

Safety Data Sheet 26211W3 according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 01/13/2016 Version: 1.0

| SECTION 1: Identification | | | | |
|--|--|--|--|--|
| 1.1. Identification | | | | |
| Product form | : Substance | | | |
| Substance name | : Biphenyl-4,4'-dicarboxylic acid | | | |
| CAS No | : 787-70-2 | | | |
| Product code | : 2621-1-W3 | | | |
| Formula | : C14H10O4 | | | |
| Synonyms | : 4,4'-Dicarboxybiphenyl | | | |
| Other means of identification | : MFCD00002554 | | | |
| 1.2. Relevant identified uses of the | e substance 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 same | afety data sheet | | | |
| SynQuest Laboratories, Inc. P.O. Box 309 Alachua, FL 32615 - United States of Amer T (386) 462-0788 - F (386) 462-7097 info@synquestlabs.com - www.synquestlab | <u>bs.com</u> | | | |
| 1.4. Emergency telephone number Emergency number | : (844) 523-4086 (3E Company - Account 10069) | | | |
| Classification (GHS-US) Skin Irrit. 2 H315 - Causes skin irritatio Eye Irrit. 2A H319 - Causes serious eye STOT SE 3 H335 - May cause respirate Full text of H-phrases: see section 16 | e irritation | | | |
| 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, spray 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 contac 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 P337+P313 - If eye irritation persists: 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 P501 - Dispose of contents/container to an approved waste disposal plant | | | |

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| | ards | | | | |
|---|--|--|--|--|--|
| No additional informa | ation available | | | | |
| 2.4. Unknown | acute toxicity (GHS US) | | | | |
| Not applicable | | | | | |
| SECTION 3: Co | mposition/information | on ing | gredients | | |
| 3.1. Substance | e | | | | |
| Substance type | : | : Mono- | constituent | | |
| Name | | | Product identifier | % | Classification (GHS-US) |
| Biphenyl-4,4'-dicarbox (Main constituent) | cylic acid | | (CAS No) 787-70-2 | <= 100 | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |
| Full text of H-phrases | s: see section 16 | | | | · |
| 3.2. Mixture | | | | | |
| Not applicable | | | | | |
| SECTION 4: Fire | st aid measures | | | | |
| 4.1. Descriptio | on of first aid measures | | | | |
| First-aid measures g | eneral : | | e of accident or if you feel unwell, seek r possible). Move the affected personnel | | |
| First-aid measures af | fter inhalation : | | ve person to fresh air and keep comforta ation. Get medical advice/attention. | able for breathin | g. If not breathing, give artificial |
| First-aid measures at | | | with plenty of soap and water. Get medi | | |
| First-aid measures af | fter eye contact : | | diately flush eyes thoroughly with water f ht and easy to do. Continue rinsing. Get | | |
| First-aid measures af | Iter ingestion : | | OT induce vomiting. Never give anything out with water. Get medical advice/atter | | unconscious person. Rinse |
| 4.2. Most impo | ortant symptoms and effects | s, both a | cute and delayed | | |
| Symptoms/injuries | : | | ost important known symptoms and effend/or in section 11. | cts are describe | ed in the labelling (see section |
| 4.3. Indication | of any immediate medical a | attentior | and special treatment needed | | |
| Treat symptomaticall | y. | | | | |
| SECTION 5: Fire | efighting measures | | | | |
| | hing media | | | | |
| Suitable extinguishin | g media : | | ol resistant foam. Carbon dioxide. Dry po oriate for surrounding fire. | owder. Water sp | ray. Use extinguishing media |
| | | | | | |
| 5.2. Special ha | azards arising from the subs | stance o | r mixture | | |
| | • | | r mixture al decomposition generates: Carbon oxi | des. | |
| Fire hazard | • | | | des. | |
| Fire hazard 5.3. Advice for | r firefighters | : Therm | | des. | |
| Fire hazard | r firefighters ns : | : Therm : In cas : Wear | al decomposition generates: Carbon oxi | n combination w | |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire | r firefighters ns : | : Therm : In cas : Wear appara | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in | n combination w | |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Acc | r firefighters ons : fighting : | : Therm : In cas : Wear appara | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect | n combination w | |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Acc 6.1. Personal p | r firefighters ons fighting cidental release measu precautions, protective equi | : Therm : In cas : Wear appara Jres pment a | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect | n combination w ion 8: "Exposure | e controls/personal protection". |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Act 6.1. Personal p General measures | r firefighters ons fighting cidental release measu precautions, protective equi | : Therm : In cas : Wear appara Jres pment a | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect and emergency procedures | n combination w ion 8: "Exposure | e controls/personal protection". |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Acc 6.1. Personal p General measures | r firefighters ons : fighting : cidental release measu precautions, protective equi : mergency personnel | : Therm : In cas : Wear appara Jres pment a : Evacu | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect and emergency procedures | n combination w ion 8: "Exposure quate air ventila | e controls/personal protection". ation. Do not breathe dust. |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Acc 6.1. Personal p General measures 6.1.1. For non-en Emergency procedur 6.1.2. For emerg | r firefighters ons fighting cidental release measu precautions, protective equi mergency personnel res gency responders | : Therm : In cas : Wear appara Jres pment a : Evacu | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect and emergency procedures ate unnecessary personnel. Ensure ade | n combination w ion 8: "Exposure quate air ventila | e controls/personal protection". ation. Do not breathe dust. |
| Fire hazard 5.3. Advice for Firefighting instructio Protection during fire SECTION 6: Act 6.1. Personal p General measures 6.1.1. For non-en Emergency procedur | r firefighters ons fighting cidental release measu precautions, protective equi mergency personnel res gency responders | : Therm : In cas : Wear appara Jres pment a : Evacu : Only c : Do no | al decomposition generates: Carbon oxi e of fire: Evacuate area. gas tight chemically protective clothing in atus. For further information refer to sect and emergency procedures ate unnecessary personnel. Ensure ade | n combination w ion 8: "Exposure quate air ventila e protective equ protective equip | e controls/personal protection". ation. Do not breathe dust. upment may intervene. |

