# SAFETY DATA SHEET

## Section 1. Identification of the material and the supplier

| | |
|---|---|
| Product: | **Nimitz** |
| Chemical Name of Active Ing: | Fluensulfone |
| Product Use: | Nematicide |
| Restriction of Use: | Refer to Section 15 |
| New Zealand Supplier: | ADAMA New Zealand Ltd |
| Address: | Level 1/93 Bolt Road<br>Tahunanui, 7011, Nelson |
| Telephone: | +64 3 543 8275 |
| Email: | nzorders@adama.com |
| **Emergency Telephone:** | **0800 764 766 (National Poison Centre)**<br>**0800 734 607 (24hr Emergency Response)** |
| Date of SDS Preparation: | 20 October 2022 |

## Section 2. Hazards Identification

**This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020**

**EPA Approval No: HSR101547**

**Pictograms**

Signal Word: **Warning**

| HSNO Classification | Hazard Code | Hazard Statement |
|---|---|---|
| Eye irritation Category 2 | H319 | Causes serious eye irritation. |
| Skin sensitisation Category 1A | H317 | May cause an allergic skin reaction. |
| Target organ systemic toxicity (repeat exposure) Category 2 | H372 | May cause damage to organs through prolonged or repeated exposure. |
| Hazardous to the aquatic environment acute Category 1 | H400 | Very toxic to aquatic life. |
| Hazardous to the aquatic environment chronic Category 1 | H410 | Very toxic to aquatic life with long lasting effects. |
| Hazardous to soil organisms | H423 | Harmful to soil organisms. |
| Hazardous to terrestrial vertebrates | H433 | Harmful to terrestrial vertebrates. |

| Prevention Code | Prevention Statement |
|---|---|
| P102 | Keep out of reach of children. |
| P260 | Do not breathe mist/spray. |
| P264 | Wash hands or exposed skin thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid unintended release into the environment. |
| P280 | Wear protective clothing and equipment as specified in Section 8. |

| Response Code | Response Statement |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P302 + P313 + P333 | IF ON SKIN: Wash exposed skin with plenty of soap and water. If skin irritation or rash occurs, get medical advice/attention. |
| P305 + P338 + P351 | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. |
| P308 + P313 | IF otherwise exposed or concerned: Get medical advice/ attention. |
| P362 + P364 | Take off contaminated clothing and wash before reuse. |
| P391 | Collect spillage. |

| Storage Code | Storage Statement |
|---|---|
| None allocated | |

| Disposal Code | Disposal Statement |
|---|---|
| P501 | Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container. |

## Section 3. Composition / Information on Ingredients

| Ingredients | Wt% | CAS NUMBER. |
|---|---|---|
| Fluensulfone | 47 - 49 | 318290-98-1 |
| Aromatic hydrocarbons | 40 - 44 | 64742-94-5 |
| Non-hazardous components | Balance | N/A |

## Section 4. First Aid Measures

Routes of Exposure:

| | |
|---|---|
| If in Eyes | Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed, while holding the eyelid(s) open. Obtain medical advice if irritation occurs. Take special care if exposed person is wearing contact lenses. |
| If on Skin | Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention. |
| If Swallowed | Rinse mouth. Get medical advice if you feel unwell. |
| If Inhaled | Remove person to fresh air. Get medical advice if breathing becomes difficult. |

**Most important symptoms and effects, both acute and delayed**
**Symptoms:**
**Ingestion**: Not applicable.
**Skin:** May cause an allergic skin reaction.
**Inhalation:** Not applicable.
**Eyes:** Causes serious eye irritation.
**Chronic:** May cause damage to organs through prolonged or repeated exposure.

## Section 5. Fire Fighting Measures

| | |
|---|---|
| **Hazard Type** | Non-Flammable liquid. |
| **Hazards from combustion products** | here is little risk of an explosion from this product if commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances. Fire decomposition products from this product are likely to be toxic and corrosive if inhaled. Take appropriate protective measures. |
| **Suitable Extinguishing media** | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| **Precautions for firefighters and special protective clothing** | If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus. |
| **HAZCHEM Code** | 3Z |

## Section 6. Accidental Release Measures

Wear full protective clothing including eye/face protection. Evacuate area from unnecessary personnel.

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Dispose of according to Local Regulations.

## Section 7. Handling and Storage

**Precautions for Handling:**
- Do not handle until all safety precautions have been read and understood.
- Do not breathe mist/spray.
- Avoid contact with skin, eyes or clothing.
- Wash hands thoroughly after handling.
- Wash contaminated clothing before re-use.
- Avoid unintended release into the environment.
- Wear protective clothing as detailed in Section 8.

**Precautions for Storage:**
- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Keep container tightly closed in a dry and well-ventilated place.
- Keep in properly labeled containers.
- As a substance with Aquatic Ecotoxicity Classifications, storage of this product must be carried out in such a manner as to prevent contamination of waterways. It is recommended that the New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed.

