Information Sheet

SECTION 1. Product and Company Identification

1.1. Identificatore del prodotto

Product name:	**SIDERGAS NIMOCR**
Classification:	**EN ISO 16834-A Mn3Ni1CrMo - AWS5.28 ER110S-G**

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

Descrizione/Utilizzo	**Wire for welding in protective atmosphere (GMAW), for professional and industrial uses**

1.3. Details of the supplier of the safety data sheet

Company Name Address City and County	**Sidergas S.p.A.** **Viale Rimembranza 17** **37015 S. Ambrogio Valpolicella (VR)** **ITALIA** **tel. 045 6862044** **fax 045 6861048**
e-mail address of the competent person responsible for the Safety Data Sheet	**info@sidergas.com Ing. Alessandro Fagnani**
Product distribution by:	**Sidergas S.p.A.**
1.4. Emergency telephone number For urgent inquiries refer to:	**0039 045 6862044 (office time only)**

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.
The product is considered "article" under REACH (Regulation 1907/2006), so the product shall not be subject to mandatory safety data sheet, neither of Classification and Labeling in accordance with Regulation 1272/2008 (CLP).
The information contained in this document is provided as a precautionary measure and relate to substances contained in the article itself.

Depending on its composition, the product is not classified as hazardous pursuant to the provisions set forth in Directives 67/548/EEC and 1999/45/EC and Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and supplements).

Any additional information concerning the risks for health and / or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.
Hazard classification and indication: ----

2.2 Label elements.
The product is not subject to hazard labelling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments.

Hazard pictograms: --
Signal words: --
Hazard statements (H): --
Precautionary statements (P): --

2.3. Other hazards.
Not dangerous in massive form. The fine particles from processing may be highly flammable. The molten metal and fine particles are very reactive in contact with water, acids, alkalis, strong oxidizing agents, halogenated compounds and certain metal oxides.
During the welding step the main dangers are mechanical, chemical and due to radiation, in particular:
- Welding fumes (mainly metal oxides and in some cases, their salts): long-term exposure to welding fumes may result in dizziness, fainting, nausea, tiredness, irritation to the respiratory tract and eyes, metal fever fume. Chronic exposure can reduce lung function. Prolonged inhalation of compounds containing nickel and chromium above the exposure limits may cause cancer, exposure to fumes containing manganese can lead to damage to the nervous system and respiratory tract
- Heat: contact with the molten metal can cause severe burns and cause fires;
- Ultraviolet radiation: prolonged exposure to ultraviolet radiation can cause serious damage to the skin and eyes;
- Electric shock involved in the welding system.

SECTION 3. Composition/information on ingrédients.

3.1. Substances. Information not relevant.

3.2. Mixtures. Contains:

Identification.	Concentration %.	Classification 67/548/CEE.	Classification 1272/2008 (CLP).
Iron in massive form (alloys)			
CAS. 7439-89-6	94-98		
CE. 231-096-4			
INDEX. -			
Nr. Reg. 01-2119462838-24-0067			

Note: Upper limit is not included into the range.
The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.
T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

It is reported as an example a percentage composition of the various elements present in welding wire SIDERGAS NIMOCR:

HEAT ANALYSIS

Element	C %	S %	P %	Mn %	Si %	Cu %	Sn %	Cr %	Ni %	Mo %	Ti %	Ca %	As %	V %	Zr %	Al%	N%	B%
	0,100	0,006	0,006	1,700	0,590	0,150	-	0,380	1,480	0,260	-	-	-	-	-	0,003	-	-

SECTION 4. First aid measures.

4.1. Description of first aid measures.

Observance of good industrial hygiene is recommended.

EYES: In case of contact with molten metal or hot parts cool rapidly with cold water and call your doctor. If the powders are in contact with the eyes you can have mechanical irritation or injury, rinse immediately with plenty of water for at least 15 minutes. Seek immediate medical attention.
SKIN: If contact is made with the product in the molten state can lead to severe burns: Wash immediately with plenty of cold water for at least 15 minutes. Call your doctor at once.
INHALATION: Remove to fresh air, if breathing is irregular or stopped, administer artificial respiration. Call your doctor immediately.
INGESTION: Not a likely route of exposure. However, if you were to have swallowed the product contact your doctor.

