratory sensitization

Summary *Based on available data the classification criteria are not met.*

##### Skin sensitization

Summary *Based on available data the classification criteria are not met.*

##### Germ cell mutagenicity

Summary *Based on available data the classification criteria are not met.*

##### Carcinogenicity

Summary *Based on available data the classification criteria are not met.*

##### Reproductive toxicity

Summary *Based on available data the classification criteria are not met.*

##### Specific target organ toxicity - single exposure

Summary *Based on available data the classification criteria are not met.*

##### Specific target organ toxicity - repeated exposure

Summary *Based on available data the classification criteria are not met.*

##### Aspiration hazard

Summary *Based on available data the classification criteria are not met.*

## 2-Pentanone, 4-methyl-4-(methylthio)-

General information	<i>No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</i>
Inhalation	<i>Prolonged inhalation of high concentrations may damage respiratory system.</i>
Ingestion	<i>Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.</i>
Skin Contact	<i>Prolonged contact may cause dryness of the skin.</i>
Eye contact	<i>May cause temporary eye irritation.</i>
Route of exposure	<i>Ingestion Inhalation Skin and/or eye contact</i>
Target Organs	<i>No specific target organs known.</i>

### 12. Ecological information

Ecotoxicity	<i>Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.</i>
Acute aquatic toxicity	
Summary	<i>Based on available data the classification criteria are not met.</i>
Chronic aquatic toxicity	
Summary	<i>Based on available data the classification criteria are not met.</i>
<b>Persistence and degradability</b>	
Persistence and degradability	<i>The degradability of the product is not known.</i>
<b>Bioaccumulative potential</b>	
Bio-Accumulative Potential	<i>No data available on bioaccumulation.</i>
Partition coefficient	<i>Not available.</i>
<b>Mobility in soil</b>	
Mobility	<i>No data available.</i>
<b>Other adverse effects</b>	
Other adverse effects	<i>None known.</i>

### 13. Disposal considerations

#### Waste treatment methods

General information	<i>The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.</i>
Disposal methods	<i>Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.</i>

### 14. Transport information

General	<i>For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.</i>
<b>UN Number</b>	
UN No. (International)	<i>Not applicable.</i>
UN No. (ICAO)	<i>3334</i>

## 2-Pentanone, 4-methyl-4-(methylthio)-

UN No. (DOT) NA1993

### UN proper shipping name

Proper shipping name (International) *Not applicable.*

Proper shipping name (ICAO) *AVIATION REGULATED LIQUID, N.O.S.*

Proper shipping name (DOT) *COMBUSTIBLE LIQUID, N.O.S.*

### Transport hazard class(es)

ICAO class/division 9

### Transport labels



### Packing group

Packing group (International) *Not applicable.*

ICAO packing group III

DOT packing group III

### Environmental hazards

Environmentally Hazardous Substance  
*No.*

### Special precautions for user

*Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.*

DOT reportable quantity *Not applicable.*

## 15. Regulatory information

Regulatory References OSHA Hazard Communication Standard 29 CFR §1910.1200

### Inventories

Canada - DSL/NDSL  
*NDSL*

US - TSCA  
*Present.*

## 16. Other information

Abbreviations and acronyms used in the safety data sheet *TDG: The transport of dangerous goods act*

*IATA: International air transport association.*

*ICAO: Technical instructions for the safe transport of dangerous goods by air.*

*IMDG: International maritime dangerous goods.*

*CAS: Chemical abstracts service.*

*ATE: Acute toxicity estimate.*

*LC<sub>50</sub>: Lethal concentration to 50 % of a test population.*

*LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).*

*EC<sub>50</sub>: 50% of maximal effective concentration.*

*PBT: Persistent, bioaccumulative and toxic substance.*

*vPvB: Very persistent and very bioaccumulative.*

## 2-Pentanone, 4-methyl-4-(methylthio)-

Training advice	<i>Read and follow manufacturer's recommendations. Only trained personnel should use this material.</i>
Revision comments	<i>NOTE: Lines within the margin indicate significant changes from the previous revision.</i>
Revision date	16/12/2020
Revision	2
Supersedes date	4/6/2015
SDS No.	1052
Hazard statements in full	<i>H227 Combustible liquid.</i>
End of Safety Data Sheet	

*This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.*