

1-Cyclohexene-1-methanol, 4-(1-

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 06/01/2015 Version: 1.0

| SECTION 1: Identification | |
|----------------------------------|--|
| 1.1. Identification | |
| Product form | : Substance |
| Substance name | : 1-Cyclohexene-1-methanol, 4-(1-methylethenyl)-, acetate |
| CAS-No. | : 15111-96-3 |
| Product code | : (US) W1688 |
| Formula | : C12H18O2 |
| Synonyms | : Acetate, 4-(1-methylethenyl)cyclohexene-1-methyl / 4-(1-Methylvinyl)cyclohex-1-ene-1-methyl acetate / Perillyl acetate / p-Mentha-1,8-dien-7-yl acetate / 1-Cyclohexene-1-methanol, 4-(1-methylethenyl)-, 1-acetate / 1-Methanol-4-(1-methylethenyl)cyclohexane-1-acetate / 4-(1-Methylethenyl)-1-cyclohexene-1-methyl acetate |

1.2. Recommended use and restrictions on use

No additional information available

Supplier 1.3.

Synerzine 5340 Hwy 42 S Ellenwood, Georgia 30294 - USA T 404-524-6744 - F 404-577-1651 info@synerzine.com - www.synerzine.com

1.4. Emergency telephone number

Emergency number

: Infotrac 1-800-535-5053 (Contract# 102471) Dial +1-352-323-3500 when outside the US

| SECTION 2: Hazard(s) identification | | |
|---|-----------------------|----------------------------------|
| 2.1. Classification of | f the substance or mi | xture |
| GHS-US classification | | |
| Skin corrosion/irritation Category 2 | H315 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2A | H319 | Causes serious eye irritation |
| Specific target organ toxicity (single exposure) Category 3 | Н335 | May cause respiratory irritation |
| Full tout of U statements , see | nation 16 | |

Full text of H statements : see section 16

| 2.2. GHS Label elements, includingGHS-US labelingHazard pictograms (GHS-US) | precautionary statements |
|---|--|
| Signal word (GHS-US) | : Warning |
| Hazard statements (GHS-US) | : H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation |
| Precautionary statements (GHS-US) | P261 - Avoid breathing fume, mist, gas, spray, vapors. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, face protection, protective clothing, protective gloves. P302+P352 - If on skin: Wash with plenty of soap and water P304+P340 - If inhaled: Remove person to fresh air and keep 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 P312 - Call a doctor, a POISON CENTER if you feel unwell P321 - Specific treatment (see supplemental first aid instructions on this label) |

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P332+P313 - If skin irritation occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

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

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

| 3.1. Substances | | | |
|---|----------------------|-------|---|
| Name | Product identifier | % | GHS-US classification |
| 1-Cyclohexene-1-methanol, 4-(1-methylethenyl)-, acetate (Main constituent) | (CAS-No.) 15111-96-3 | >= 96 | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

