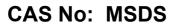
# ARSENIC (AS) ICP STANDARD SOLUTION 1 GM/L IN DILUTE HNO3 TRACEABLE TO NIST MSDS





# MATERIAL SAFETY DATA SHEET (MSDS)

| SECTION 1: Identification  | on of the substance/mixture and of the company/undertaking    |  |
|--|---|--|
| 1.1. Product identifi  |   |  |
| Product form   | : Mixture   |  |
| Product code   | :<br>: 1500N  |  |
| 1.2. Relevant identif  | ied uses of the substance or mixture and uses advised against |  |
| 1.2.1. Relevant identif  | ïed uses  |  |
| Use of the substance/mixed   | ture : Laboratory chemicals, Manufacture of substances        |  |
| <b>1.2.2.</b> Uses advised ag No additional information  | -   |  |
| 1.3. Details of the su   | upplier of the safety data sheet                              |  |
| Labogens Fine Chem Industries<br>1st Floor , Above Bank of India, Guru Vihar , Rahon Road,<br>Ludhiana Pb. (141007)<br>+91 9316777775, +91 7707855700<br>sales@labogens.com - www.Labogens.com |   |  |
| <b>1.4.</b> Emergency tele<br>Emergency number   | phone number<br>: +91 7707855700 (9:00am - 6:00 pm)           |  |
| SECTION 2: Hazards ide   |   |  |
| 2.1. Classification o  | f the substance or mixture                                    |  |
| Classification according to Regulation (EC) No. 1272/2008 [CLP]  |   |  |
| Skin corrosion/irritation,   | H315  |  |
| Category 2<br>Serious eye damage/eye   | H319  |  |
| irritation, Category 2<br>Carcinogenicity, Category<br>1A  | / H350  |  |
| Hazardous to the aquatic<br>environment — Chronic<br>Hazard, Category 3  | H412  |  |
| Full text of classification categories and H statements : see section 16   |   |  |

## Adverse physicochemical, human health and environmental effects

No additional information available

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#### 2.2. Label elements

| Labelling according to Regulation (EC) | No. 1272/2008 [CLP]  |
|--|--|
| Hazard pictograms (CLP)                |  |
|  | GHS05 GHS07 GHS08 GHS09  |
| Signal word (CLP)                      | : Danger   |
| Hazard statements (CLP)                | <ul> <li>H315 - Causes skin irritation</li> <li>H319 - Causes serious eye irritation</li> <li>H350 - May cause cancer</li> <li>H412 - Harmful to aquatic life with long lasting effects</li> </ul>   |
| Precautionary statements (CLP)         | <ul> <li>P201 - Obtain special instructions before use</li> <li>P273 - Avoid release to the environment</li> <li>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.</li> <li>Remove contact lenses, if present and easy to do. Continue rinsing</li> <li>P308+P313 - IF exposed or concerned: Get medical advice/attention</li> </ul> |

#### 2.3. Other hazards

### No additional information available

| SECTION 3: Composition/information on ingredients |                |  |  |  |
|---|----------------|--|--|--|
|   |                |  |  |  |
| 3.1.  | Substance      |  |  |  |
| Not a   | Not applicable |  |  |  |

#### 3.2. Mixture

| Name   | Product identifier  | %        | Classification according<br>to Regulation (EC) No.<br>1272/2008 [CLP]  |
|--|---|----------|--|
| Water  | (CAS No) 7732-18-5<br>(EC no) 231-791-2                               | 75 - 99  | Not classified   |
| Nitric acid  | (CAS No) 7697-37-2<br>(EC no) 231-714-2<br>(EC index no) 007-004-00-1 | 1 - 5    | Ox. Liq. 1, H271<br>Skin Corr. 1A, H314  |
| Diarsenic trioxide<br>substance listed as REACH Candidate<br>substance listed in REACH Annex XIV | (CAS No) 1327-53-3<br>(EC no) 215-481-4<br>(EC index no) 033-003-00-0 | 0.01 - 1 | Carc. 1A, H350<br>Acute Tox. 1 (Oral), H300<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

