

Safety Data Sheet 2221313 according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Version: 1.0 Date of issue: 10/02/2015

| SECTION 1: Identification | |
|--|---|
| 1.1. Identification | |
| Product form | : Substance |
| Substance name | : 1-(1,1,2,3,3,3-Hexafluoropropyl)adamantyl-3-carboxylic acid |
| CAS No | : 86301-98-6 |
| Product code | : 2221-3-13 |
| Formula | : C14H16F6O2 |
| Other means of identification | : MFCD00193108 |
| 1.2. Relevant identified uses of the substa | ance or mixture and uses advised against |
| Use of the substance/mixture | : Laboratory chemicals Manufacture of substances Scientific research and development |
| 1.3. Details of the supplier of the safety d | ata sheet |
| SynQuest Laboratories, Inc. P.O. Box 309 Alachua, FL 32615 - United States of America T (386) 462-0788 - F (386) 462-7097 info@synquestlabs.com | |
| 1.4. Emergency telephone number | |
| Emergency number | : (844) 523-4086 (3E Company - Account 10069) |
| SECTION 2: Hazard(s) identification | |
| 2.1. Classification of the substance or mi | xture |
| Classification (GHS-US) | |
| Skin Irrit. 2H315 - Causes skin irritationEye Irrit. 2AH319 - Causes serious eye irritatioSTOT SE 3H335 - May cause respiratory irritationFull text of H-phrases: see section 16 | |
| 2.2. Label elements | |
| GHS-US labeling | |
| Hazard pictograms (GHS-US) | : GHS07 |
| 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 dust, mist P264 - Wash skin thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/eye protection/face protection 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 POISON CENTER or doctor/physician if you feel unwell P321 - Specific treatment (see supplemental first aid instructions on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention 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 |

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

| 2.3. Other hazards | 1001 | - Dispose of contents/container to an ap | | | | | | | | |
|--|-----------------|---|-------------------|---|--|--|--|--|--|--|
| No additional information available | | | | | | | | | | |
| 2.4. Unknown acute toxicity (GHS US | 5) | | | | | | | | | |
| Not applicable | , | | | | | | | | | |
| SECTION 3: Composition/informa | tion on in | aradiants | | | | | | | | |
| 3.1. Substance | | greatents | | | | | | | | |
| Substance type | · Mono | -constituent | | | | | | | | |
| | . 10010 | | | | | | | | | |
| Name | | Product identifier | % | Classification (GHS-US) | | | | | | |
| 1-(1,1,2,3,3,3-Hexafluoropropyl)adamantyl-3-carb (Main constituent) | oxylic acid | (CAS No) 86301-98-6 | <= 100 | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 | | | | | | |
| 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 | 5 | | | | | | | | | |
| First-aid measures general | | se of accident or if you feel unwell, seek r e possible). Move the affected personnel | | | | | | | | |
| First-aid measures after inhalation | | ove person to fresh air and keep comforta ation. Get medical advice/attention. | ble for breathin | g. If not breathing, give artificial | | | | | | |
| First-aid measures after skin contact | : Wash | with plenty of soap and water. Get medi | cal advice/atter | ition. | | | | | | |
| First-aid measures after eye contact | : Imme prese | nmediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if resent and easy to do. Continue rinsing. Get medical advice/attention. | | | | | | | | |
| First-aid measures after ingestion | | OT induce vomiting. Never give anything nout with water. Get medical advice/atter | | unconscious person. Rinse | | | | | | |
| 4.2. Most important symptoms and e | ffects, 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 med | lical attentio | n and special treatment needed | | | | | | | | |
| Treat symptomatically. | | | | | | | | | | |
| SECTION 5: Firefighting measure | S | | | | | | | | | |
| 5.1. Extinguishing media | | | | | | | | | | |
| Suitable extinguishing media | | ol resistant foam. Carbon dioxide. Dry po priate for surrounding fire. | owder. Water sp | oray. Use extinguishing media | | | | | | |
| 5.2. Special hazards arising from the | substance of | or mixture | | | | | | | | |
| Fire hazard | : Therr | nal decomposition generates: Carbon oxi | des. Hydrogen | fluoride. | | | | | | |
| 5.3. Advice for firefighters | | | | | | | | | | |
| Protection during firefighting | : Do no | ot attempt to take action without suitable | protective equip | ment. For further information | | | | | | |
| 0 0 0 | | to section 8: "Exposure controls/personal | | | | | | | | |
| SECTION 6: Accidental release m | easures | | | | | | | | | |
| 6.1. Personal precautions, protective | | and emergency procedures | | | | | | | | |
| General measures | : Evac | uate unnecessary personnel. Ensure ade ne dust. | quate air ventila | ation. Avoid raising dust. Do not | | | | | | |
| 6.1.1. For non-emergency personnel | | | | | | | | | | |
| Emergency procedures | : Only | qualified personnel equipped with suitabl | e protective equ | lipment may intervene. | | | | | | |
| 6.1.2. For emergency responders | | | | | | | | | | |
| Protective equipment | | ot attempt to take action without suitable p to section 8: "Exposure controls/personal | | ment. For further information | | | | | | |
| 6.2. Environmental precautions | | | | | | | | | | |
| · · · · · · · · · · · · · · · · · · · | | luat antora aquiora ar public watara | | | | | | | | |

