

Safety Data Sheet 22171X5 according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 06/13/2016 Version: 1.0

| 1.1. Identification   |   |  |
|---|---|--|
| Product form  | : Substance   |  |
| Substance name  | : Adamantan-2-one   |  |
| CAS No  | : 700-58-3  |  |
| Product code  | : 2217-1-X5   |  |
| Formula   | : C10H14O   |  |
| Synonyms  | : Tricyclo[3.3.1.1~3,7~]decan-2-one; 2-Oxotricyclo[3.3.1.1~3,7~]decane  |  |
| Other means of identification   | : MFCD00074737  |  |
| 1.2. Relevant identified uses of the  | substance or mixture and uses advised against   |  |
| Use of the substance/mixture  | : Laboratory chemicals<br>Manufacture of substances<br>Scientific research and development  |  |
| 1.3. Details of the supplier of the sa  | afety data sheet  |  |
| SynQuest Laboratories, Inc.<br>P.O. Box 309<br>Alachua, FL 32615 - United States of Amer<br>T (386) 462-0788 - F (386) 462-7097<br>info@synquestlabs.com - www.synquestlab  |   |  |
| 1.4. Emergency telephone number   |   |  |
| Emergency number  | : (844) 523-4086 (3E Company - Account 10069)   |  |
| SECTION 2: Hazard(s) identificat  | tion  |  |
| 2.1. Classification of the substance  |   |  |
| Classification (GHS-US)   |   |  |
| Eye Irrit. 2A H319 - Causes seriou<br>STOT SE 3 H335 - May cause res<br>Aquatic Acute 3 H402 - Harmful to aqu   | us eye irritation<br>spiratory irritation<br>uatic life   |  |
| Eye Irrit. 2AH319 - Causes seriouSTOT SE 3H335 - May cause resAquatic Acute 3H402 - Harmful to aquAquatic Chronic 3H412 - Harmful to aqu  | us eye irritation<br>spiratory irritation   |  |
| Eye Irrit. 2AH319 - Causes seriouSTOT SE 3H335 - May cause resAquatic Acute 3H402 - Harmful to aquAquatic Chronic 3H412 - Harmful to aquFull text of H-phrases: see section 16  | us eye irritation<br>spiratory irritation<br>uatic life   |  |
| Eye Irrit. 2AH319 - Causes seriouSTOT SE 3H335 - May cause resAquatic Acute 3H402 - Harmful to aquAquatic Chronic 3H412 - Harmful to aquFull text of H-phrases: see section 162.2.Label elements  | us eye irritation<br>spiratory irritation<br>uatic life   |  |
| Eye Irrit. 2AH319 - Causes seriouSTOT SE 3H335 - May cause restAquatic Acute 3H402 - Harmful to aquAquatic Chronic 3H412 - Harmful to aquFull text of H-phrases: see section 162.2.Label elementsGHS-US labeling  | us eye irritation<br>spiratory irritation<br>uatic life   |  |
| Eye Irrit. 2A H319 - Causes seriou.<br>STOT SE 3 H335 - May cause rest<br>Aquatic Acute 3 H402 - Harmful to aqu<br>Aquatic Chronic 3 H412 - Harmful to aqu<br>Full text of H-phrases: see section 16<br>2.2. Label elements<br>GHS-US labeling<br>Hazard pictograms (GHS-US)  | us eye irritation<br>espiratory irritation<br>uatic life<br>uatic life with long lasting effects  |  |
| Eye Irrit. 2AH319 - Causes seriouSTOT SE 3H335 - May cause resAquatic Acute 3H402 - Harmful to aquAquatic Chronic 3H412 - Harmful to aquFull text of H-phrases: see section 16  | us eye irritation<br>spiratory irritation<br>uatic life<br>uatic life with long lasting effects<br>:<br>CINE<br>GHS07   |  |
| Eye Irrit. 2A       H319 - Causes seriou.         STOT SE 3       H335 - May cause rest         Aquatic Acute 3       H402 - Harmful to aqu         Aquatic Chronic 3       H412 - Harmful to aqu         Full text of H-phrases: see section 16         2.2.       Label elements         GHS-US labeling         Hazard pictograms (GHS-US) | <ul> <li>us eye irritation</li> <li>aspiratory irritation</li> <li>uatic life</li> <li>uatic life with long lasting effects</li> </ul> : value of the second sec |  |

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P362+P364 - Take off contaminated clothing and wash it 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

### No additional information available

2.4. Unknown acute toxicity (GHS US)

#### Not applicable

# SECTION 3: Composition/information on ingredients

#### 3.1. **Substance**

: Mono-constituent Substance type

| Name                                  | Product identifier | %      | Classification (GHS-US)   |
|---------------------------------------|--------------------|--------|---|
| Adamantan-2-one<br>(Main constituent) | (CAS No) 700-58-3  | <= 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335<br>Aquatic Acute 3, H402<br>Aquatic Chronic 3, H412 |