PROTECTION MEASURES FOR THE FIRST RESCUE: for PPE required for first aid refer to section 8.2 of this Information Sheet.

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

No episodes of damage to health ascribable to the product have been reported.

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

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT
Use extinguishers appropriate for the surrounding materials that caught fire.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular. Molten metal may react violently with water.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products (fumes of metallic oxides).

5.3. Advice for firefighters.

GENERAL INFORMATION
In the form of wire the product is non-flammable and there is not a risk of explosion. Fine dust may ignite and pose a risk of explosion. During the combustion are produced dangerous fumes containing metal oxides.
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. Precautions for safe handling.

Ensure an accurate localized ventilation / aspiration in the workplace during welding. Do not eat, drink or smoke during use. Before handling the product, consult all the other sections of this Information Sheet. Avoid leakage of the product into the environment.
Keep the workplace clean by avoiding dust build-up.

7.2. Conditions for safe storage, including any incompatibilities.

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

No other use than specified in Section 1.2 of this information Sheet.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Occupational exposure limits

Description	Type	Status	TWA/8h		STEL/15min
			mg/m3	ppm	mg/m3
IRON, SOLUBLE SALTS AS Fe	TLV-ACGIH		1		
IRON OXIDE (Fe2O3)	TLV-ACGIH		5 respirable fraction		
ALUMINUM METAL insoluble compounds	TLV-ACGIH		1	0,9	
ALUMINIUM POWDER	WEL	UK	4 (respirable) 10 (total)		
	TLV	CH	3		
	OSHA - PEL		5 (respirable) 15 (total)		
NICKEL	TLV-ACGIH		1,5		
	TLV	CH	0,5		
	WEL	UK	0,1		
	OSHA - PEL		0,015		
Insoluble inorganic Nickel compounds	TLV-ACGIH		0,2 A1, inhalable fraction		
Soluble inorganic Nickel compounds	TLV-ACGIH		0,1 A4, inhalable fraction		
LEAD	TLV-ACGIH		0,05		
	OEL	EU	0,15		
Chromium and Cr (II) and Cr (III) compounds (not soluble)	OEL	EU	2		
		IT	0,5		
	WEL	UK	0,5		
	TLV-ACGIH		0,5		
SILICON, POWDER	OSHA - PEL		5 (respirable) 15 (total)		
TIN AND INORGANIC COMPOUNDS (EXPRESSED AS TIN)	OEL	EU	2		
	TLV-ACGIH		2		
MANGANESE element and inorganic compounds (as Mn)	TLV-ACGIH		0,2		
Molybdenum metal and insoluble compounds (as Mo)	TLV-ACGIH		10 (inhalable fraction note 3) 3 (respirable fraction note 4)		
ARSENIC and inorganic compounds (As)	TLV-ACGIH		0,01		
Zirconium and its compounds (as Zr)	TLV-ACGIH		5		10
Antimony and compounds (as Sb)	TLV-ACGIH		0,5		
COPPER	OSHA - PEL		1 (dust / mist) 0.1 (fumes)		

8.2. Exposure controls.

Observance of safety measures used in handling chemical substances. As the use of adequate technical equipment must always take priority over personal protection equipment, ensure good ventilation at the workplace through effective local aspiration. If these steps do not keep the concentration of the product below the exposure limit values in the workplace, wear suitable protection for the respiratory tract

SKIN PROTECTION

Cover exposed areas with appropriate clothing.

HAND PROTECTION

Use gloves for welders

SECTION 8. Exposure controls/personal protection.

