


|  |   |   |
|--|---|---|
| <br><b>MODERNWATER</b> | <p style="text-align: center;"><b>SDS</b></p> <p style="text-align: center;">Safety Data Sheet<br/>According to Regulation (EC) No.<br/>1907/2006</p> | Document No.: MSDS046<br>Version No.: 03<br>Effective Date: 01 Jan 2016 |
| <b>Molybdenum Standard Solution</b>  |   |   |

---

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1 Product Identifiers**

Product name : Molybdenum Standard Solution  
Product number : R-300-20STSMO-01, R-100-51STMO-01, R-100-51STMO-500, R-100-51STMO-250  
Substance name : Molybdenum (Mo) Standard, 20ppm, 1ppm, 500ppb, and 250ppb  
REACH reg no. : This product is exempt from registration, insufficient annual volume.

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

Identified uses : Reagent for analysis

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

Company : Modern Water Monitoring Limited  
: Units 15-17 Cambridge Science Park  
: Cambridge, CB4 0FQ  
: UK  
Email : [info@modernwater.co.uk](mailto:info@modernwater.co.uk)

**1.4 Emergency telephone number**

+44 (0) 1483 696030

---

**SECTION 2: Hazards identification**
**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Skin irritation (Category 2)

Eye irritation (Category 2)

**2.2 Label elements**

Hazard pictogram



Signal Word: Warning

Hazard statements:

|      |                        |
|------|------------------------|
| H320 | Causes eye irritation  |
| H315 | Causes skin irritation |

Precautionary statements:

|                |  |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|----------------|--|

**2.3 Other hazards : Not known**



MODERNWATER

SDS

Safety Data Sheet  
According to Regulation (EC) No.  
1907/2006

Document No.: MSDS046  
Version No.: 03  
Effective Date: 01 Jan 2016

## Molybdenum Standard Solution

Page 2 of 8

### SECTION 3: Composition/information on ingredients

**3.1 Substance** : Not relevant, see 3.2 Mixtures

#### 3.2 Mixtures

Hazardous ingredients classification according to Regulation (EC) No. 1272/2008 CLP

| Substance name                       | Concentration | CAS No    | EC No     |
|--------------------------------------|---------------|-----------|-----------|
| Nitric acid                          | 2-3%          | 7697-37-2 | 231-714-2 |
| H315 – causes skin irritation        |               |           |           |
| H319 – causes serious eye irritation |               |           |           |
|                                      |               |           |           |

### SECTION 4: First Aid measures

#### 4.1 Description of first aid measure

**General advice:** When in doubt or if symptoms observed, get medical advice. Show this safety data sheet to the doctor in attendance.

**After Inhalation:** Remove casualty to fresh air and keep warm. If breathing difficult or respiratory tract irritation get medical assistance. If not breathing, give artificial respiration and get urgent medical assistance.

**In case of skin contact:** Remove contaminated clothing. Wash off with soap and plenty of water. Get medical assistance.

**After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes. Remove contact lenses. Get urgent medical assistance.

**In case of ingestion:** If accidentally swallowed rinse mouth with plenty of water (only if person is conscious). Do not induce vomiting. Get medical attention.


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

No information available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

*Uncontrolled copy unless stamped 'Controlled' or viewed as pdf.  
If this is an uncontrolled copy, verify the revision is current before use.*

|  |   |   |
|--|---|---|
| <br><b>MODERNWATER</b> | <p style="text-align: center;"><b>SDS</b></p> <p style="text-align: center;">Safety Data Sheet<br/>According to Regulation (EC) No.<br/>1907/2006</p> | Document No.: MSDS046<br>Version No.: 03<br>Effective Date: 01 Jan 2016 |
| <b>Molybdenum Standard Solution</b>  |   |   |

---

**SECTION 5: Fire-fighting measures.**

- 5.1 Extinguishing media:**  
**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Unsuitable extinguishing media**  
No restriction
- 5.2 Special hazards arising from the substance or mixture**  
Possible generation of Nitrogen oxide (NO<sub>x</sub>) fumes
- 5.3 Advice for firefighters**  
Wear self-contained breathing apparatus.
- 5.4 Additional information**  
Do not let run-off from fire-fighting to enter drains or water courses.