## Full text of H-phrases: see section 16

| 3.2. Mixture  |  |  |
|---|--|--|
| Not applicable  |  |  |
| SECTION 4: First aid measures   |  |  |
| 4.1. Description of first aid measures  |  |  |
| First-aid measures general  | : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area. |  |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.                              |  |
| First-aid measures after skin contact   | : Wash with plenty of soap and water. Get medical advice/attention.  |  |
| First-aid measures after eye contact  | : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.  |  |
| First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention. |  |  |
| 4.2. Most important symptoms and effect   | s, both acute and delayed  |  |
| Symptoms/injuries   | : The most important known symptoms and effects are described in the labelling (see section  |  |

2.2) and/or in section 11.

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

Treat symptomatically.

| SECTI      | ON 5: Firefighting measures         |  |
|------------|-------------------------------------|--|
| 5.1.       | Extinguishing media                 |  |
| Suitable   | extinguishing media                 | : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.   |
| 5.2.       | Special hazards arising from the su | stance or mixture  |
| Fire haza  | ard                                 | : Thermal decomposition generates: Carbon oxides.  |
| 5.3.       | Advice for firefighters             |  |
| Firefighti | ing instructions                    | : In case of fire: Evacuate area.  |
| Protectio  | on during firefighting              | : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection". |

| SECTION 6: Accidental release measures |                                      |   |
|--|--------------------------------------|---|
| 6.1.                                   | Personal precautions, protective equ | ipment and emergency procedures   |
| General r                              | neasures                             | : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe dust. |
| 6.1.1.                                 | For non-emergency personnel          |   |
| Emergen                                | cy procedures                        | : Only qualified personnel equipped with suitable protective equipment may intervene.   |

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| 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".  |
| 6.2. Environmenta  | precautions  |
| Avoid release to the envir   | onment. Notify authorities if product enters sewers or public waters.  |
| 6.3. Methods and r   | naterial for containment and cleaning up   |
| For containment  | : Stop leak if safe to do so.  |
| Methods for cleaning up  | : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust.   |
| Other information  | : For disposal of solid materials or residues refer to section 13 : "Disposal considerations".   |
|  |  |
| 6.4. Reference to c  | ther sections  |
| 6.4. Reference to c<br>No additional information   |  |
| No additional information  | available  |
| No additional information<br>SECTION 7: Handli   | available<br>ng and storage  |
| No additional information<br>SECTION 7: Handli   | available<br>ng and storage<br>r safe handling   |
| No additional information<br>SECTION 7: Handli<br>7.1. Precautions for   | available ng and storage r safe handling ling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective  |
| No additional information<br>SECTION 7: Handli<br>7.1. Precautions for<br>Precautions for safe hanc<br>Hygiene measures  | available ng and storage r safe handling ling : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes. : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or   |
| No additional information<br>SECTION 7: Handli<br>7.1. Precautions for<br>Precautions for safe hanc<br>Hygiene measures  | available ng and storage r safe handling ling  : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes. : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.   |
| No additional information<br>SECTION 7: Handli<br>7.1. Precautions for<br>Precautions for safe hance<br>Hygiene measures<br>7.2. Conditions for                      | available ng and storage r safe handling ling  : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes. : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. safe storage, including any incompatibilities                                       |
| No additional information<br>SECTION 7: Handli<br>7.1. Precautions for<br>Precautions for safe hanc<br>Hygiene measures<br>7.2. Conditions for<br>Technical measures | available ng and storage r safe handling ling  : Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes. : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. safe storage, including any incompatibilities : Comply with applicable regulations. |

# **SECTION 8: Exposure controls/personal protection**

#### 8.1. **Control parameters**

No additional information available

| 8.2. Exposure controls           |  |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers<br>should be available in the immediate vicinity of any potential exposure. |
| Hand protection                  | : Protective gloves. 29 CFR 1910.138: Hand Protection.   |
| Eye protection                   | : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection.   |
| Skin and body protection         | : Wear suitable protective clothing.   |
| Respiratory protection           | : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory<br>Protection.   |
| Other information                | : Safety shoes. 29 CFR 1910.136: Foot Protection.  |
|                                  |  |

# **SECTION 9: Physical and chemical properties**

| 9.1. Information on basic physical an       | d chemical properties |
|---|-----------------------|
| Physical state                              | : Solid               |
| Color                                       | : No data available   |
| Ddor  | : No data available   |
| Ddor threshold                              | : No data available   |
| Н   | : No data available   |
| Melting point                               | : 256 - 258 °C (sub.) |
| Freezing point                              | : No data available   |
| Boiling point                               | : No data available   |
| Flash point                                 | : No data available   |
| Relative evaporation rate (butyl acetate=1) | : No data available   |
| Flammability (solid, gas)                   | : No data available   |
| Explosion limits                            | : No data available   |
| Explosive properties                        | : No data available   |

