



# MATERIAL SAFETY DATA SHEET SDS/MSDS

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Sodium Meta Vanadate

CAS-No. : 13718-26-8

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Industrial & for professional use only.

### 1.3 Details of the supplier of the safety data sheet

Company : Bio-Chem Chemicals  
5455 Nicholson Road, Science Market  
Ambala Cantt, 133001 - Haryana  
+91 82952 41953  
info@biofinechemical.com - www.biofinechemical.com

### 1.4 Emergency telephone number

Emergency Phone # : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 4), H332

Eye irritation (Category 2), H319

Reproductive toxicity (Category 2), H361fd

Specific target organ toxicity - repeated exposure (Category 1), H372

Chronic aquatic toxicity (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H301

Toxic if swallowed.

H319

Causes serious eye irritation.

|                                |                                                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| H332                           | Harmful if inhaled.                                                                                                        |
| H361fd                         | Suspected of damaging fertility. Suspected of damaging the unborn child.                                                   |
| H372                           | Causes damage to organs through prolonged or repeated exposure.                                                            |
| H411                           | Toxic to aquatic life with long lasting effects.                                                                           |
| Precautionary statement(s)     |                                                                                                                            |
| P201                           | Obtain special instructions before use.                                                                                    |
| P261                           | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.                                                                     |
| P273                           | Avoid release to the environment.                                                                                          |
| P280                           | Wear eye protection/ face protection.                                                                                      |
| P301 + P310 + P330             | IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.                                                        |
| P304 + P340 + P312             | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. |
| Supplemental Hazard Statements | none                                                                                                                       |

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |   |                                                                                                                           |
|------------------|---|---------------------------------------------------------------------------------------------------------------------------|
| Synonyms         | : | Sodium (meta)vanadate<br>Sodium vanadate(V)<br>Sodium vanadium oxide<br>Sodium vanadium trioxide<br>Sodium trioxovanadate |
| Formula          | : | NaVO <sub>3</sub>                                                                                                         |
| Molecular weight | : | 121.93 g/mol                                                                                                              |
| CAS-No.          | : | 13718-26-8                                                                                                                |
| EC-No.           | : | 237-272-7                                                                                                                 |

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

| Component |            | Classification                                                                            | Concentration |
|-----------|------------|-------------------------------------------------------------------------------------------|---------------|
| CAS-No.   | 13718-26-8 | Acute Tox. 3; Acute Tox. 4;                                                               | <= 100 %      |
| EC-No.    | 237-272-7  | Eye Irrit. 2; Repr. 2; STOT RE 1; Aquatic Chronic 2; H301, H332, H319, H361fd, H372, H411 |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed**

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**

No data available

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **5.2 Special hazards arising from the substance or mixture**

Sodium oxides, Vanadium/vanadium oxides

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

No data available

### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.

#### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### **6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### **6.4 Reference to other sections**

For disposal see section 13.

### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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

#### **8.1 Control parameters**

#### **8.2 Exposure controls**

##### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## Personal protective equipment

### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                                            |
|-------------------------------------------------|--------------------------------------------|
| a) Appearance                                   | Form: powder<br>Colour: light yellow       |
| b) Odour                                        | No data available                          |
| c) Odour Threshold                              | No data available                          |
| d) pH                                           | No data available                          |
| e) Melting point/freezing point                 | Melting point/range: 630 °C                |
| f) Initial boiling point and boiling range      | No data available                          |
| g) Flash point                                  | Not applicable                             |
| h) Evaporation rate                             | No data available                          |
| i) Flammability (solid, gas)                    | No data available                          |
| j) Upper/lower flammability or explosive limits | No data available                          |
| k) Vapour pressure                              | No data available                          |
| l) Vapour density                               | No data available                          |
| m) Relative density                             | No data available                          |
| n) Water solubility                             | 10 g/l - OECD Test Guideline 105 - soluble |
| o) Partition coefficient: n-octanol/water       | No data available                          |
| p) Auto-ignition temperature                    | No data available                          |
| q) Decomposition temperature                    | No data available                          |

- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties The substance or mixture is not classified as oxidizing.

