



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier:

Stroumbos Charalampos, Afroditi 8, 15341, Athens tel – fax: +0302106561057

Contains the following substances with hazardous properties. - Cobalt

1.2 Relevant Identified uses of the substance or mixture and uses advised against:

| Identified | Other Process or activity: |
|------------|--|
| uses: 0 | Metal articles |
| AC7 | Formulation of preparations |
| ERC2 | (mixtures) Formulation in materials |
| ERC3 | Production of preparations or articles by tableting, compression, extrusion, pelletisation |
| PROC14 | Use in closed, continuous process with occasional controlled exposure |
| PROC2 | Potentially closed processing operations with minerals/metals at elevated temperature; industrial setting |
| PROC22 | Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) |
| PROC5 | General manufacturing |
| SU17 | |

1.3 Details of the supplier of the Safety Data Sheet

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Athens
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Telephone: +0302106561057- 58
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1.4 Emergency Telephone Number:

+44 (0)1639 634121 available 09:00 to 17:00 GMT Monday to Friday (English language only)

Section 2: Hazards Identification

2.1 Classification of the substance or mixture:

2.1.1 CLP

MSDS conforming to EC Directive 1907/2006
and 1272/2008

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Danger

~ Warning

CLP

Hazard statements

Aquatic Chronic 4

H413 Resp. 8ens. 1

H334

8skin 8ens. 1 H317

Precautionary

statements P202

P260

P270

P272

P281

P501

May cause long lasting harmful effects to aquatic life.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace. Use personal protective equipment as required.

Dispose of contents/container in accordance with local and national regulations

2.1.2 CHIP

CHIP

R42/4

3 R53

820/2

1 822

824

837

860

861

May cause sensitisation by inhalation and skin contact.

May cause long-term adverse effects in the aquatic environment. When using do not eat, drink or smoke.

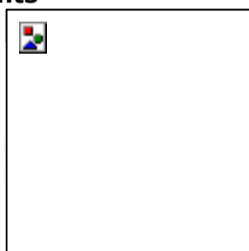
Do not breathe dust.

Avoid contact with skin.

Wear suitable gloves.

This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

2.2 Label Elements



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Hazard statements:

Aquatic Chronic 4 H413

May cause long lasting harmful effects to aquatic life.

Resp. Sens. 1 H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Skin Sens. 1 H317

Precautionary statements:

P202

Do not handle until all safety precautions have been read and understood. Do

P260

not breathe dust/fume/gas/mist/vapours/spray.

P270

Do not eat, drink or smoke when using this product.

P272

Contaminated work clothing should not be allowed out of the workplace. Use

P281

personal protective equipment as required.

P501

Dispose of contents/container in accordance with local and national regulations

2.3 Other Hazards

No Information

Section 3: Composition/Information on Ingredients

3.2 Mixture

| Cone. % | CAS No | EC No | REACH Registration No | Classification according to CHIP (Chemicals Hazard Information for Packaging and Regulations 2002) | Classification according to 67/548/EEC |
|-----------------|-----------|-----------|-----------------------|--|---|
| Cobalt | | | | | |
| 60.00-70.00 | 7440-48-4 | 231-158-0 | 01-2116517392-44-0000 | R42/43 R53 520/21 522 524 537 560 561 | Aquatic Chronic 4 H413 Resp. Sens. 1 H334 Skin Sens. 1 H317 P202 P260 P270 P272 P281 P501 |
| Chromium | | | | | |
| 10.00-25.00 | 7440-47-3 | 231-157-5 | 01-2119485652-31-0000 | 520/21 522 560 | P202 P260 P270 P272 P281 P501 |
| Tungsten | | | | | |
| 1.00-10.00 | 7440- | 231- | | 520/21 | P202 |

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| | | | | | |
|-------------------|-----------|-----------|-----------------------|----------------------|--|
| | 33-7 | 143-9 | | 822 860 | P260 P270 P272 P281 P501 |
| Molybdenum | | | | | |
| 1.00-10.00 | 7439-98-7 | 231-107-2 | | 820/21 822 860 | P202 P260 P270 P272 P281 P501 |
| Niobium | | | | | |
| 0.10-1.00 | 7440-03-1 | 231-113-5 | | 820/21 822 860 | P202 P260 P270 P272 P281 P501 |
| Silicon | | | | | |
| 0.10-1.00 | 7440-21-3 | 231-130-8 | 05-2115702009-58-0000 | 820/21 822 860 | P202 P260 P270 P272 P281 P501 |

Section 4: First-Aid Measures

4.1 Description of first aid measures

- Skin Contact:** Wash off thoroughly with soap and water. If rash develops seek medical attention.
- Eye Contact:** Irrigate thoroughly with water for at least 10 minutes - obtain medical attention if irritation persists
- Inhalation:** Remove from exposure, rest and keep warm. In severe cases or if exposure has been great, obtain medical attention.
- Ingestion:** Wash out mouth thoroughly with water. Obtain medical attention if further symptoms develop.

4.2 Most important symptoms and effects, both acute and delayed

- Skin Contact:** Rash may develop.
- Eye Contact:** Mechanical irritation.

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Inhalation: Possible asthma like symptoms.

Ingestion: No information

4.3 Indications of any immediate medical attention and special treatment needed

Skin Contact: Treat symptomatically

Eye Contact: Treat symptomatically

Inhalation: Treat symptomatically

Section 5: Fire Fighting Measures

5.1 Extinguishing Media

Use water mist, extinguishing type D powder or sand.

5.2 Special Hazards arising from the substance or mixture

Avoid formation of dust cloud as this may lead to an increased risk of a dust explosion.

5.3 Advice for fire fighters

No information

Section 6: Accident Release Measures

6.1 Personal precautions

6.1.1 For non-emergency personnel: Wear suitable protective clothing and equipment.

6.1.2 For emergency responders: Wear suitable protective clothing and equipment.

6.2 Environmental precautions: Take precautions to ensure product does not contaminate ground or enter the drainage system.

6.3 Methods and material for containment and clear up

6.3.1 For containment: Not applicable

6.3.2 For cleaning up:
Small spillage: Vacuum with equipment fitted with HEPA filtration.

Large spillage: Solids should be carefully transferred to salvage containers. Any residues should be treated as small spillages.

6.3.3 Other information: No Information.

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6.4 Reference to other sections No Information

Section 7: Handling and Storage

7.1 Precautions for safe handling

| | |
|---|---|
| Protective measures: | Avoid contact with skin and eyes. Do not breathe dust. Wash hand and face thoroughly after working with material. |
| Measures to prevent fire: | Not applicable. |
| Measures to protect the environment: | Use appropriate containment to avoid environmental hazard. |
| Advice on general occupational hygiene: | Work using a suitable extraction/ventilation system. Contaminated clothing should be removed and washed before re-use. |

7.2 Conditions for safe storage

| | |
|---|---|
| Technical measures and storage conditions: | Store in sealed container in dry conditions and keep the container closed when not in use |
| Packaging materials: | Keep in the container supplied, or suitable metal, plastic or polythene container. |
| Requirements for storage rooms and vessels: | Containers should be stored under cover in a clean and dry environment. |
| Storage class: | Not applicable. |
| Further information on storage conditions: | Local regulations should be followed regarding the storage of this material. |

7.3 Specific end uses

| | |
|--------------------|--|
| Identified uses: a | Other Process or activity: |
| AC7 | Metal articles |
| ERC2 | Formulation of preparations |
| ERC3 | (mixtures) Formulation in materials |
| PROC14 | Production of preparations or articles by tableting, compression, extrusion, pelletisation |
| PROC2 | Use in closed, continuous process with occasional controlled exposure |
| PROC22 | Potentially closed processing operations with minerals/metals at elevated temperature; industrial setting |
| PROC5 | Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) |
| SU17 | General manufacturing |

Section 8: Exposure Controls and Personal Protection

8.1 Control Parameters

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| CAS No. | Name | Legal Basis | WEL 8hr limit | | WEL 15min limit | |
|-----------|------------|--|---------------|--------------------------------------|-----------------|-------------------------------|
| | | | ppm (8hr TWA) | mg/m ³ (8hr TWA) | ppm (15min TWA) | mg/m ³ (15min TWA) |
| 7440-48-4 | Cobalt | HSE EH40/2005 Workplace exposure limits | - | 0.1 | - | - |
| 7440-47-3 | Chromium | HSE EH40/2005 Workplace exposure limits | - | 0.5 | - | - |
| 7440-33-7 | Tungsten | HSE EH40/2005 Workplace exposure limits | - | 5 | - | 10 |
| 7439-98-7 | Molybdenum | HSE EH40/2005 Workplace exposure limits | - | 10 | - | 20 |
| 7440-03-1 | Niobium | HSE EH40/2005 Workplace exposure limits | - | Inhalable 10, respirable 4. | - | - |
| 7440-21-3 | Silicon | HSE | - | inhalable | - | - |



| | | | | | | |
|--|--|---|--|-------------------------|--|--|
| | | EH40/2005 Workplace exposure limits | | 10, respirable 4. | | |
|--|--|---|--|-------------------------|--|--|

8.2 Exposure Controls



8.2.1 Appropriate engineering controls:

Substance/mixture related measures to prevent exposure during identified uses: Not applicable
Structural measures to prevent exposure: Enclosed processes

Organisational measures to prevent exposure: Substance/Mixture only to be used by those trained in its safe use.
Technical measures to prevent exposure: Enclosed processes or local exhaust ventilation

