



# TENACITO 38R

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS Ref.: E-00337

Date of issue: 28/09/2004 Revision date: 02/07/2019 Supersedes: 11/03/2019 Version: 5.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : TENACITO 38R  
Product code : E-00337

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

##### 1.2.1. Relevant identified uses

Main use category : Electric arc welding coated electrode  
Industrial/Professional use spec : Reserved for industrial and professional use  
Function or use category : Welding and soldering agents

##### 1.2.2. Uses advised against

Restrictions on use : No particular exclusions are known

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

Lincoln Electric Europe B.V.  
Nieuwe Dukenburgseweg 20  
6534 AD Nijmegen - The Netherlands  
T +31 243 522 911  
[sds@lincolnelectriceurope.com](mailto:sds@lincolnelectriceurope.com) - [www.lincolnelectric.eu](http://www.lincolnelectric.eu)

#### 1.4. Emergency telephone number

Emergency number : INRS +33 (0)1.45.42.59.59

| Country        | Organisation/Company  | Address                            | Emergency number | Comment                |
|----------------|---|------------------------------------|------------------|------------------------|
| United Kingdom | National Poisons Information Service (Belfast Centre)<br>Royal Victoria Hospital          | Grosvenor Road<br>BT12 6BA Belfast | 0344 892 0111    | Available 24 hours/day |
| United Kingdom | National Poisons Information Service (Cardiff Centre)<br>Gwenwyn Ward, Llandough Hospital | Penarth<br>CF64 2XX Cardiff        | 0344 892 0111    | Available 24 hours/day |

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

However the form in which product is placed on the market does not present a danger, such preparations do not require a label. Not classified. The product contains less than 1% of respirable crystalline silica.

No labelling applicable

#### 2.3. Other hazards

Other hazards not contributing to the classification : Spatter and melting metal can cause burn injuries. UV, IR radiations. Inhalation of vapours may cause respiratory irritation. Excessive or prolonged inhalation of fumes may cause metal fever. Electric shocks can kill. Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name  | Product identifier   | %     | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|--|-------|---|
| Manganese substance with a Community workplace exposure limit | (CAS-No.) 7439-96-5<br>(EC-No.) 231-105-1<br>(REACH-no) 01-2119449803-34 | 1 - 3 | Not classified  |

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|                            |  |       |                 |
|----------------------------|--|-------|-----------------|
| Quartz (SiO <sub>2</sub> ) | (CAS-No.) 14808-60-7<br>(EC-No.) 238-878-4 | 1 - 3 | STOT RE 1, H372 |
|----------------------------|--|-------|-----------------|

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures after inhalation   | : If breathing becomes difficult (due to inhalation of fume), take the patient to fresh air and get them to breathe deeply. Seek medical attention if symptoms persist. |
| First-aid measures after skin contact | : In case of burn with hot metal, flush with plenty of water. Seek medical attention if burns develop.  |
| First-aid measures after eye contact  | : In case of burn with hot metal, flush with plenty of water. Seek medical attention immediately.   |
| First-aid measures after ingestion    | : Ingestion unlikely. Obtain emergency medical attention.   |

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

Symptoms/effects : See Heading 2.3.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

|                                |               |
|--------------------------------|---------------|
| Suitable extinguishing media   | : Dry powder. |
| Unsuitable extinguishing media | : Water.      |

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

|  |                                |
|--|--------------------------------|
| Fire hazard                                      | : Not flammable.               |
| Hazardous decomposition products in case of fire | : May release hazardous fumes. |

#### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Precautionary measures fire    | : Eliminate all ignition sources if safe to do so.  |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information              | : Do not remove damaged packages. Move only undamaged packages out of fire zone.                |

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

|                                  |   |
|----------------------------------|---|
| Protective equipment             | : Wear recommended personal protective equipment. |
| Measures in case of dust release | : Wear suitable respiratory equipment.            |

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

|                   |  |
|-------------------|--|
| For containment   | : Do not touch or walk on the spilled product. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). |
| Other information | : Contain and collect as any solid.  |