## **9.2 Other safety information**

No data available

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

No data available

### **10.5 Incompatible materials**

Strong oxidizing agents

### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Sodium oxides, Vanadium/vanadium oxides

Other decomposition products - No data available

In the event of fire: see section 5

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - 183 mg/kg(Sodium metavanadate)

(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 4.13 mg/l(Sodium metavanadate)

(OECD Test Guideline 403)

LD50 Dermal - Rat - > 2,500 mg/kg(Sodium metavanadate)

(Read-across (Analogy))

LD50 Intraperitoneal - Rat - 12 mg/kg(Sodium metavanadate)

#### **Skin corrosion/irritation**

Skin - EPISKIN Human Skin Model Test(Sodium metavanadate)

Result: No skin irritation

(OECD Test Guideline 439)

#### **Serious eye damage/eye irritation**

Eyes - Rabbit(Sodium metavanadate)

Result: Irritating to eyes.

(OECD Test Guideline 405)

#### **Respiratory or skin sensitisation**

Maximisation Test - Guinea pig(Sodium metavanadate)

Does not cause skin sensitisation.

(OECD Test Guideline 406)

#### **Germ cell mutagenicity**

In vitro tests did not show mutagenic effects(Sodium metavanadate)

#### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **Reproductive toxicity**

Suspected of damaging the unborn child.(Sodium metavanadate)

Suspected of damaging fertility.(Sodium metavanadate)

**Specific target organ toxicity - single exposure**

No data available(Sodium metavanadate)

**Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

Oral - Irregular cardiac activity(Sodium metavanadate)

**Aspiration hazard**

No data available(Sodium metavanadate)

**Additional Information**

Repeated dose toxicity - Rat - Oral - Lowest observed adverse effect level - 1.7 mg/kg(Sodium metavanadate)

RTECS: YW1050000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Sodium metavanadate)

**SECTION 12: Ecological information**

**12.1 Toxicity**

Toxicity to fish

static test LC50 - Poecilia reticulata (guppy) - 6.1 mg/l - 96 h(Sodium metavanadate)

flow-through test NOEC - Pimephales promelas (fathead minnow) - 0.12 mg/l - 28 d(Sodium metavanadate)

**12.2 Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available(Sodium metavanadate)

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Toxic to aquatic life with long lasting effects.

No data available

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID: 3285

IMDG: 3285 IATA: 3285

**14.2 UN proper shipping name**

ADR/RID: VANADIUM COMPOUND, N.O.S. (Sodium metavanadate)

IMDG: VANADIUM COMPOUND, N.O.S. (Sodium metavanadate)

IATA: Vanadium compound, n.o.s. (Sodium metavanadate)

|                                          |                           |           |
|------------------------------------------|---------------------------|-----------|
| <b>14.3 Transport hazard class(es)</b>   |                           |           |
| ADR/RID: 6.1                             | IMDG: 6.1                 | IATA: 6.1 |
| <b>14.4 Packaging group</b>              |                           |           |
| ADR/RID: III                             | IMDG: III                 | IATA: III |
| <b>14.5 Environmental hazards</b>        |                           |           |
| ADR/RID: no                              | IMDG Marine pollutant: no | IATA: no  |
| <b>14.6 Special precautions for user</b> |                           |           |
| No data available                        |                           |           |

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

|        |                                                                          |
|--------|--------------------------------------------------------------------------|
| H301   | Toxic if swallowed.                                                      |
| H319   | Causes serious eye irritation.                                           |
| H332   | Harmful if inhaled.                                                      |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372   | Causes damage to organs through prolonged or repeated exposure.          |
| H411   | Toxic to aquatic life with long lasting effects.                         |