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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| 6.3. | Methods and material for contain | nent and cleaning up |
|-------|----------------------------------|---|
| | ds 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 other sections | |
| No ad | ditional information available | |
| SEC | FION 7: Handling and storage | |
| 7.1. | Precautions for safe handling | |
| Preca | utions for safe handling | : Ensure good ventilation of the work station. Do not breathe dust. Avoid raising dust. Wear personal protective equipment. Avoid contact with skin and eyes. |

| Hygiene measures | : 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. |
|---|--|
| 7.2. Conditions for safe storage, include | ling any incompatibilities |
| Storage conditions | : Keep container tightly closed. |
| Incompatible materials | : Refer to Section 10 on Incompatible Materials. |
| Storage area | : Store in dry, cool, well-ventilated area. |

| SECTION 8: Ex | posure 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 should be available in the immediate vicinity of any potential exposure. |
| Hand protection | : Protective gloves. |
| Eye protection | : Chemical goggles or safety glasses. Face shield. |
| Skin and body protection | : Wear suitable protective clothing. |
| Respiratory protection | : In case of insufficient ventilation, wear suitable respiratory equipment. |

SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and | d chemical properties | | |
|---|-----------------------|-----------------|-----|
| Physical state | : Solid | | |
| Color | : No data available | | |
| Odor | : No data available | | |
| Odor threshold | : No data available | | |
| DH | : No data available | | |
| Melting point | : 115 - 117 °C | | |
| 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 | | |
| 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 | : 330.27 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 | | |
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| Viccosity ki | inomotio | : No data available |
|-----------------------------|--|---|
| Viscosity, ki | | : No data available |
| Viscosity, dy | , | |
| | Other information | |
| No additiona | al information available | |
| SECTION | N 10: Stability and reactivity | |
| 10.1. R | eactivity | |
| No additiona | al information available | |
| 10.2. C | chemical stability | |
| The product | t is stable at normal handling and stora | age conditions. |
| 10.3. P | ossibility of hazardous reactions | |
| No additiona | al information available | |
| 10.4. C | conditions to avoid | |
| No additiona | al information available | |
| 10.5. In | ncompatible materials | |
| Strong base | es. Strong oxidizing agents. | |
| 10.6. H | lazardous decomposition products | |
| Under norm fire, see See | | ardous decomposition products should not be produced. Hazardous decomposition products in case of |
| SECTION | N 11: Toxicological information | on |
| 11.1. In | nformation on toxicological effects | |
| | | |
| Acute toxicit | ity | : Not classified |
| Skin corrosi | ion/irritation | : Causes skin irritation. |
| Serious eye | e damage/irritation | : Causes serious eye irritation. |
| Respiratory | or skin sensitization | : Not classified |
| Germ cell m | nutagenicity | : Not classified |

| o , | |
|--|-------------------------------------|
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : May cause respiratory irritation. |

Specific target organ toxicity (repeated : Not classified

Aspiration hazard : Not classified

| SECTION 12: Ecological information |
|-------------------------------------|
| 12.1. Toxicity |
| No additional information available |
| 12.2. Persistence and degradability |
| 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 |

| SECTI | ON 13: Disposal considerati | ons |
|----------|-----------------------------|---|
| 13.1. | Waste treatment methods | |
| Waste tr | eatment methods | : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. |

Carcinogenicity

exposure)

: Not classified

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Waste disposal recommendations

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

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:

| 1-(1,1 | ,2,3,3,3 - ⊦ | lexaflu | oroproj | pyl)ad | amant | tyl-3 | -carl | ооху | icid | | CA | AS No | o 863 | 01-98-6 | 6 | | | | 0% | | |
|--------|---------------------|---------|---------|--------|-------|-------|-------|------|------|--|----|-------|-------|---------|---|--|--|--|----|------|---|
| | | | | | | | | | | | | | | | | | | | | | _ |

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

No additional information available

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

Full text of H-phrases:

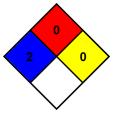
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
|---------------|---|
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

| NFPA health I | hazard |
|---------------|--------|
|---------------|--------|

NFPA fire hazard NFPA reactivity

- medical attention is given.: 0 Materials that will not burn.
- : 0 Normally stable, even under fire exposure conditions, and are not reactive with water.

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt



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| HMIS III 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.