#### 6.4. Reference to other sections

See Heading 8.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

|                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Provide local exhaust or general room ventilation to minimize exposure to dust.                                       |
| Precautions for safe handling     | : Local exhaust and general ventilation must be adequate to meet exposure standards.                                    |
| Hygiene measures                  | : 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, including any incompatibilities

|                    |  |
|--------------------|--|
| Storage conditions | : Store in dry protected location to prevent any moisture contact. Keep container closed when not in use. Keep only in original container. |
|--------------------|--|

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

Not applicable.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Manganese (7439-96-5)

###### EU - Occupational Exposure Limits

|                                |  |
|--------------------------------|--|
| Local name                     | Manganese  |
| IOELV TWA (mg/m <sup>3</sup> ) | 0,2 mg/m <sup>3</sup> (inhalable fraction)<br>0,05 mg/m <sup>3</sup> (respirable fraction) |
| Notes                          | (Year of adoption 2011)  |
| Regulatory reference           | SCOEL Recommendations  |

###### Germany - Occupational Exposure Limits (TRGS 900)

|   |   |
|---|---|
| TRGS 900 Local name   | Mangan und seine anorganischen Verbindungen             |
| TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> ) | 0,02 mg/m <sup>3</sup> (A)<br>0,2 mg/m <sup>3</sup> (E) |
| TRGS 900 Limitation of exposure peaks                           | 8(II)   |
| TRGS 900 Remark   | DFG,Y,10  |
| TRGS 900 Regulatory reference                                   | TRGS900   |

###### Portugal - Occupational Exposure Limits

|                              |   |
|------------------------------|---|
| Local name                   | Manganês e compostos inorgânicos, expressos em Mn |
| OEL TWA (mg/m <sup>3</sup> ) | 0,2 mg/m <sup>3</sup>                             |
| Regulatory reference         | Norma Portuguesa NP 1796:2014                     |

###### Spain - Occupational Exposure Limits

|                             |   |
|-----------------------------|---|
| Local name                  | Manganeso   |
| VLA-ED (mg/m <sup>3</sup> ) | 0,2 mg/m <sup>3</sup> elemental<br>0,2 mg/m <sup>3</sup> Compuestos inorgánicos de Manganeso, como Mn |

##### Quartz (SiO<sub>2</sub>) (14808-60-7)

###### Austria - Occupational Exposure Limits

|                          |                       |
|--------------------------|-----------------------|
| MAK (mg/m <sup>3</sup> ) | 0,1 mg/m <sup>3</sup> |
|--------------------------|-----------------------|

###### Belgium - Occupational Exposure Limits

|                                  |                       |
|----------------------------------|-----------------------|
| Limit value (mg/m <sup>3</sup> ) | 0,1 mg/m <sup>3</sup> |
|----------------------------------|-----------------------|

###### France - Occupational Exposure Limits

|                          |                       |
|--------------------------|-----------------------|
| Local name               | quartz                |
| VME (mg/m <sup>3</sup> ) | 0,1 mg/m <sup>3</sup> |

###### Ireland - Occupational Exposure Limits

|  |                       |
|--|-----------------------|
| OEL (8 hours ref) (mg/m <sup>3</sup> ) | 0,1 mg/m <sup>3</sup> |
|--|-----------------------|

###### Netherlands - Occupational Exposure Limits

|   |                           |
|---|---------------------------|
| Local name                              | Silicium(di)oxide– kwarts |
| Grenswaarde TGG 8H (mg/m <sup>3</sup> ) | 0,075 mg/m <sup>3</sup>   |

###### Portugal - Occupational Exposure Limits

|                              |                                |
|------------------------------|--------------------------------|
| Local name                   | Silica, cristalina α - Quartzo |
| OEL TWA (mg/m <sup>3</sup> ) | 0,025 mg/m <sup>3</sup>        |

###### Spain - Occupational Exposure Limits

|                             |  |
|-----------------------------|--|
| Local name                  | Sílice Cristalina (Cuarzo)                 |
| VLA-ED (mg/m <sup>3</sup> ) | 0,05 mg/m <sup>3</sup> Fracción respirable |

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|       |  |
|-------|--|
| Notes | (2015), n (En las industrias extractivas véase la Orden ITC 2585/2007, de 30 de agosto (BOE nº 315 de 7 de septiembre de 2007), por la que se aprueba la Instrucción Técnica Complementaria 2.0.02 del Reglamento General de Normas Básicas de Seguridad Minera.), d (Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles.), y (Reclasificado, por la International Agency for Research on Cancer (IARC) de grupo 2A (probablemente carcinogénico en humanos) a grupo 1 (carcinogénico en humanos).), véase ITC/2582/2007 |
|-------|--|

