1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION 
AND OF THE COMPANY/UNDERTAKING

1.1 Identification of substance / preparation
Product identifier : Solid Welding Wires (GMAW)
Product name : LNM 25, LNM 26, LNM 27, Autal SG2, Autal SG3, Supra MIG, Supra MIG HD
Supra MIG Copper Free, Supra MIG Ultra, Supra MIG Ultra HD, UltraMag,
UltraMag HD, UltraMag SG2, UltraMag SG3, UltraMag SG3 HD, Arcweld, Arcweld SG3

1.2 Use of substance / preparation
Use of substance/preparation  : Solid  Welding Wires
Main use category   : Industrial use – Professional use
Industrial category   : Welding

1.3 Company / undertaking identification
Supplier    : Lincoln Electric Europe B.V.
            Nieuwe Dukenburgseweg 20
            6534AD Nijmegen
            The Netherlands
            Company role   : Producer - Supplier
            Company telephone number  : +31 243 522 911
            Company fax number : +31 243 522 245
            Web     : www.lincolnelectric.eu
            Company contact person  : vmee@lincolnelectric.eu

1.4 Emergency Telephone
Emergency telephone number : 112

2. HAZARDS IDENTIFICATION

2.1 Classification and General Hazards
The solid wires that this MSDS concerns are not classified as hazardous to health and environment according to present regulation.

2.2 Label elements
Solid welding wires in massive form do not require labeling under current chemical product classification and labeling regulations, if they are not classified as hazardous to health and environment

2.3 Other hazards
Processes which generate particulates during welding can cause hazards to health or environmental effects and they may cause an allergic reaction on contact with skin or by inhalation. The solid wires do not meet the criteria for PBT or vPvB in accordance with Annex XIII.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance / Preparation
For information on each substance in the solid welding wires, see 3.2.

3.2 Mixture
The substances in the preparation are as follows (see section 15. Regulatory Information for text applicable H-phrases):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS nr</th>
<th>EINECS nr</th>
<th>Hazard statements</th>
<th>Concentration Max weight%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>231-096-4</td>
<td>N.A.</td>
<td>&gt;97</td>
</tr>
<tr>
<td>Mn</td>
<td>7439-96-5</td>
<td>231-105-1</td>
<td>N.A.</td>
<td>&lt;2</td>
</tr>
<tr>
<td>Si</td>
<td>7440-21-3</td>
<td>231-130-8</td>
<td>N.A.</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Cu</td>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>N.A.</td>
<td>&lt; 0,1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Solid welding wires in themselves or particles from the wires are not judged as acute toxic. An average content in the air of a single substance at the level of the limit considered, with current knowledge, generally not present any risk of injury or discomfort. It is nevertheless important to strive to keep all air pollutants as low as possible during the exposure limit. A particularly important situation is that if someone is exposed to multiple air pollutants simultaneously or exposed to air pollution related to heavy work. There is no indication of immediate medical attention or special treatment for the welding electrodes.
Lincoln Electric EMEAR

Safety Data Sheet in accordance with:
COMMISSION REGULATION (EU) No 2015/830
Date of Issue: April 2016 Document: SDS-4211 rev.11

General: Show this safety data sheet to the doctor on duty
Inhalation: When breathing is difficult, provide fresh air and contact physician
Skin contact: For skin burns from arc radiation, seek medical attention.
Eye contact: For radiation burns due to arc flash, seek medical attention.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
The solid welding wires are non-combustible as a solid. Where metal dust or powder is involved, cover with dry sand, chemical powder, or other dry inert material to minimize the risk of explosion.

5.2 Advice for fire-fighter
Use ordinary safety equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Not applicable to solid metal welding wires in massive form. In particulate form, wear personal protective equipment as specified in Section 8. Avoid contact with the skin. Do not inhale dust.

6.2 Environmental precautions
Collect powder using a vacuum cleaner or by gentle sweeping to keep dust away from drains, surface and ground water. Prevent particulates from entering watercourses or drains. Avoid formation of dust clouds.