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| Oxidizing properties            | : No data available |
|---------------------------------|---------------------|
| Vapor pressure                  | : No data available |
| Relative density                | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Molecular mass                  | : 150.22 g/mol      |
| Solubility                      | : No data available |
| Log Pow                         | : No data available |
| Auto-ignition temperature       | : No data available |
| Decomposition temperature       | : No data available |
| Viscosity                       | : No data available |
| Viscosity, kinematic            | : No data available |
| Viscosity, dynamic              | : No data available |
|                                 |                     |

## 9.2. Other information

No additional information available

| SECT    | ION 10: Stability and reactivity   |
|---------|--|
| 10.1.   | Reactivity   |
| No add  | itional information available  |
| 10.2.   | Chemical stability   |
| The pro | oduct is stable at normal handling and storage conditions.   |
| 10.3.   | Possibility of hazardous reactions   |
| No add  | itional information available  |
| 10.4.   | Conditions to avoid  |
| Keep a  | way from heat, sparks and flame.   |
| 10.5.   | Incompatible materials   |
| Strong  | oxidizing agents.  |
| 10.6.   | Hazardous decomposition products   |
| Under r | normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of |

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

# 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                    |

| SECT   | ON 12: Ecological information |  |
|--------|-------------------------------|--|
| 12.1.  | Toxicity                      |  |
| Adama  | antan-2-one (700-58-3)        |  |
| LC50 f | ish 1                         | 51.7 - 71.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| 12.2.  | Persistence and degradability |  |

No additional information available

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| 12.3.                               | Bioaccumulative potential     |  |  |  |  |
|-------------------------------------|-------------------------------|--|--|--|--|
| No addi                             | itional information available |  |  |  |  |
| 12.4.                               | Mobility in soil              |  |  |  |  |
| No additional information available |                               |  |  |  |  |
|                                     |                               |  |  |  |  |
| 12.5.                               | Other adverse effects         |  |  |  |  |
| No addi                             | itional information available |  |  |  |  |

## **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

# Waste treatment methods

Waste disposal recommendations Additional information

- : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.
- sal recommendations : Dispose of contents/cor
- Dispose of contents/container in accordance with licensed collector's sorting instructions.
   Recycle the material as far as possible.
- SECTION 14: Transport information

## **Department of Transportation (DOT)**

In accordance with DOT

Not regulated for transport

### TDG

No additional information available

### Transport by sea

No additional information available

#### Air transport

No additional information available

## SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

|  | Adamantan-2-one | CAS No 700-58-3 | 100% |
|--|-----------------|-----------------|------|
|--|-----------------|-----------------|------|

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### 15.2. International regulations

### CANADA

No additional information available

#### **EU-Regulations**

No additional information available

# National regulations

Adamantan-2-one (700-58-3)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on NZIoC (New Zealand Inventory of Chemicals)

## 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

**SECTION 16: Other information** 

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| Full tex         | t of H-phrases:   |   |  |  |  |
|------------------|-------------------|---|--|--|--|
|                  | Aquatic Acute 3   | Hazardous to the aquatic environment - Acute Hazard Category 3  |  |  |  |
|                  | Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3  |  |  |  |
|                  | Eye Irrit. 2A     | Serious eye damage/eye irritation Category 2A   |  |  |  |
|                  | Skin Irrit. 2     | Skin corrosion/irritation Category 2  |  |  |  |
|                  | STOT SE 3         | Specific target organ toxicity (single exposure) Category 3   |  |  |  |
|                  | H315              | Causes skin irritation  |  |  |  |
|                  | H319              | Causes serious eye irritation   |  |  |  |
|                  | H335              | May cause respiratory irritation  |  |  |  |
|                  | H402              | Harmful to aquatic life   |  |  |  |
|                  | H412              | Harmful to aquatic life with long lasting effects   |  |  |  |
| NFPA fire hazard |                   | <ul> <li>2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.</li> <li>0 - Materials that will not burn.</li> </ul> |  |  |  |
| NFPA reactivity  |                   | <ul> <li>O - Normally stable, even under fire exposure conditions, and are not reactive with water.</li> </ul>  |  |  |  |
| HMIS I           | II Rating         |   |  |  |  |
| Health           |                   | : 2 Moderate Hazard - Temporary or minor injury may occur   |  |  |  |
| Flammability     |                   | : 0 Minimal Hazard - Materials that will not burn   |  |  |  |
| Physical         |                   | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.                         |  |  |  |

SDS US (GHS HazCom 2012)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.