| SECTION 4: First-aid measures | |
|---------------------------------------|--|
| 4.1. Description of first aid measur | es |
| First-aid measures general | : Call a poison center/doctor/physician if you feel unwell. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell. |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Call a poison center/doctor/physician if you feel unwell. |
| 4.2. Most important symptoms and | effects (acute and delayed) |
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Irritation. |
| Symptoms/effects after eye contact | : Eye irritation. |
| 4.3. Immediate medical attention a | nd special treatment, if necessary |
| Treat symptomatically. | |
| SECTION 5: Fire-fighting measure | s |
| 5.1. Suitable (and unsuitable) extin | guishing media |
| Suitable extinguishing media | : Water spray. Dry powder. Foam. Carbon dioxide. |
| 5.2. Specific hazards arising from t | he chemical |
| Reactivity | : The product is non-reactive under normal conditions of use, storage and transport. |
| 5.3. Special protective equipment a | nd precautions for fire-fighters |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
| SECTION 6: Accidental release m | easures |
| 6.1. Personal precautions, protectiv | ve equipment and emergency procedures |
| 6.1.1. For non-emergency personnel | |
| Emergency procedures | : Ventilate spillage area. Avoid breathing gas, fume, mist, spray, vapors. Avoid contact with skin and eyes. |
| 6.1.2. For emergency responders | |
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
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| 6.2. Environmental precautions | |
|--|--|
| Avoid release to the environment. | |
| 6.3. Methods and material for cont | |
| Methods for cleaning up | : Take up liquid spill into absorbent material. |
| Other information | : Dispose of materials or solid residues at an authorized site. |
| 6.4. Reference to other sections | |
| For further information refer to section 13. | |
| SECTION 7: Handling and storage | |
| 7.1. Precautions for safe handling | |
| Precautions for safe handling | : Use only outdoors or in a well-ventilated area. Avoid breathing fume, gas, mist, spray, vapors. Avoid contact with skin and eyes. Wear personal protective equipment. |
| Hygiene measures | Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |
| 7.2. Conditions for safe storage, inc | |
| Storage conditions | : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. |
| conde conditions | . see stoken up, store in a wen ventilaten place, keep container tignty closen, keep cool. |
| SECTION 8: Exposure controls/pe | rsonal protection |
| 8.1. Control parameters | |
| No additional information available | |
| | |
| 8.2 Appropriate engineering cont | |
| 8.2. Appropriate engineering control Appropriate engineering controls | : Ensure good ventilation of the work station. |
| Appropriate engineering controls Environmental exposure controls | : Avoid release to the environment. |
| | |
| | |
| 8.3. Individual protection measures | /Personal protective equipment |
| 8.3. Individual protection measures Hand protection: | /Personal protective equipment |
| | /Personal protective equipment |
| Hand protection: Protective gloves | /Personal protective equipment |
| Hand protection: Protective gloves Eye protection: | /Personal protective equipment |
| Hand protection: Protective gloves Eye protection: Safety glasses | /Personal protective equipment |
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| Hand protection: Protective gloves Eye protection: Safety glasses | /Personal protective equipment |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: | /Personal protective equipment |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing | |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: | |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: | espiratory equipment |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respirated | espiratory equipment |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable response of the second se | espiratory equipment |
| Hand protection:Protective glovesEye protection:Safety glassesSkin and body protection:Wear suitable protective clothingRespiratory protection:In case of insufficient ventilation, wear suitable respirationSECTION 9: Physical and chemica9.1. | espiratory equipment I properties Ind chemical properties |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respiration SECTION 9: Physical and chemical 9.1. Information on basic physical and Physical state | espiratory equipment I properties Ind chemical properties I Liquid |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respirate to the second s | espiratory equipment I properties Ind chemical properties : Liquid : A colorless liquid. |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respiratory envices SECTION 9: Physical and chemical 9.1. Information on basic physical and Physical state Appearance Color | espiratory equipment I properties Ind chemical properties I Liquid I A colorless liquid. I Colorless |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respiratory protection: SECTION 9: Physical and chemical 9.1. Information on basic physical and | espiratory equipment I properties Ind chemical properties I Liquid I A colorless liquid. I Colorless I fuity woody raspberry aroma |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respiratory protection: SECTION 9: Physical and chemical 9.1. Information on basic physical and Physical state Appearance Color Odor Odor threshold | espiratory equipment I properties ind chemical properties : Liquid : A colorless liquid. : Colorless : fruity woody raspberry aroma : No data available |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable respiratory protection: In case of insufficient ventilation, wear suitable respiratory protection: SECTION 9: Physical and chemical 9.1. Information on basic physical and Physical state Appearance Color Odor Odor threshold pH | espiratory equipment I properties ind chemical properties : Liquid : A colorless liquid. : Colorless : fruity woody raspberry aroma : No data available : No data available |
| Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing Respiratory protection: In case of insufficient ventilation, wear suitable restricted and chemical state 9.1. Information on basic physical and chemical state Appearance Color Odor threshold pH Melting point Helting point | espiratory equipment 1 properties ind chemical properties i Liquid : A colorless liquid. : Colorless : fruity woody raspberry aroma : No data available : No data available : No data available : Not applicable |
| Hand protection:Protective glovesEye protection:Safety glassesSkin and body protection:Wear suitable protective clothingRespiratory protection:In case of insufficient ventilation, wear suitable respiratory protection:SECTION 9: Physical and chemical9.1. Information on basic physical andPhysical stateAppearanceColorOdor thresholdpHMelting pointFreezing point | espiratory equipment I properties ind chemical properties I Liquid I A colorless liquid. I Colorless I fruity woody raspberry aroma I No data available I No data available |