6.3 Methods and material for containment and cleaning up
Collect powder using a vacuum cleaner or by gentle sweeping.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
No special precautions necessary for solid wires in massive form other than normal physical handling techniques. Extraction should be used when working with particulate material (dust, fumes, mist). Avoid prolonged inhalation of dust. Wear gloves to avoid contact with skin (see Section 8). Do not to eat, drink or smoke in work areas and wash hands / shower when leaving the working areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry environment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read and understand the “Recommendations for Exposure Scenarios, Risk Management Measures and to identify Operational Conditions under which metals, alloys and metallic articles may be safely welded”, available from your supplier.
Welding/Brazing produces fumes which can affect human health and the environment. Fumes are a varying mixture of airborne gases and fine particles which, if inhaled or swallowed, constitute a health hazard. The degree of risk will depend on the composition of the fume, concentration of the fume and duration of exposure. The fume composition is dependent upon the material being worked, the process and consumables being used, coatings on the work such as paint, galvanizing or plating, oil or contaminants from cleaning and degreasing activities. A systematic approach to the assessment of exposure is necessary, taking into account the particular circumstances for the operator and ancillary worker that can be exposed.

Considering the emission of fumes when welding, brazing or cutting of metals, it is recommended to
1. Arrange risk management measures through applying general information and guidelines provided by this Exposure scenario and
2. Using the information provided in this MSDS.

The employer shall ensure that the risk from welding fumes to the safety and health of workers is eliminated or reduced to a minimum. The following principle shall be applied:
1. Select the applicable process/material combinations with the lowest class, whenever possible.
2. Set welding process with the lowest emission parameter.
3. Apply the relevant collective protective measure in accordance with class number. In general, the use of PPE is taken into account after all other measures is applied.
4. Wear the relevant personal protective equipment in accordance with the duty cycle.

In addition, compliance with the National Regulations regarding the exposure to welding fumes of welders and related personnel shall be verified.
8.1 Control parameters
MAC, PEL, TLV values may vary per element as well as per country. Check your national limit values.

8.2 Exposure control
Always check the applicability of any protective equipment with your supplier.

8.2.1 Eye/face protection
Always wear eye protection when handling dusts and other particulates, e.g. safety glasses with side protection, safety goggles or visor.

8.2.2 Skin protection
Always wear protective clothing when handling dusts and other particulates.

8.2.3 Hand protection
Wear hand protection, e.g. leather gloves when handling welding electrodes with sharp edges to avoid cuts. Always wear disposable nitrile or vinyl gloves when handling particulate material to avoid skin contact. Where necessary wear the disposable gloves under work gloves to protect against both types of hazard.

8.2.4 Respiratory protection
Solid welding wires delivered in solid form give no health risk through inhalation. Extraction should be used when working with particulate material (dust, fumes, mist). In case of prolonged or frequent exposure to particulates, wear particle filter mask (like for instance P3).

8.2.5 General hygiene measures
Wash hands well with soap and water after handling dusty materials. Wash contaminated clothing to avoid secondary contamination or contamination of other personnel.

8.2.6 Thermal hazards
Ensure adequate ventilation to keep levels of air-borne particles below occupational exposure limits given above. Working areas should be provided with extraction. Factories should be kept clean to avoid any unnecessary contamination.

8.2.7 Environmental exposure control
Avoid letting dust and fumes entering the outside air.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance : Metallic wire
Odor : Odorless
Melting- / freezing point: 1200 -1500°C
Vapor density : 7.8 kg/dm³
Note: These are typical values and do not constitute a specification.

9.2 Other information
No other physical or chemical parameters are necessary for solid welding wires.

10. STABILITY/REACTIVITY

10.1 Reactivity
Solid welding wires are stable. Any reaction should not take place under normal circumstances.

10.2 Chemical stability
Solid welding wires are stable under normal conditions.

10.3 Possibility of hazardous reactions
See section 8

10.4 Conditions to avoid
No special conditions need to be avoided for solid welding wires, however keep dust and fumes from entering the environment.