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

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| 6.3. Methods and material 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 other sectio | ns |
| No additional information available | |
| SECTION 7: Handling and s | torage |
| 7.1. Precautions for safe hand | dling |
| Precautions for safe handling | : 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. |
| Hygiene measures | · Handle in accordance with good industrial bygiene and safety procedures. Do not eat, drink or |

| nygien | e measures | smoke when using this product. Always wash hands after handling the product. |
|---------|-------------------------------------|--|
| 7.2. | Conditions for safe storage, includ | ing any incompatibilities |
| Technie | cal measures | : Comply with applicable regulations. |
| Storage | e conditions | : Keep container closed when not in use. |
| Incomp | atible materials | : Refer to Section 10 on Incompatible Materials. |

Storage area : Store in dry, cool, well-ventilated area.

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 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 Protection. |
| Other information | : Safety shoes. 29 CFR 1910.136: Foot Protection. |

| SECTION | 0. Dhycical and | chemical properties |
|---------|-----------------|---------------------|
| | | CHEINCALDIQUEITES |

| 9.1. Information on basic physical ar | d chemical properties |
|---|-----------------------|
| Physical state | : Solid |
| Color | : No data available |
| Odor | : No data available |
| Odor threshold | : No data available |
| рН | : No data available |
| Melting point | : > 300 °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 | : 242.23 g/mol |

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| 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

| SECTION 10: Stability and re | eactivity |
|--|--|
| 10.1. Reactivity | |
| No additional information available | |
| 10.2. Chemical stability | |
| The product is stable at normal handli | ing and storage conditions. |
| 10.3. Possibility of hazardous r | eactions |
| No additional information available | |
| 10.4. Conditions to avoid | |
| Keep away from heat, sparks and flan | ne. |
| 10.5. Incompatible materials | |
| Strong bases. Strong oxidizing agents | 3. |
| 10.6. Hazardous decomposition | a products |
| | nd use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of |
| fire, see Section 5. | iu use, nazarubus decomposition products should not be produced. Hazarubus decomposition products in case of |
| SECTION 11: Toxicological i | information |
| 11.1. Information on toxicologic | |
| | |
| 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 |
| | |

Specific target organ toxicity (repeated : Not classified exposure)

Aspiration hazard

: Not classified

| SECT | ION 12: Ecological informatio | n | | |
|----------|-------------------------------|-----------------|-----------------|-----|
| 12.1. | Toxicity | | | |
| No addi | tional information available | | | |
| 12.2. | Persistence and degradability | | | |
| No addi | tional information available | | | |
| 12.3. | Bioaccumulative potential | | | |
| No addi | tional information available | | | |
| 12.4. | Mobility in soil | | | |
| No addi | tional information available | | | |
| 12.5. | Other adverse effects | | | |
| No addi | tional information available | | | |
| 12/06/20 | 16 | EN (English US) | SDS ID: 26211W3 | 4/6 |

irritation.

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| SECTION 13: Disposal conside | rations |
|--|---|
| 13.1. Waste treatment methods | |
| Waste treatment methods | : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. |
| Waste disposal recommendations | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Additional information | : Recycle the material as far as possible. |
| SECTION 14: Transport informa 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

| OFOTIO | | • • | |
|--------|----------|----------|---------------|
| SECHO | N 15: Re | dulatory | y information |
| | | | |

15.1. US Federal regulations

Biphenyl-4,4'-dicarboxylic acid (787-70-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

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 | |
|--|--|
| Biphenyl-4,4'-dicarboxylic acid (787-70-2) | |
| Listed on the Canadian NDSL (Non-Domestic Substances List) | |
| | |

EU-Regulations

No additional information available

National regulations

- Biphenyl-4,4'-dicarboxylic acid (787-70-2) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ISHL (Industrial Safety and Health Law)

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 |

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| NFPA health hazard | : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given. | |
|--------------------|---|--|
| NFPA fire hazard | : 0 - Materials that will not burn. | |
| NFPA reactivity | : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water. | |
| 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.