BODY PROTECTION
Not required.
EYE PROTECTION
Use masks with UV protection suitable for your application.
RESPIRATORY PROTECTION
In case of exceeding the threshold value of one or more of the substances present in the preparation for daily exposure in workplace environment or to a fraction established by the company's prevention and protection, wear a half-mask with filter type combined FFA1P2 suitable to protect from dust and welding fumes and vapors (ref. EN 141 standard).
The use of means of respiratory protection is necessary in the absence of technical measures to limit worker exposure. The protection provided by masks is in any case limited.
THERMAL HAZARDS
Use appropriate personal protective equipment during welding to protect from heat and possible liquid metal (CEN standards).

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	Solid (wire in massive form)
Colour	bright copper
Odour	odourless
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	1500°C
Initial boiling point.	Not applicable.
Boiling range.	Not available.
Flash point.	Not applicable.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	Not available.
Solubility	7,96 kg/dm^3
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

SECTION 10. Stability and reactivity.

10.1. Reactivity.
There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability.
The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.
No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid.
None in particular. The wire is made from metals in massive form and is stable and non-reactive under normal conditions of use.
However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials.
Avoid contact with acids.

10.6. Hazardous decomposition products.
By thermal decomposition when heated or in the event of fire, vapors potentially dangerous to health can be released.

10.7 Fumes Emission
According with EN ISO 15011-4 (Health and safety in welding and allied processes — Laboratory method for sampling fume and gases — Part 4: Fume data sheets):

Key element limit value welding fumes composition:	The key element is:	Classification according with EN ISO 15011-4:
9 mg/m^3	**Fe**	**5d**

SECTION 11. Toxicological information.

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled carefully according to good industrial practices. This product may have slight health effects on sensitive people, by inhalation and/or cutaneous absorption and/or contact with eyes and/or ingestion.

11.1. Information on toxicological effects.

Information on the product not available.

Long-term exposure to welding fumes may result in dizziness, fainting, nausea, tiredness, irritation to the respiratory tract and eyes, metal fume fever. Chronic exposure can reduce lung function. Exposure to fumes containing manganese can lead to damage to the nervous system and respiratory tract

The IARC classifies welding fumes as possibly carcinogenic to humans (2B), the target organ is the lung and it is assumed that the risk is limited to the welding of stainless steel as containing Cr and Ni. However, the currently available epidemiological data on mortality and incidence of lung cancer do not provide clear evidence that nickel and hexavalent chromium compounds are the most important risk factor (Sjogrenand Langard, 2004). The ACGIH does not provide a classification of the carcinogenicity of welding fumes. The carcinogenic role of welding fumes is still debated, especially for little evidence derived from epidemiological studies and by the few and not conclusive experimental studies on animals.

SECTION 12. Ecological information.

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation. No acute or chronic classification is assigned to Iron Alloys in massive form.

12.1. Toxicity.	Information not available.
12.2. Persistence and degradability.	Information not available.
12.3. Bioaccumulative potential.	Information not available.
12.4. Mobility in soil.	Information not available.
12.5. Results of PBT and vPvB assessment.	On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.
12.6. Other adverse effects.	Information not available.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. The hazard level of waste containing this product must be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Solid residues may be suitable for disposal in an authorised landfill site.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

SECTION 15. Regulatory information.

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

Seveso Category:	None
Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.	None
Substances in Candidate List (Art. 59 REACH).	None
Substances subject to authorisarion (Annex XIV REACH).	None
Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:	None
Substances subject to the Rotterdam Convention:	None
Substances subject to the Stockholm Convention:	None
Healthcare controls.	Information not available.
15.2. Chemical safety assessment.	

The welding wire SIDERGAS NIMOCR is considered an article and not a substance or a mixture according to the REACH Regulation.
No chemical safety assessment has been processed for the article.
At the time of writing the exposure scenario of substance Iron (Registration number: 01-2119462838-24-0067-XXXX) was not available.

SECTION 16. Other information.

Training for workers:
Worker training should include content, updates and duration as a function of the risk profiles assigned to work areas to which they belong, in the manner prescribed by applicable national and local regulations.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as Reach Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation.

GENERAL BIBLIOGRAPHY
1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety
10. Niosh - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website
Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

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