10.5 Incompatible materials
Contact with acids can generate explosive gasses, e.g. hydrogen.

10.6 Hazardous decomposition products
Solid welding wires are stable under normal conditions
11. TOXICOLOGICAL INFORMATION

11.1 General
Inhalation of welding fumes, dust and gases can be hazardous for health. Welding electrodes containing nickel carry a risk of producing an allergic reaction following prolonged contact or in already sensitized persons. No further toxicological data available for solid welding wires.

11.2 Chronic toxicity
Over-exposure to welding fumes and dust may affect pulmonary function. Welding fumes and dust may contain chromium, and nickel compounds which are suspected of being cancer causing agents.

11.2 Acute toxicity
Overexposure to welding fumes and dust may result in symptoms like dizziness, nausea, dryness or irritation of the nose, throat or eyes.

11.3 Other information
Nickel is classified as a skin sensitizer. Can cause skin sensitization to susceptible individuals through prolonged contact with the skin.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Solid welding wires may contain metals which are considered to be toxic towards aquatic organisms.

12.2 Persistence and degradability
Solid welding wires consist of elements that cannot degrade any further in the environment.

12.3 Mobility in soil
Solid welding wires are not soluble in water or soil. Particles formed by working with solid welding wires can be transported in the air.

12.4 Results of PBT and vPvB assessment
No chemical safety report is required for the solid welding wires, however neither the solid welding wire in itself or the substances that it consist of, meet the criteria for PBT or vPvB in accordance with REACH, Annex XIII.

12.5 Other adverse effects
In massive form, solid welding wires present no hazards to the aquatic environment. Particles and ions can, nevertheless, enter the aquatic compartment by means of dusts or smoke, or by liberation due to erosion thereby introducing iron or heavy metals into the ground or water.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Non-contaminated waste from production and solid welding wires are recyclable. The unused product is not classified as hazardous waste. Dispose in accordance with appropriate government regulations. Any residues of finely divided product (particles, dust, fumes) may be regarded as Hazardous Waste, depending on local regulations.

13.2 EU and Local legislation
The recommendations given are considered appropriate for safe disposal. However, local regulations may be more stringent and these must be complied with. EURAL CODE: 120113

14. TRANSPORT INFORMATION

14.1 UN number
Solid welding wires are not classified as dangerous goods for transport and have no UN number.

14.2 UN proper shipping name
Solid welding wires are not classified as dangerous goods for transport and have no UN proper shipping name

14.3 Transport hazard class(es)
Solid welding wires are not classified as dangerous goods for transport.
14.4 Packing group
There are no any special precautions with which a user should or must comply or be aware of in connection with transport or conveyance either within or outside his premises.

14.5 Environmental hazards
Solid welding wires are not environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID and ADN) and/or a marine pollutant according to the IMDG Code.

14.6 Special precautions for user
There are no any special precautions which a user should or must comply or be aware of in connection with transport or conveyance either within or outside his premises of the solid welding wires.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Solid welding wires in massive form are not subject to MARPOL73/78 and the IBC Code.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Prepared according to EU Directives 2015/830. Classifications mentioned in section 3 concerns substances in their crushed form. Solid welding wires in massive form do not require labeling under current chemical product classification and labeling regulations, if they are not classified as hazardous to health and environment. Welding electrodes in particulate form e.g. dust, fumes, mist may cause an allergic reaction on contact with skin or if inhaled.

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out for the product.

15.3 Full text of H-phrases used in Section 3
N.A.

16. OTHER INFORMATION


All national/local prescriptions remain applicable. The data given in this sheet relate to the unused product, unless specified otherwise. During usage dangerous products can be formed (welding fume, radiation, etc.).

General Disclaimer
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.

REACH Disclaimer
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation.