Section 1 | Identification of the substance/mixture of the company/undertaking

1.1. Product identifier

- motomig SG2 wire 550.5
- motomig SG2 wire 550.7
- motomig SG2 wire 550.8
- motomig SG3 wire 552.5
- motomig SG3 wire 552.7
- motomig SG3 wire 552.8

Welding wire according to EN ISO 14341 - A G 3Si1 and AWS 5.18 ER 70-S6

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

Used as MIG/MAG welding consumable
It is not recommended for any use other than its intended use.

1.3. Details of the supplier of the safety data sheet

Motomig, S.A.
Rua Tomé de Barros Queirós, 135
Zona Industrial das Ervosas
3830-252 Ílhavo
Portugal
Phone: +351 234 320 900
Fax: +351 234 320 916
E-mail: geral@motofil.com
Site: www.motofil.com

1.4. Emergency telephone number

CIAV (Anti-Poison Information Center)) – Portugal: +351 800 250 250
CareChem 24 – Europe: +44 (0) 1235 239 670
European Emergency Number:: 112

Section 2 | Hazards identification

2.1. Classification of the substance or mixture

It presents on the market as:

- Odour: Odourless
- State: Solid welding wire. Insoluble in water
- Not inflammable
- Not reactive

This product is not classified as dangerous according to EU legislation

2.2. Label elements

Hazard pictogram: Not applicable

Signal words: Not applicable

Hazard statements (H) and Precautionary statements (P): See section 16

2.3. Other hazards

Wear protective gloves to avoid slight cuts and skin contact when handling the product

The dangers associated with this product only occu during the welding process, including high temperatures, non-ionizing radiation, electric shock, incandescent particles, metallic fumes and gases, i.e. carbon monoxide, ozone and nitrous compounds, and fire and explosion

- Inhalation: Inhaling welding fumes can cause nausea, dizziness, and nose and throat irritation. Overexposure to welding fumes can cause lung dysfunction. Sufficient exhaustion and ventilation and the use of appropriate personal protective equipment must be ensured

- Ingestion: Not applicable
- Skin contact: May cause shocks or burns due to the spatters or non-ionising radiations (IR (infrared) and UV (ultraviolet))
- Eye contact: The electric arc may injure eyes

- PBT or vPvB substances: This product does not contain substances that are classified as PBT or vPvB in concentrations equal to or greater than 0.1% by mass

- Endocrine disruptors: This product does not contain substances identified as endocrine disruptors.

Section 3 | Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Wire composition	Concentration (w/w (%))	N.º CAS	N.º EINECS	Risk Classification
Iron (Fe)	>91	7439-89-6	231-096-4	No
Manganese (Mn)	1,40-1,85	7439-96-5	231-105-1	No
Silicon (Si)	0,80-1,15	7440-21-3	231-130-8	No
Carbon (C)	0,06-0,14	7440-44-0	231-153-3	No
Copper (Cu)	<0,35	7440-50-8	231-159-6	No
Sulfur (S)	< 0,025	770434-9	231-722-6	No
Phosphorus (P)	< 0,025	7723-14-0	231-768-7	No

Note: Risk classifications are based on current regulations and concentrations present in the product.

Section 4 | First aid measures

4.1. Description of first aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Provide artificial respiration or call a physician in case of respiratory arrest

Se o paciente estiver inconsciente colocá-lo na posição lateral de segurança até chegar

Skin contact: Remove, if possible, cutting off clothing or shoes. For burns, wash thoroughly with cold water. Contact a physician

Eye contact: If the eyes are affected by the electric arc or fumes, wash the eyes with the eyelids open with running water for at least 15 minutes and contact a physician

Electric shock: Disconnect equipment from the current and move the victim away from possible active parts, with the help of a non-conductive material. If cardio-respiratory arrest occurs, initiate basic life support and call a physician immediately

The rescuer should, whenever possible, use examination gloves and/or other personal protective equipment appropriate to the situation.

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

See section 11

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

No further relevant information is available.