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

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## **SECTION 4: First aid measures**

| 4.1. Description of first aid measures |  |
|--|--|
| First-aid measures after inhalation    | : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.      |
| First-aid measures after skin contact  | : Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.   |
| First-aid measures after eye contact   | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion     | : Rinse mouth. Get medical advice/attention.   |
| 4.2. Most important symptoms and ef    | fects both acute and delayed   |
|  | : Causes skin irritation.  |
|  | : Causes serious eye irritation.   |
|  | -  |
| Symptoms/injuries after ingestion      | : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.   |
| 4.3. Indication of any immediate med   | cal attention and special treatment needed   |
| No additional information available    |  |
| SECTION 5: Firefighting measures       |  |
| E.4. Extinguishing modia               |  |
| 5.1. Extinguishing media               | Water men Franz Drugender Orders disside   |
|  | : Water spray. Foam. Dry powder. Carbon dioxide.   |
| Unsuitable extinguishing media         | : Do not use extinguishing media containing water.   |
| 5.2. Special hazards arising from the  | substance or mixture   |
| No additional information available    |  |
|  |  |
| 5.3. Advice for firefighters           |  |
| Protection during firefighting         | : Do not enter fire area without proper protective equipment, including respiratory protection.  |
| SECTION 6: Accidental release measures |  |
| 6.1. Personal precautions, protective  | aquipment and emergency procedures   |
|  | equipment and emergency procedures   |
| 6.1.1. For non-emergency personnel     |  |
| Emergency procedures                   | : Evacuate unnecessary personnel.  |
| 6.1.2. For emergency responders        |  |
|  | : Use personal protective equipment as required.   |
|  |  |
| 6.2. Environmental precautions         |  |
| Avoid release to the environment.      |  |
| 6.3. Methods and material for contain  | ment and cleaning up   |
|  | : On land, sweep or shovel into suitable containers. Collect spillage.   |
|  |  |
| 6.4. Reference to other sections       |  |
| No additional information available    |  |
| SECTION 7: Handling and storage        |  |
| 7.1. Precautions for safe handling     |  |
| -                                      | : Avoid contact with skin and eyes. Do not handle until all safety precautions have  |
| Trecautions for sale nationing         | been read and understood. Do not breathe vapours.  |
|  |  |

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| Hygier   | ne measures                         | : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |  |
|--|-------------------------------------|---|--|
| 7.2.   | Conditions for safe storage, incl   | uding any incompatibilities   |  |
| Storag   | e conditions                        | : Store in a well-ventilated place. Keep container tightly closed.  |  |
| 7.3.   | Specific end use(s)                 |   |  |
| No additional information available              |                                     |   |  |
| SECTION 8: Exposure controls/personal protection |                                     |   |  |
| 8.1.   | Control parameters                  |   |  |
| No ad  | No additional information available |   |  |

| 8.2. Exposure controls                     |                                      |
|--|--------------------------------------|
| Hand protection                            | : Protective gloves                  |
| Eye protection                             | : Chemical goggles or safety glasses |
| Skin and body protection                   | : Wear suitable protective clothing  |
| Respiratory protection                     | : Wear respiratory protection        |
| SECTION 9: Physical and chemical pro       |                                      |
|  |                                      |
| 9.1. Information on basic physical a       | and chemical properties<br>: Liquid  |
| Physical state                             |                                      |
| Colour                                     | : Clear colourless.                  |
| Odour                                      | : No data available                  |
| Odour threshold                            | : No data available                  |
| рН   | : No data available                  |
| Relative evaporation rate (butylacetate=1) | : No data available                  |
| Melting point                              | : No data available                  |
| Freezing point                             | : No data available                  |
| Boiling point                              | : No data available                  |
| Flash point                                | : No data available                  |
| Auto-ignition temperature                  | : No data available                  |
| Decomposition temperature                  | : No data available                  |
| Flammability (solid, gas)                  | : No data available                  |
| Vapour pressure                            | : No data available                  |
| Relative vapour density at 20 °C           | : No data available                  |
|  |                                      |

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| Relative density     | : No data available |
|----------------------|---------------------|
| Solubility           | : No data available |
| Log Pow              | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic   | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits     | : No data available |

| 9.2.     | Other information                  |
|----------|------------------------------------|
| No addi  | tional information available       |
| SECTIO   | ON 10: Stability and reactivity    |
|          |                                    |
| 10.1.    | Reactivity                         |
| No addi  | tional information available       |
| 10.2.    | Chemical stability                 |
| Stable ι | under normal conditions.           |
| 10.3.    | Possibility of hazardous reactions |
| No addi  | tional information available       |
| 10.4.    | Conditions to avoid                |
| No addi  | tional information available       |
| 10.5.    | Incompatible materials             |
| No addi  | tional information available       |
| 10.6.    | Hazardous decomposition products   |
| No addi  | tional information available       |
| SECTIC   | DN 11: Toxicological information   |

| 0                                      |                                  |
|--|----------------------------------|
| 11.1. Information on toxicological e   | ffects                           |
| Acute toxicity                         | : Not classified                 |
|  |                                  |
| Skin corrosion/irritation              | : Causes skin irritation.        |
| Serious eye damage/irritation          | : Causes serious eye irritation. |
| Respiratory or skin sensitisation      | : Not classified                 |
| Germ cell mutagenicity                 | : Not classified                 |
| Carcinogenicity                        | : May cause cancer.              |
| Reproductive toxicity                  | : Not classified                 |
| Specific target organ toxicity (single | : Not classified                 |

exposure)

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 Specific target organ toxicity (repeated exposure)
 : Not classified

 Aspiration hazard
 : Not classified

 Potential adverse human health effects and symptoms
 : Toxic if swallowed.