---


**SECTION 6: Accidental release measures.**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment (see section 8). Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
- 6.2 Environmental precautions**  
Do not let product enter drains or surface water. Spills are to be contained. Discharge into environment must be avoided.
- 6.3 Methods and materials for containment and cleaning up**  
Soak up with inert absorbent material. Keep in a suitable closed container for disposal. Dispose correctly, referring to local regulations.
- 6.4 References to other sections**  
For disposal see section 13.

---

**SECTION 7: Handling and storage.**

- 7.1 Precautions for safe handling**  
Avoid exposure to skin and eyes.
- 7.2 Conditions for safe storage, including and incompatibilities**  
Store in a cool place, below 25°C. Keep contained upright and the cap tightly closed.
- 7.3 Specific end use(s)**  
Apart from uses specified in section 1.2, no other specific uses.

|  |  |                             |
|--|--|-----------------------------|
| <br><b>MODERNWATER</b> | <b>SDS</b><br>Safety Data Sheet<br>According to Regulation (EC) No.<br>1907/2006 | Document No.: MSDS046       |
|  |  | Version No.: 03             |
|  |  | Effective Date: 01 Jan 2016 |
| <b>Molybdenum Standard Solution</b>  |  |                             |

---

**SECTION 8: Exposure controls/personal protection.**
**8.1 Control parameters**

Components with workplace control parameters

| Component   | CAS-No    | Value type | Limit value     |                       |
|-------------|-----------|------------|-----------------|-----------------------|
| Nitric acid | 7697-37-2 | STEL       | 1ppm (2.6mg/m3) | EU and UK EH40<br>WEL |
|             |           |            |                 |                       |

**8.2 Exposure controls:****Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at end of workday.

**Personal protective equipment**

Wear suitable protective clothing

**Eye/face protection**

Safety glasses with side-shields conforming to EN166 or equivalent standard.

**Skin protection**

Handle with gloves (PVC or nitrile)

---

**SECTION 9: Physical and chemical properties.**
**9.1 Information on basic physical and chemical properties**

|                                       |                         |
|---------------------------------------|-------------------------|
| Appearance                            | Clear colourless Liquid |
| Odour                                 | none                    |
| Odour threshold                       | no data available       |
| pH                                    | 1 (approx.)             |
| Melting point/range (°C)              | no data available       |
| Boiling point (°C):                   | 100 (approx.)           |
| Flash point                           | not flammable           |
| Evaporation rate                      | no data available       |
| Flammability (solid/gas)              | not applicable          |
| Upper/lower flammability rates        | not flammable           |
| Vapour pressure (mmHg at 20°C)        | 25 (approx.)            |
| Vapour density                        | no data available       |
| Relative density                      | 1.0 (approx.)           |
| Water solubility                      | completely miscible     |
| Partition coefficient: n-octane/water | no data available       |
| Auto ignition temperature             | no data available       |
| Decomposition temperature             | no data available       |
| Viscosity                             | no data available       |
| Explosive properties                  | not applicable          |
| Oxidising properties                  | no data available       |



MODERNWATER

SDS

Safety Data Sheet  
According to Regulation (EC) No.  
1907/2006

Document No.: MSDS046  
Version No.: 03  
Effective Date: 01 Jan 2016

## Molybdenum Standard Solution

Page 5 of 8

### 9.2 Other data

Corrosion May be corrosive to metals

---

## SECTION 10: Stability and reactivity.

### 10.1 Reactivity

Mildly reactive to bases.

### 10.2 Chemical stability

This product is chemically stable under standard ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

No data available.

### 10.5 Incompatible materials

Strong bases.