Section 5 | Firefighting measures

5.1. Extinguishing media

This material is not flammable. However, the electric arc can ignite combustible material. Use extinguishing media appropriate to the environment in which you are inserted in.

-Suitable extinguishing media: Chemical powder, foam, carbon dioxide (CO_2)

-Unsuitable extinguishing media: Do not use a water jet.

-Specific hazards of the substance: May release metal oxides during combustion

- Special protective equipment: Use appropriate protective equipment, including masks

5.2. Special hazards arising from the substance or mixture

Fire may cause toxic gases and/or irritating and may contain, among others:

Chemical Agents	N.º CAS
Nitrogen Dioxide	10102-44-0
Nitrogen Monoxide	10102-43-9
Sulfur Dioxide	7446-09-5
Carbon Dioxide	124-38-9
Manganese	7439-96-5
Carbon Monoxide	630-08-0
Ozone	10028-15-6

The electric arc from welding or spatters can ignite combustible and flammable materials. It is recommended to keep the work area clean and free of flammable materials.

5.3. Advice for firefighters

Use respiratory equipment and clothes adequate to the environment they are inserted in.

Section 6 | Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear gloves to avoid cuts or chips when handling the solid product. When welding, use appropriate protective equipment, such as a respiratory mask and welding mask, providing adequate protection against radiation. Protect hands, body, head and neck with flame-retardant material

6.2. Environmental precautions

Over time, the welding wire can degrade, so it is important to prevent it from accumulating in the soil and contaminating groundwater.

6.3. Methods and material for containment and cleaning up

No special precautions are necessary as it is a solid material.

Preferably, remove by mechanical means and discard in accordance with local regulations.

6.4. Reference to other sections

Not applicable

Section 7 | Handling and storage

7.1. Precautions for safe handling

Motomig packaging must be handled in such a way that it does not suffer shocks, knocks or falls.

When handling drums, do not dump or roll them. Always lift the drums with the help of the two side straps to avoid sudden oscillations.

Always handle the welding consumables with protective gloves to avoid cuts or stings, as well as the oxidation of the wire surface.

Do not eat, drink or smoke in working areas.

Wash your hands after using.

Avoid exposing pregnant women to welding acts.

Use in well-ventilated areas, and avoid inhaling fumes.

7.2. Conditions for safe storage, including any incompatibilities

Do not overlap pallets or place more than 8 levels of boxes on each pallet.

The packages must not be stored or transported in a humid environment or with liquids that could spill, or with incompatible materials such as strong acids and strong bases. Always keep in a dry place.

7.3. Specific end use(s)

Used as MIG/MAG welding consumable

Section 8 | Exposure controls/personal protection

8.1. Control parameters

Not applicable to solid product. The limit values during normal use may vary according to the legislation of each country, with the following being some agents, as an indication:

Substances whose occupational exposure limit values must be controlled in the work environment (Directive (EU) 2017/164, Directive (EU) 2019/1831 and Portuguese Standard NP 1796:2014)

Chemical Agents	TLV-TWA	TLV-STEL	Reference
Nitrogen Dioxide	0,5 ppm	1 ppm	Directive (UE) 2017/164 Directive (UE) 2019/183
Nitrogen Monoxide	2 ppm	-	Directive (UE) 2017/164 Directive (UE) 2019/183
Sulfur Dioxide	0,5 ppm	1 ppm	Directive (UE) 2017/164 Directive (UE) 2019/183
Carbon Dioxide	5000 ppm	30000 ppm	NP 1796:2014
Manganese	0,2 mg/m^3 [1] 0,05 mg/m^3 [2]	-	Directive (UE) 2017/164 Directive (UE) 2019/183
Carbon Monoxide	20 ppm	100 ppm	Directive (UE) 2017/164 Directive (UE) 2019/183
Ozone	Heavy work - 0,05 ppm Moderate work - 0,08 ppm Light work - 0,10 ppm Work ≤2 horas - 0,20 ppm	-	NP 1796:2014

[1] - Inhalable fraction.

[2] - Breathable fraction.

Threshold limit value - Time weighted average (TLV-TWA) - Average exposure on the basis of a 8h/day, 40/week work schedule, to which it considers that almost every worker may be exposed, day after day, without adverse health effects
Threshold limit value - Short-term exposure limit (TLV-STEL) - Exposure that considers almost every worker may be repeatedly exposed for shorts periods of time, as long as the value of TLV-TAW is not exceeded and without adverse effects.

Note: The exposures superior to the TLV-TAW and inferior to the TLV-STEL must not exceed 15 min and must not be repeated more than 4 times per day. These exposures must occur with at least 60 min between them.

8.2. Exposure controls

Ventilation: Ensure sufficient ventilation and exhaustion in the arc area to avoid inhalation of welding fumes. Train the welder to keep his head away from welding fumes

Respiratory Protection: It is mandatory to use respiratory protection equipment suitable for the environment and conditions in which welding is carried out. Take special care when welding coated or painted steels that may release hazardous substances.

Eye/face protection: Use a welding mask with suitable filters. Protect welding work areas with radiation shielding panels or curtains.

Skin Protection: Protect your hands, body, head and neck to avoid burns from thermal hazards (spatter) and radiation hazards (non-ionizing radiation). Use welding gloves, masks with filters, hoods, welding aprons, protective boots with protected laces, arm and shoulder protection. Clothing must be suitable and resistant to: fire, preferably fireproof, electrocution and burns. Keep clothing clean and dry.

Hearing protection: The use of suitable hearing protectors is recommended.

Section 9 | Physical and chemical properties

9.1. Information on basic physical and chemical properties

- **Appearance:** Solid welding wire
- **Odour:** Odourless
- **Odour threshold:** Not applicable, odourless
- **pH:** Neutral
- **Melting point/freezing point:** 1000 ºC
- **Initial boiling point and boiling range:** Not applicable, wire in solid state
- **Flash point:** Not applicable, not inflammable
- **Evaporation rate:** Not applicable, wire in solid state
- **Flammability (solid, gas):** Not inflammable, not combustible
- **Upper/lower flammability or explosive limits:** Not applicable, not inflammable and not combustible
- **Vapour pressure:** Not applicable, wire in solid state
- **Vapour density:** Not applicable, not inflammable and not combustible
- **Relative density:** 7,85
- **Solubility(ies):** Insoluble in water
- **Partition coefficient n-octanol/water:** Not determined
- **Auto-ignition temperature:** Not applicable, not combustible
- **Decomposition temperature:** Not determined
- **Viscosity:** Not applicable, wire in solid state
- **Explosive properties:** Not explosive
- **Oxidising properties:** Not combustible

9.2. Other information

Not applicable

Section 10 | Stability and reactivity

10.1. Reactivity

This material is stable under ordinary conditions. See point 10.5.

10.2. Chemical stability

This material is stable under normal environmental conditions and predictable temperature and pressure conditions during storage and handling.

10.3. Possibility of hazardous reactions

Possibility of releasing dangerous gases, radiation and spatter during welding.

May generate dangerous gases when in contact with strong acids and strong bases

10.4. Conditions to avoid

Not relevant

10.5. Incompatible materials

The product is incompatible with strong acids and bases and may generate dangerous gases and fumes.

10.6. Hazardous decomposition products

The gases and fumes generated come from decomposition products that are different in percentage, quantity and form from the substances listed in section 3. In ordinary operations, these products come from reaction, oxidation or volatilization of the constituent material of the wire, the base metal and some possible coating of the wire. The composition and quantity of decomposition products depends not only on the welding consumable, but also the process and all materials used in the welding process. Some of the expected reaction products can be found in section 5.2.

