



SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 453/2010)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : GRAVOMETALL ARGENT
Product code : GRAV 042.

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

Metallurgy.

1.3. Details of the supplier of the safety data sheet

Registered company name: GRAVOTECH MARKING SAS.
Address : 56, avenue Jean Jaurès.10600.La Chapelle Saint Luc.France.
Telephone : +33 (0)3 25 41 65 65. Fax : +33 (0)3 25 79 04 25.
e-mail : info@gravograph.fr
http://www.gravograph.com

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin sensitisation, Category 1.
Carcinogenicity, Category 2.
Specific target organ toxicity (repeated exposure), Category 2.
Hazardous to the aquatic environment - Acute hazard, Category 1.
Hazardous to the aquatic environment - Chronic hazard, Category 1.
This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Possibility of skin sensitisation. The mixture may also irritate the skin and prolonged contact may aggravate this effect.
Possibility of category three carcinogenic effects.
Possibility of serious noxious effects in the event of repeated or prolonged exposure and by inhalation.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS09

GHS07

GHS08

Signal Word :

WARNING

Product identifiers :

028-002-00-7

NICKEL

Hazard statements :

H317

May cause an allergic skin reaction.

H351

Suspected of causing cancer .

H373	May cause damage to organs through prolonged or repeated exposure (if inhaled).
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements - Prevention :	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
Precautionary statements - Response :	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
Precautionary statements - Disposal :	
P501	Dispose of contents/container at a disposal facility in accordance with local regulations.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Hazard symbols :



Harmful



Dangerous for the environment

Contains :

028-002-00-7

NICKEL

Risk phrase :

R 50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 43

May cause sensitisation by skin contact.

R 48/20

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R 40

Limited evidence of a carcinogenic effect.

Safety phrase:

S 36/37

Wear suitable protective clothing and gloves.

S 61

Avoid release to the environment. Refer to special instructions/Safety data sheets.

S 60

This material and its container must be disposed of as hazardous waste.

S 57

Use appropriate container to avoid environmental contamination.

2.3. Other hazards

Product submitted to restrictions on the marketing and use: see Regulation (EC) No 1907/2006.

For professional use only.

No data available.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances**

No substances fulfil the criteria set forth in annexe II section A of the REACH regulation (EC) n° 1907/2006.

3.2. Mixtures**Composition :**

Identification	Name	Classification	%
CAS: 7440-50-8 EC: 231-159-6	COPPER		50 <= x % < 100
INDEX: 030-001-01-9 CAS: 7440-66-6 EC: 231-175-3	ZINC POWDER - ZINC DUST (STABILISED)	GHS09, Wng N H:410 R: 50/53	25 <= x % < 50
INDEX: 028-002-00-7 CAS: 7440-02-0 EC: 231-111-4	NICKEL	GHS08, GHS07, Dgr T H:351-372-	2.5 <= x % < 10

317
R:
40.C3-43-4
8/23
NOTA: 7 S

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

In the event of fire, use specifically suitable extinguishing agents. Never use water.

Suitable methods of extinction

In the event of a fire, use :

- D powder

- dry sand

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

- fumes

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non fire-fighters

Avoid any contact with the skin and eyes.

For fire-fighters

Fire-fighters will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming).

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Never pour water into this mixture.

Do not breathe in dust.

Avoid exposure - obtain special instructions before use.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7440-50-8	0.2 mg/m ³	-	-	-	-
7440-02-0	1.5 mg/m ³	-	-	-	I

- France (INRS - ED984:2007 and French Order of 30/06/2004) :

CAS	VME-ppm :	VME-mg/m ³ :	VLE-ppm :	VLE-mg/m ³ :	Notes :	TMP No :
7440-02-0	-	1	-	-	C3	-

- Switzerland (SUVA 2009) :

CAS	VME-mg/m ³ :	VME-ppm :	VLE-mg/m ³ :	VLE-ppm :	Temps :	RSB :
7440-50-8	0,1 i	-	0,2 i	-	4x15	-
7440-02-0	0,05 i	-	-	-	-	SB

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid breathing dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state:	solid.
Odour:	Odourless.
Colour:	Silvery red / gold.
Density :	8.7
pH of the substance or preparation :	not relevant. The pH is impossible to measure or its value is not relevant.
Flash point interval :	not relevant.
Vapour pressure :	not relevant.
Water solubility :	Insoluble.

9.2. Other information

Melting point/melting range :	905 - 1065°C.
-------------------------------	---------------

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid :

- formation of dusts

Dusts can form an explosive mixture with air.

10.5. Incompatible materials

Keep away from :

- strong acids

- alkalis

- oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

- fumes

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

May cause an allergic reaction by skin contact.

Suspected human carcinogen.

May cause severe damage to organs in the event of repeated or prolonged exposure.

Substances

No toxicological data available for the substances.

Mixture

No toxicological data available for the mixture.

Respiratory or skin sensitisation :

May cause an allergic skin reaction.

Monographie(s) du CIRC (Centre International de Recherche sur le Cancer) :

CAS 7440-02-0 : CIRC Groupe 2B : L'agent est peut-être cancérigène pour l'homme.

SECTION 12 : ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

Substances

No aquatic toxicity data available for the substances.

Mixtures

No aquatic toxicity data available for the mixture.

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

No data available.

12.6. Other adverse effects

No data available.

German regulations concerning the classification of hazards for water (WGK) :

WGK 2 (VwVwS vom 27/07/2005, KBws) : Hazardous for water.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

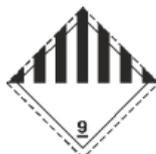
Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2009 - IMDG 2008 - ICAO/IATA 2011).

- Classification :



- Environmentally hazardous material :



UN3077=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(zinc powder - zinc dust (stabilised))

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M7	III	9	90	LQ27	274 335 601	E1	3	E
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ			
	9	-	III	5 kg	F-A,S-F	179 274 335 909	E1			
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	9	-	III	956	400 kg	956	400 kg	A97 A158 A179	E1	
	9	-	III	Y956	30 kg G	-	-	A97 A158 A179	E1	

SECTION 15 : REGULATORY INFORMATION

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

- Particular provisions :

No data available.

- German regulations concerning the classification of hazards for water (WGK):

Germany: WGK 2 (VwVwS vom 27/07/2005, KBws)

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Title for H, EUH and R indications mentioned in section 3 :

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer .
H372	Causes damage to organs through prolonged or repeated exposure .
H410	Very toxic to aquatic life with long lasting effects.
R 40.C3	Limited evidence of a carcinogenic effect.
R 43	May cause sensitisation by skin contact.
R 48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R 50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefahrdungsklasse (Water Hazard Class).