### Sweden - Occupational Exposure Limits

|   |                       |
|---|-----------------------|
| nivågränsvärde (NVG) (mg/m <sup>3</sup> ) | 0,1 mg/m <sup>3</sup> |
|---|-----------------------|

### USA - ACGIH - Occupational Exposure Limits

|                                |    |
|--------------------------------|----|
| ACGIH TWA (mg/m <sup>3</sup> ) | 10 |
|--------------------------------|----|

## 8.2. Exposure controls

### Materials for protective clothing:

Wear suitable protective clothing.

### Skin and body protection:

Skin protection appropriate to the conditions of use should be provided.

### Respiratory protection:

Do not exceed the occupational exposure limits (OEL). In case of insufficient ventilation, wear suitable respiratory equipment

### Environmental exposure controls:

Do not exceed the occupational exposure limits (OEL).

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |                     |
|--|---------------------|
| Physical state                             | : Solid             |
| Colour                                     | : Grey.             |
| Odour                                      | : odourless.        |
| Odour threshold                            | : No data available |
| pH   | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point                              | : Ca 1500 °C        |
| 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 |
| Relative density                           | : No data available |
| Density                                    | : 6 - 8             |
| Solubility                                 | : Insoluble.        |
| 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 additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

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### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Not applicable.

### 10.4. Conditions to avoid

None under normal conditions.

### 10.5. Incompatible materials

Keep away from oxidising agents and strongly alkaline and strongly acidic materials.

### 10.6. Hazardous decomposition products

Formation of dangerous fumes during use. Welding fumes are classified carcinogen by the IARC (International Agency for Research on Cancer) : Group 1. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. These hazardous products could include those from the reaction or oxidation of the components listed in section 3 or included in base material. The amount of fumes generated change with the welding parameters and the diameters of the consumable. Refer to applicable national exposure limits for fume compounds and national exposure limits for fumes. In case of work on parts covered by coatings such as: Lubrificants, Solvent, Paint, metallic compounds, Grease, etc... The thermal or photochemical decomposition products of these elements cumulate with the dust and fumes emitted by the melting of the welding product. The solution to adopt must be, in any case, preceded by a spot study. Refer to the document "Health and Safety in Welding" published by the International Institute of Welding.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                   |                  |
|-----------------------------------|------------------|
| Acute toxicity (oral)             | : Not classified |
| Acute toxicity (dermal)           | : Not classified |
| Acute toxicity (inhalation)       | : Not classified |
| Skin corrosion/irritation         | : Not classified |
| Serious eye damage/irritation     | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity            | : Not classified |
| Carcinogenicity                   | : Not classified |

### Quartz (SiO<sub>2</sub>) (14808-60-7)

|            |                            |
|------------|----------------------------|
| IARC group | 1 - Carcinogenic to humans |
|------------|----------------------------|

|                        |                   |
|------------------------|-------------------|
| Reproductive toxicity  | : Not classified  |
| STOT-single exposure   | : Not classified  |
| STOT-repeated exposure | : Not classified. |
| Aspiration hazard      | : Not classified  |

## SECTION 12: Ecological information

### 12.1. Toxicity

|                          |                  |
|--------------------------|------------------|
| Acute aquatic toxicity   | : Not classified |
| Chronic aquatic toxicity | : Not classified |

### 12.2. Persistence and degradability

No additional information available

### 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

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                              |   |
|------------------------------|---|
| Regional legislation (waste) | : Dispose in a safe manner in accordance with local/national regulations.                     |
| Additional information       | : 12 01 13 Welding wastes (Q8). 16 01 17 Ferrous metal (Q1). 16 01 18 Non-ferrous metal (Q1). |
| Ecology - waste materials    | : Avoid release to the environment.   |

## SECTION 14: Transport information

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

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### 14.1. UN number

|               |                  |
|---------------|------------------|
| UN-No. (ADR)  | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN)  | : Not applicable |
| UN-No. (RID)  | : Not applicable |