## Section 8 Exposure Controls / Personal Protection

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

| | TWA | | STEL | |
|---|---|---|---|---|
| **Substance** | **ppm** | **mg/m3** | **ppm** | **mg/m3** |

No ingredients have exposure limits.

Workplace Exposure Standard – Time Weighted Average (WES-TWA*). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

**Engineering Controls**

No special ventilation is usually needed when occasionally handling small quantities. However make sure the work environment remains clean and that vapours and mists are minimised.

**Personal Protection**

| | |
|---|---|
| **Eyes** | Protective glasses or goggles with shield shields must be worn when this product is being used. |
| **Hands and Skin** | Suitable protective clothing, Suitable protective clothing, Apron, Gloves made of plastic or rubber. |
| **Respiratory** | During spraying wear suitable respiratory equipment. |
| **General** | When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended. Do not allow into any sewer, on the ground or into any body of water. |

## Section 9 Physical and Chemical Properties

| | |
|---|---|
| **Appearance** | Clear orange liquid. |
| **Odour** | Characteristic odour. |
| **Odour Threshold** | Not available. |
| **pH** | 5 - 7 (1% in water) |
| **Boiling Point** | Not available. |
| **Melting Point** | Liquid at normal temperatures |
| **Crystallization temperature** | Not applicable |
| **Flash Point** | 101°C |
| **Flammability** | Not available. |
| **Upper and Lower Exposure Limits** | Not available. |
| **Vapour Pressure** | Not available. |
| **Specific Gravity** | 1.1 – 1.2 |
| **Solubilities** | Emulsifiable in water |
| **Partition Coefficient:** | 2.6 (at pH 7.5) |
| **Auto-ignition Temperature** | Not available. |
| **Viscosity, dynamic** | Not available. |
| **Particle Characteristics** | Not available. |
| **Volatiles** | Not available. |

## Section 10. Stability and Reactivity

| | |
|---|---|
| **Stability of Substance** | This product is stable under normal conditions. |
| **Reactivity** | This product is unlikely to react or decompose under normal storage conditions. |
| **Conditions to Avoid** | Keep isolated from combustible materials, direct sun light. This product should be kept in a cool place, preferably below 30◦C. Containers should be kept dry. Store in the closed original container in a dry, cool well-ventilated area out of direct sun light. |
| **Incompatible Materials** | Strong acids, strong bases, strong oxidising agents. |
| **Hazardous Decomposition Products** | Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. May form hydrogen chloride gas, other compounds of chlorine. May form hydrogen fluoride gas and other compounds of fluorine. Calcium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. |

## Section 11 Toxicological Information

**Acute Effects:**

| | |
|---|---|
| **Swallowed** | Not applicable. |
| **Dermal** | May cause an allergic skin reaction. |
| **Inhalation** | Not applicable. |
| **Skin** | Not applicable. |
| **Eye** | Causes serious eye irritation. |

**Chronic Effects:**

| | |
|---|---|
| **Carcinogenicity** | Not applicable. |
| **Reproductive Toxicity** | Not applicable. |
| **Germ Cell Mutagenicity** | Not applicable. |
| **Aspiration** | Not applicable. |
| **STOT/SE** | Not applicable. |
| **STOT/RE** | May cause damage to organs through prolonged or repeated exposure. |

**Fluensulfone:**
LD50 Oral, Rat 500-1000mg/kg
LD50 Dermal, Rat = >4000mg/kg
LC50 Inhalation, Rat = >5.058mg/L/4hr

**Inhalation:**
Short term exposure: Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.
Long Term exposure: No data for health effects associated with long term inhalation.

**Skin Contact:**
Short term exposure: Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. In addition, product may be irritating, but is unlikely to cause anything more than mild transient discomfort. Long Term exposure: No data for health effects associated with long term skin exposure.

**Eye Contact:**
Short term exposure: This product is believed to be irritating, to eyes.
Long Term exposure: No data for health effects associated with long term eye exposure.

**Ingestion:**
Short term exposure: Significant oral exposure is considered to be unlikely. This product is believed to be mildly irritating to mucous membranes but is unlikely to cause anything more than mild transient discomfort.
Long Term exposure: No data for health effects associated with long term ingestion.

**Carcinogen Status:**
SWA: No significant ingredient is classified as carcinogenic by SWA. NTP: No significant ingredient is classified as carcinogenic by NTP. IARC: No significant ingredient is classified as carcinogenic by IARC.

## Section 12. Ecotoxicological Information

**HSNO Classifications**: Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates.

| | |
|---|---|
| **Persistence and degradability** | Persistent in the aquatic environment, readily biodegradable in soil. |
| **Bioaccumulation** | Not bioaccumulative |
| **Mobility in Soil** | Highly mobile in soil |
| **Other adverse effects** | No data available on product |
| **Precautions** | Do not allow to enter waterways. |

## Section 13. Disposal Considerations

**Disposal Method:** Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers before puncturing and offering for recycling or landfill.