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| Vapor pressure | : No data available |
|---------------------------------|--|
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Specific gravity / density | : $0.98 - 0.987 \text{ g/cm}^3$ |
| Molecular mass | : 193.3 g/mol |
| Solubility | : insoluble in water. Soluble in organic solvents. |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| | |

9.2. Other information

No additional information available

| SECTION 10: Stability and reactivity |
|--|
| 10.1. Reactivity |
| The product is non-reactive under normal conditions of use, storage and transport. |
| 10.2. Chemical stability |
| Stable under normal conditions. |
| 10.3. Possibility of hazardous reactions |
| No dangerous reactions known under normal conditions of use. |
| 10.4. Conditions to avoid |
| None under recommended storage and handling conditions (see section 7). |
| 10.5. Incompatible materials |
| No additional information available |
| 10.6. Hazardous decomposition products |
| Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| SECTION 11: Toxicological information |
| 11.1. Information on toxicological effects |

| Acute toxicity | : Not classified |
|--|-------------------------------------|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity – single exposure | : May cause respiratory irritation. |
| Specific target organ toxicity – repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Irritation. |
| Symptoms/effects after eye contact | : Eye irritation. |

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| SECTION 12: Ecological informa | ation |
| 12.1. Toxicity | |
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
| 12.2. Persistence and degradabilit | y I |
| No additional information available | |
| 12.3. Bioaccumulative potential | |
| No additional information available | |
| 12.4. Mobility in soil | |
| No additional information available | |
| 12.5. Other adverse effects | |
| No additional information available | |
| | |
| SECTION 12. Disposal considers | |
| SECTION 13: Disposal considera | ations |
| 13.1. Disposal methods Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| | |
| SECTION 14: Transport informa | tion |
| Department of Transportation (DOT) | |
| In accordance with DOT | |
| Other information | : No supplementary information available. |
| Transportation of Dangerous Goods | |
| Transport by sea | |
| Air transport | |
| SECTION 15: Regulatory inform | ation |
| 15.1. US Federal regulations | |
| 1-Cyclohexene-1-methanol, 4-(1-methyle | thenyl)-, acetate (15111-96-3) |
| Listed on the United States TSCA (Toxic Subs | stances Control Act) inventory |
| | |
| 15.2. International regulations | |
| CANADA | |
| 1-Cyclohexene-1-methanol, 4-(1-methyle | thenyl)-, acetate (15111-96-3) |
| Listed on the Canadian DSL (Domestic Subst | |

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

1-Cyclohexene-1-methanol, 4-(1-methylethenyl)-, acetate (15111-96-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

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1-Cyclohexene-1-methanol, 4-(1-methylethenyl)-, acetate (15111-96-3)Listed on the AICS (Australian Inventory of Chemical Substances)Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)Listed on the Japanese ENCS (Existing & New Chemical Substances) inventoryListed on the Japanese ISHL (Industrial Safety and Health Law)Listed on NZIOC (New Zealand Inventory of Chemicals and Chemical Substances)Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases:

| Causes skin irritation |
|---|
| Causes serious eye irritation |
| May cause respiratory irritation |
| : 1 - Materials that, under emergency conditions, can cause significant irritation. |
| : 1 - Materials that must be preheated before ignition can occur. |
| : 0 - Material that in themselves are normally stable, even under fire conditions. |
| |
| : 1 Slight Hazard - Irritation or minor reversible injury possible |
| : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB) |
| : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardou polymerization in the absence of inhibitors. |
| ard |

Synerzine US

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product