 SECTION 12: Ecological information

 12.1. Toxicity

 Ecology - water
 : Harmful to aquatic life with long lasting effects.

| 12.2. Persistence and degradability |   |  |
|-------------------------------------|---|--|
| ARSENIC (As) ICP STANDARD SOLUTIO   | N 1 GM/L IN DILUTE HNO3 traceable to NIST               |  |
| Persistence and degradability       | May cause long-term adverse effects in the environment. |  |
| -                                   |   |  |

#### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

| Component                      |   |
|--------------------------------|---|
| Diarsenic trioxide (1327-53-3) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII<br>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

| 12.6. Other adverse effects                   |                                    |
|---|------------------------------------|
| No additional information available           |                                    |
| SECTION 13: Disposal considerations           |                                    |
| 13.1. Waste treatment methods                 |                                    |
| Product/Packaging disposal<br>recommendations | : Dispose of contents/container to |
| Ecology - waste materials                     | : Hazardous waste due to toxicity. |
| SECTION 14: Transport information             |                                    |

In accordance with ADR / RID / IMDG / IATA / ADN

| 14.1.  | UN number |        |
|--------|-----------|--------|
| UN-No. | (ADR)     | : 3264 |

| Safety Data Sheet   |   |
|---|---|
| UN-No. (IMDG)<br>UN-No.(IATA)<br>UN-No.(ADN)  | : 3264<br>: 3264<br>: Not regulated   |
| UN-No. (RID)  | : Not regulated   |
| 14.2. UN proper shipping name   |   |
| Proper Shipping Name (ADR)<br>Proper Shipping Name (IMDG)<br>Proper Shipping Name (IATA)<br>Proper Shipping Name (ADN)<br>Proper Shipping Name (RID)<br>Transport document description (ADR)<br>Transport document description (IMDG) | <ul> <li>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.</li> <li>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.</li> <li>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.</li> <li>Not regulated</li> <li>Not regulated</li> <li>UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, (E)</li> <li>UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, MARINE POLLUTANT</li> <li>UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III</li> </ul> |
| 14.3. Transport hazard class(es)  |   |
|   |   |
| Transport hazard class(es) (ADR)<br>Danger labels (ADR)   |   |

## IMDG

| Transport hazard class(es) (IMDG) |  |
|-----------------------------------|--|
| Danger labels (IMDG)              |  |



| ΙΑΤΑ                              |  |
|-----------------------------------|--|
| Transport hazard class(es) (IATA) |  |
| Hazard labels (IATA)              |  |

| : | 8 |
|---|---|
| : | Î |
|   |   |

: 8 : 8

: 8

## ADN

| Transport hazard class(es) (ADN) |
|----------------------------------|
|----------------------------------|

## RID

Transport hazard class(es) (RID)

# : Not regulated

: Not regulated

| Packing group (ADR) | : III | 30/01/2018 | 7/10 |
|---------------------|-------|------------|------|
|                     | . 111 |            |      |
| 14.4. Packing group |       |            |      |
|                     |       |            |      |