AGRECOVERY

**Precautions:** Do not allow product to enter waterways.

**Disposal methods to avoid:** Do not burn product or container.

## Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ; NZS 5433**


**Road and Rail Transport**

| | |
|---|---|
| UN No: | 3082 |
| Class-primary | 9 |
| Packing Group | III |
| Proper Shipping Name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Fluensulfone) |
| Restrictions: | DO NOT CARRY THIS PRODUCT ON A PASSENGER SERVICE VEHICLE. |

**Air Transport**

| | |
|---|---|
| UN No: | 3082 |
| Class-primary | 9 |
| Packing Group | III |
| Proper Shipping Name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Fluensulfone) |

**Marine Transport**

| | |
|---|---|
| UN No: | 3082 |
| Class-primary | 9 |
| Packing Group | III |
| Proper Shipping Name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Fluensulfone) |
| Marine Pollutant | Yes |

**Special Provisions:**
If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

## Section 15 Regulatory Information

**This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020**

**HSNO Approval Code**: HSR101547

**HSNO Classification**: Eye irritation Category 2, Skin sensitisation Category 1A, Target organ systemic toxicity (repeat exposure) Category 2, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates.

| HSW (HS) Regulations 2017 and EPA Notices | Trigger Quantity |
|---|---|
| Certified Handlers | Not required |
| Location Certificate | Not required |
| Tracking Trigger Quantities | Not required |
| Signage Trigger Quantities | 100 L |
| Emergency Response Plan | 100 L |
| Secondary Containment | 100 L |

| HSNO Varied/Additional Controls | |
|---|---|
| Variation to Hazardous Property Controls Notice Part 4B | The maximum application rate of Nimitz is 8 L/ha (equivalent to 3.84 kg fluensulfone/ha), with a maximum frequency of one application per year; |
| Application method restrictions | Application method restrictions have been applied to this substance:<br>1. The substance must be applied using ground-based methods only;<br>2. The substance must be applied with ground-based equipment with a low boom height and minimum coarse droplets, as defined by the American Society of Agricultural and Biological Engineers ASABE Standard (S572) or the British Crop Production Council guideline;<br>3. The substance must not be applied when wind speeds are less than 3 km/hr or more than 20 km/hr as measured at the application site;<br>4. The substance must be incorporated into the soil after application; and<br>5. Avoid application during rain or when rain is forecast within 72 hours after application. |
| Buffer zones | A buffer zone applies to this substance:<br>1. To mitigate risks from run0ff, the substance should not be applied within 25 m of any down-slope waterbody; and<br>2. To mitigate risks from spray drift, the substance must not be applied within 10 m upwind of any waterbody. |
| **Hazardous Property Controls Notice 2017** | |
| HPC Notice Part 1 | Hazardous Property Controls preliminary provisions |
| HPC Notice Part 3 | Hazardous substances in a place other than a workplace |
| HPC Notice Part 4 Subpart A | Substances that are hazardous to the environment: Site and storage controls |
| HPC Notice Part 4 Subpart B | Use of substances that are hazardous to the environment |
| HPC Notice Part 4 Clause 47 | Equipment for environmentally hazardous substances must be appropriate |
| HPC Notice Part 4 Clause 48 | Records of application of ecotoxic pesticides and plant growth regulators |
| HPC Notice Part 4 Clause 52 | Agrichemicals that are hazardous to the aquatic environment must not be applied to water |
| HPC Notice Part 4 Subpart C | Qualifications required for the application of substances that are hazardous to the environment |
| **ACVM Act and Regulations** | |
| Registered pursuant to the ACVM Act 1997,<br>See www.foodsafety.govt.nz for registration conditions | No. P009781 |

## Section 16 Other Information

### Glossary

| | |
|---|---|
| ACVM | Agricultural Compounds and Veterinary Medicines Act 1997. |
| EC50 | Median effective concentration. |
| EEL | Environmental Exposure Limit. |
| EPA | Environmental Protection Authority. |
| HSNO | Hazardous Substances and New Organisms Act 1996. |
| HSW | Health and Safety at Work Act 2015. |
| HSW (HS) Regulations 2017. | Health and Safety at Work (Hazardous Substances) Regulations |
| LC50 or ingesting it. | Lethal concentration that will kill 50% of the test organisms inhaling |
| LD50 | Lethal dose to kill 50% of test animals/organisms. |
| LEL | Lower explosive level. |
| TEL | Tolerable Exposure Limit. |
| TLV authority. | Threshold Limit Value-an exposure limit set by responsible |
| UEL | Upper Explosive Level. |
| WES | Workplace Exposure Limit. |

References:


1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433
5. HSW (Hazardous Substances) Regulations 2017


**Disclaimer:**

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