Section 11 | Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

- Acute toxicity: Inhaling welding fumes and gases can be dangerous to health, due to the metal contained in the particles and gases emitted during welding. It can cause irritation to the eyes, nose and throat, respiratory failure, bronchitis, nausea, metal fume fever, kidney damage, muscle weakness, lethargy and damage to the nervous system, among others.
-Skin corrosion/irritation: May cause skin irritation and electric arc may cause skin burns
- Serious eye damage/eye irritation: Fumes and electric arc can cause eye irritation and burns
- Respiratory or cutaneous sensitization: Not available
- Carcinogenicity: Electric arc-reported as cause of skin cancer
- Reproductive toxicity: Not available
- STOT - single exposure: May cause airway irritation
- STOT - repeated exposure: Not available
- Aspiration hazard: Not available

11.2. Information on other hazards

Inhaling Manganese fumes can irritate the nose, throat and lungs, causing coughing or even shortness of breath. May cause metal fume fever. Prolonged exposure can cause brain damage, the first symptoms include changes in speech, balance, mood, loss of facial expressions and poor muscle coordination. Subsequent symptoms are identical to those of Parkinson's disease.

This product does not contain substances identified as known endocrine disruptors, with values of 0.1% or greater

Section 12 | Ecological information

12.1. Toxicity

The welding process produces incandescent particles, fumes and gases that can cause negative effects on the environment and health.

12.2. Persistence and degradability

Low degradability

12.3. Bioaccumulative potential

No relevant information available.

12.4. Mobility in soil

Unknown potential

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

This product does not contain substances identified as known endocrine disruptors, with values of 0.1% or greater

12.7. Other adverse effects

not applicable

Section 13 | Disposal considerations

13.1. Waste treatment methods

The management of packaging, metal scraps and residues from chemical surface treatments and metal coatings, which involves recovery and disposal operations, must be carried out in accordance with current legislation.

Residues from welding consumables, or from the welding process, should not be disposed of on the soil or in water, as they can accumulate in soil and groundwater..

Section 14 | Transport information

14.1. UN number or ID number
not applicable

14.2. UN proper shipping name
not applicable

14.3. Transport hazard class(es)
not applicable

14.4. Packing group
not applicable

14.5. Environmental hazards
not applicable

14.6. Special precautions for user
not applicable

14.7. Maritime transport in bulk according to IMO instruments
not applicable

Section 15 | Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Regulation (EC) nº 1907/2006(REACH):non or nor relevant
Commission Regulation (EU) nº 2020/878: non or nor relevant
Commission Regulation (EU) nº 453/2010: non or nor relevant
Regulation (EC) N.o 1272/2008: non or nor relevant
Commission Regulation (EC) nº 790/2009: non or nor relevant
Commission Regulation (EU) nº 2018/1881: non or nor relevant
Commission Regulations (EU) nº 2015/830: non or nor relevant
Directive 2012/18/EU (Seveso III): non or nor relevant
Commission Directive (EU) 2017/164: relating to some compounds that can form in the workplace (see point 8.1)
Commission Directive (EU) 2019/1831: relating to some compounds that can form in the workplace (see point 8.1)
NP 1796:2014:relating to some compounds that can form in the workplace (see point 8.1)
Regulation (UE) 2019/1021 (POPs): non or nor relevant

15.2. Chemical safety assessment
The chemical safety assessment of this product was not carried out.

Section 16 | Other information

The data in this fact sheet is based on our best knowledge at the date of publication and are given in good faith. They should, however, be understood as a guide and do not constitute a guarantee, since the operations with the product are not under our control, and this company does not assume any responsibility for losses or damages that may result from them. In any case, this information does not exempt the user of the product from complying with and respecting the legislation and regulations applicable to the product, safety, hygiene and protection of human health and the environment, and from carrying out sufficient verification and procedural test of effectiveness. The workers involved and responsible for the safety area must have access to the information contained in this sheet in order to guarantee safety in the use of this product

Classification and labeling:
Not classified as dangerous for supply

Hazard Statements (H):

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary Recommendations (P):

P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P270	Do no eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P402+P404	Store in a dry place. Store in a closed container.

Legislation applicable to the safety data sheet:

This safety data sheet has been developed in accordance with Regulation (EC) No. 1907/2006 and Comission Regulation (EU) 2020/878