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| · · · · · · · · · · · · · · · · · · ·                     |                              |              |      |
|---|------------------------------|--------------|------|
| Packing group (IMDG)                                      | : 111                        |              |      |
| Packing group (IATA)                                      | : 111                        |              |      |
| Packing group (ADN)                                       | : Not regulated              |              |      |
| Packing group (RID)                                       | : Not regulated              |              |      |
| 14.5. Environmental hazards                               |                              |              |      |
| Dangerous for the environment                             | : No                         |              |      |
| Marine pollutant  | : Yes (IMDG only)            |              |      |
| Other information   | : No supplementary informati | on available |      |
|   |                              |              |      |
| 14.6. Special precautions for user                        |                              |              |      |
| - Overland transport                                      |                              |              |      |
| Classification code (ADR)                                 | : C1                         |              |      |
| Special provision (ADR)                                   | : 274                        |              |      |
| Limited quantities (ADR)                                  | : 5L                         |              |      |
| Excepted quantities (ADR)                                 | : E1                         |              |      |
| Packing instructions (ADR)                                | : P001, IBC03, LP01, R001    |              |      |
| Mixed packing provisions (ADR)                            | : MP19                       |              |      |
| Portable tank and bulk container instructions (ADR)       | : T7                         |              |      |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP28                  |              |      |
| Tank code (ADR)   | : L4BN                       |              |      |
| Vehicle for tank carriage                                 | : AT                         |              |      |
| Transport category (ADR)                                  | : 3                          |              |      |
| Special provisions for carriage - Packages (ADR)          |                              |              |      |
| Hazard identification number (Kemler No.)                 | : 80                         |              |      |
| Orange plates   | 80<br>3264                   |              |      |
| Tunnel restriction code (ADR)                             | : E                          |              |      |
| EAC code  | : 2X                         |              |      |
| APP code  | : B                          |              |      |
| - Transport by sea  |                              |              |      |
| Special provision (IMDG)                                  | : 223, 274                   |              |      |
| Limited quantities (IMDG)                                 | : 5 L                        |              |      |
| Excepted quantities (IMDG)                                | : E1                         |              |      |
| Packing instructions (IMDG)                               | : P001, LP01                 |              |      |
| IBC packing instructions (IMDG)                           | : IBC03                      |              |      |
| Tank instructions (IMDG)                                  | : T7                         |              |      |
| Tank special provisions (IMDG)                            | : TP1, TP28                  |              |      |
| EmS-No. (Fire)  | : F-A                        |              |      |
| EmS-No. (Spillage)  | : S-B                        |              |      |
| Stowage category (IMDG)                                   | : A                          |              |      |
| Stowage and handling (IMDG)                               | : SW2                        |              |      |
| MFAG-No   | : 154                        |              |      |
| - Air transport   |                              |              |      |
| PCA Excepted quantities (IATA)                            | : E1                         |              |      |
| PCA Limited quantities (IATA)                             | : Y841                       |              |      |
| www.Labogens.com  | Version: 1.0                 | 30/01/2018   | 8/10 |

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| PCA limited quantity max net quantity (IATA) | : 1L  |
|--|-------|
| PCA packing instructions (IATA)              | : 852 |
| PCA max net quantity (IATA)                  | : 5L  |
| CAO packing instructions (IATA)              | : 856 |
| CAO max net quantity (IATA)                  | : 60L |
| Special provision (IATA)                     | : A3  |
| ERG code (IATA)                              | : 8L  |
|  |       |

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

### Not applicable

# **SECTION 15: Regulatory information**

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

### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains substance on the candidate list in concentration  $\geq$  0.1% or with a lower specific limit: Diarsenic trioxide (EC 215-481-4, CAS 1327-53-3)

### Contains REACH Annex XIV substances:

| Substance name                                       | Authorisation number | Sunset date | REACH authorization<br>exemptions |
|--|----------------------|-------------|-----------------------------------|
| Diarsenic trioxide (EC 215-<br>481-4, CAS 1327-53-3) |                      | 21/05/2015  |                                   |

#### 15.1.2. National regulations

## Germany

| AwSV/VwVwS Annex reference  | : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to AwSV, Annex 1)  |
|---|--|
| 12th Ordinance Implementing the Federal<br>Immission Control Act - 12.BImSchV | : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)   |
| Denmark   |  |
| Recommendations Danish Regulation   | : Young people below the age of 18 years are not allowed to use the product  |
|   | Pregnant/breastfeeding women working with the product must not be in direct<br>contact with the product                                      |
|   | The requirements from the Danish Working Environment Authorities regarding work<br>with carcinogens must be followed during use and disposal |

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#### 15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

#### Full text of H- and EUH-phrases:

| Acute Tox. 1 (Oral) | Acute toxicity (oral), Category 1                                 |
|---------------------|---|
| Aquatic Acute 1     | Hazardous to the aquatic environment — Acute Hazard, Category 1   |
| Aquatic Chronic 1   | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 3   | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Carc. 1A            | Carcinogenicity, Category 1A                                      |
| Eye Dam. 1          | Serious eye damage/eye irritation, Category 1                     |
| Eye Irrit. 2        | Serious eye damage/eye irritation, Category 2                     |
| Ox. Liq. 1          | Oxidising Liquids, Category 1                                     |
| Skin Corr. 1A       | Skin corrosion/irritation, Category 1A                            |
| Skin Corr. 1B       | Skin corrosion/irritation, Category 1B                            |
| Skin Irrit. 2       | Skin corrosion/irritation, Category 2                             |
| H271                | May cause fire or explosion; strong oxidiser                      |
| H300                | Fatal if swallowed  |
| H314                | Causes severe skin burns and eye damage                           |
| H315                | Causes skin irritation  |
| H318                | Causes serious eye damage   |
| H319                | Causes serious eye irritation                                     |
| H350                | May cause cancer  |
| H400                | Very toxic to aquatic life  |
| H410                | Very toxic to aquatic life with long lasting effects              |
| H412                | Harmful to aquatic life with long lasting effects                 |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product