### 10.6 Hazardous decomposition products

No data available

---

## SECTION 11: Toxicological information.

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes eye irritation

#### Respiration or skin sensitisation

Not sensitising

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No indication of human carcinogenicity

#### Reproductive toxicity

No data available

*Uncontrolled copy unless stamped 'Controlled' or viewed as pdf.  
If this is an uncontrolled copy, verify the revision is current before use.*



MODERNWATER

SDS

Safety Data Sheet  
According to Regulation (EC) No.  
1907/2006

Document No.: MSDS046  
Version No.: 03  
Effective Date: 01 Jan 2016

## Molybdenum Standard Solution

Page 6 of 8

### Specific target organ exposure – single exposure

No data available

### Specific target organ exposure – repeated exposure

No data available

### Aspiration hazard

Not applicable

### Other adverse effects

No data available

---

## SECTION 12: Ecological information.

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This 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

Harmful to aquatic life with long lasting effects

---

## SECTION 13: Disposal considerations.

### 13.1 Waste treatment methods:

#### Product

Dispose in accordance to local regulations, consult the local waste disposal expert.

#### Contaminated packaging

Dispose in accordance to local regulations, the same way as the product itself.

*Uncontrolled copy unless stamped 'Controlled' or viewed as pdf.  
If this is an uncontrolled copy, verify the revision is current before use.*



MODERNWATER

SDS

Safety Data Sheet  
According to Regulation (EC) No.  
1907/2006

Document No.: MSDS046  
Version No.: 03  
Effective Date: 01 Jan 2016

**Molybdenum Standard Solution**

Page 7 of 8

**SECTION 14: Transport information.**

Non – Hazardous for air, road and sea transport.

**Land transport (ADR/RID)**

|      |                             |                |
|------|-----------------------------|----------------|
| 14.1 | UN number                   | Not applicable |
| 14.2 | UN proper shipping name     | Not applicable |
| 14.3 | Transport hazard            | Not applicable |
| 14.4 | Packaging group             | Not applicable |
| 14.5 | Environmental hazards       | Not applicable |
| 14.6 | Special precaution for user | Not applicable |

**Air transport (IATA)**

|      |                             |                |
|------|-----------------------------|----------------|
| 14.1 | UN number                   | Not applicable |
| 14.2 | UN proper shipping name     | Not applicable |
| 14.3 | Transport hazard            | Not applicable |
| 14.4 | Packaging group             | Not applicable |
| 14.5 | Environmental hazards       | Not applicable |
| 14.6 | Special precaution for user | Not applicable |

**SEA transport (IMDG)**

|      |                             |                |
|------|-----------------------------|----------------|
| 14.1 | UN number                   | Not applicable |
| 14.2 | UN proper shipping name     | Not applicable |
| 14.3 | Transport hazard            | Not applicable |
| 14.4 | Packaging group             | Not applicable |
| 14.5 | Environmental hazards       | Not applicable |
| 14.6 | Special precaution for user | Not applicable |

**SECTION 15: Regulatory information.**


**15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture**

None applicable

**15.2 Chemical Safety Assessment**

No data available

*Uncontrolled copy unless stamped 'Controlled' or viewed as pdf.  
If this is an uncontrolled copy, verify the revision is current before use.*

|  |   |   |
|--|---|---|
| <br><b>MODERNWATER</b> | <p style="text-align: center;"><b>SDS</b></p> <p style="text-align: center;">Safety Data Sheet<br/>According to Regulation (EC) No.<br/>1907/2006</p> | Document No.: MSDS046<br>Version No.: 03<br>Effective Date: 01 Jan 2016 |
| <b>Molybdenum Standard Solution</b>  |   |   |

---

**SECTION 6: Other information.**

**Abbreviations and acronyms**

ADR – European Agreement Concerning the International Carriage of Dangerous Goods by Road

IATA – International Air Transportation Association

IMDG – international Maritime Code of Dangerous Goods

Mo - Molybdenum

STEL – Short term exposure limit

TWA – Time Weighted Average

WEL – Workplace Exposure Limit

**Symbol, R and S phrases for this mixture**

|             |              |  |
|-------------|--------------|--|
| Symbol      | Xi- Irritant |  |
| R-phrase(s) | R36/38       | Irritating to eyes and skin  |
| S-phrase(s) | S26          | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice |

---

All information given by the Company is offered in good faith and is believed to the best of our knowledge to be accurate. However this information is offered without warranty representation inducement or licence and the Company does not assume legal responsibility for reliance upon the same.

Every person dealing with the materials referred to herein does so at his or her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

---