### 14.2. UN proper shipping name

|                             |                  |
|-----------------------------|------------------|
| Proper Shipping Name (ADR)  | : Not applicable |
| Proper Shipping Name (IMDG) | : Not applicable |
| Proper Shipping Name (IATA) | : Not applicable |
| Proper Shipping Name (ADN)  | : Not applicable |
| Proper Shipping Name (RID)  | : Not applicable |

### 14.3. Transport hazard class(es)

#### ADR

|                                  |                  |
|----------------------------------|------------------|
| Transport hazard class(es) (ADR) | : Not applicable |
|----------------------------------|------------------|

#### IMDG

|                                   |                  |
|-----------------------------------|------------------|
| Transport hazard class(es) (IMDG) | : Not applicable |
|-----------------------------------|------------------|

#### IATA

|                                   |                  |
|-----------------------------------|------------------|
| Transport hazard class(es) (IATA) | : Not applicable |
|-----------------------------------|------------------|

#### ADN

|                                  |                  |
|----------------------------------|------------------|
| Transport hazard class(es) (ADN) | : Not applicable |
|----------------------------------|------------------|

#### RID

|                                  |                  |
|----------------------------------|------------------|
| Transport hazard class(es) (RID) | : Not applicable |
|----------------------------------|------------------|

### 14.4. Packing group

|                      |                  |
|----------------------|------------------|
| Packing group (ADR)  | : Not applicable |
| Packing group (IMDG) | : Not applicable |
| Packing group (IATA) | : Not applicable |
| Packing group (ADN)  | : Not applicable |
| Packing group (RID)  | : Not applicable |

### 14.5. Environmental hazards

|                               |  |
|-------------------------------|--|
| Dangerous for the environment | : No                                     |
| Marine pollutant              | : No                                     |
| Other information             | : No supplementary information available |

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol 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 REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

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### 15.1.2. National regulations

#### Germany

Reference to AwSV

: Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen

: Quartz (SiO<sub>2</sub>) is listed

SZW-lijst van mutagene stoffen

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: Manganese is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: Manganese is listed

#### Denmark

Danish National Regulations

: 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 contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Indication of changes:

1.3. Details of the supplier of the safety data sheet. 1.4. Emergency telephone number. 8.2. Exposure controls.

### Abbreviations and acronyms:

|       |   |
|-------|---|
| ADN   | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways   |
| ADR   | European Agreement concerning the International Carriage of Dangerous Goods by Road               |
| ATE   | Acute Toxicity Estimate   |
| BCF   | Bioconcentration factor   |
| CLP   | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008                       |
| DMEL  | Derived Minimal Effect level  |
| DNEL  | Derived-No Effect Level   |
| EC50  | Median effective concentration  |
| IARC  | International Agency for Research on Cancer   |
| IATA  | International Air Transport Association   |
| IMDG  | International Maritime Dangerous Goods  |
| LC50  | Median lethal concentration   |
| LD50  | Median lethal dose  |
| LOAEL | Lowest Observed Adverse Effect Level  |
| NOAEC | No-Observed Adverse Effect Concentration  |
| NOAEL | No-Observed Adverse Effect Level  |
| NOEC  | No-Observed Effect Concentration  |
| OECD  | Organisation for Economic Co-operation and Development  |
| PBT   | Persistent Bioaccumulative Toxic  |
| PNEC  | Predicted No-Effect Concentration   |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID   | Regulations concerning the International Carriage of Dangerous Goods by Rail                      |
| SDS   | Safety Data Sheet   |

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|      |  |
|------|--|
| STP  | Sewage treatment plant                   |
| TLM  | Median Tolerance Limit                   |
| vPvB | Very Persistent and Very Bioaccumulative |

Other information : The product must not be used for any application that is not allowed, in this case we will not be responsible for any damage caused. The user must respect current Safety, Health and Environmental legislation.

| Full text of H- and EUH-statements: |   |
|-------------------------------------|---|
| STOT RE 1                           | Specific target organ toxicity — Repeated exposure, Category 1                                  |
| H372                                | Causes damage to organs through prolonged or repeated exposure.                                 |
| EUH208                              | Contains nickel powder; [particle diameter < 1mm](7440-02-0). May produce an allergic reaction. |

SDS EU (REACH Annex II)

*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.*