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8.2.2 Personal protection
equipment:

8.2.2.1 Eye and face protection: Safety glasses

8.2.2.2 Skin protection:

Hand protection: Impervious gloves

Other skin protection: Barrier cream

8.2.2.3 Respiratory protection: FFP3 dust mask to EN149:2001

8.2.2.4 Thermal hazards: Not applicable

8.2.3 Environmental exposure controls:

Substance/mixture related measures to prevent exposure: Not

applicable Instruction measures to prevent exposure: Not applicable

Organisational measures to prevent exposure: Substance/Mixture only to be used by those trained in its safe use. Technical measures to prevent exposure: Not applicable

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|---|-------------|
| Appearance | Grey powder |
| Odour | Odourless |
| Odour | No data |
| Threshold pH | No data |
| Melting point/freezing point | 0 |
| Initial boiling point and boiling range | No data |
| Flash point | No data |
| Evaporation rate | No data |
| Flammability (solid,gas) | No data |
| Upper/lower flammability or explosive limits | No data |
| Vapour pressure | No data |
| Vapour density | No data |
| Relative density | 9.27 |
| Solubility(ies) | No data |
| Partition coefficient; n-octanol/water | No data |
| Auto-ignition temperature | No data |
| Decomposition temperature | No data |
| Viscosity | No data |
| Explosive properties | No data |

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| | |
|---|---------------------|
| Oxidising properties Particle size | No data 100%<1mm |
|---|---------------------|

9.2 Other Information

No data.

Section 10: Stability and Reactivity

| | |
|---|---------------------------------|
| 10.1 Reactivity: | No data |
| 10.2 Chemical stability: | Stable under normal conditions. |
| 10.3 Possibility of hazardous reactions: | No Data |
| 10.4 Conditions to avoid: | Oxidising agents. |
| 10.5 Incompatible materials: | No data |
| 10.6 Hazardous decomposition products: | No data |

Section 11: Toxicological Information

11.1 Information on toxicological effects

| | |
|---|---------|
| Acute toxicity | No data |
| Skin corrosion/irritation | No data |
| Serious eye damage/irritation | No data |
| Respiratory or skin sensitisation | No data |
| Germ cell mutagenicity | No data |
| Carcinogenicity | No data |
| Reproductive toxicity | No data |
| Summary of evaluation of the CMR properties | No data |
| STOT-single exposure | No data |
| STOT-repeated exposure | No data |
| Aspiration hazard | No data |

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Section 12: Ecological Information

| | |
|---|---------|
| 12.1 Toxicity Long-term Ecotoxicity | No data |
| 12.2 Persistence and degradability | |
| Abiotic Degradation | No data |
| Physical- and photo-chemical elimination | No data |
| Biodegradation | No data |
| 12.3 Bioaccumulative potential | |
| Partition coefficient n-octanol/water (log Kow) | No data |
| Bioconcentration factor (BCF) | No data |
| 12.4 Mobility in soil | |
| Known or predicted distribution to environmental compartments | No data |
| Surface tension | No data |
| Adsorption/Desorption | No data |
| 12.5 Results of PBT & vPvB assessment | No data |
| 12.6 Other adverse effects | No data |
| 12.7 Additional information | No data |

Section 13: Disposal Considerations

13.1 Waste treatment methods

13.1.1 Product/Packaging disposal:

EWC for waste product, ferrous alloys 12-01-02, non-ferrous alloys 12-01-04

EWC for non product contaminated packaging, steel drums 15-01-04, card 15-01-01, plastic 15-01-02, wood 15-01-03 EWC for product contaminated packaging, all types 15-01-10

13.1.2 Waste treatment - relevant information:

Chemical residues are generally classified as special waste and as such, are covered by Directive 2008/98/EC of the European Parliament. Contact your local waste disposal authority for advice or pass to a chemical recovery company.

13.1.3 Sewage disposal- relevant information:

13.1.4 Other disposal recommendations:

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Section 14: Transport Information

| | |
|--|--|
| 14.1 UN Number | None |
| 14.2 UN proper shipping name | Not classified hazardous for transport |
| 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 | None |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IPSC code | Not Applicable |

Section 15: Regulatory Information

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

| | |
|----|---|
| UK | The use of this product must be assessed in accordance with the requirements of the COSHH Regulations 2002 as amended. |
| EU | EC directive 98/24/EC on the Protection of the health and safety of workers from the risks related to chemical agents at work |

Authorisation and/or restrictions on use

Authorisations: Not applicable

Restrictions: see section 1.2 on uses advised against.

Chemical safety assessment: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16: Other Information

16.1 Revision Information

| Revision: | Reason for revision: |
|--------------|----------------------|
| 1 09.20.2016 | Initial setup |

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Testing in accordance with the method described in 49 CFR 173 Appendix E and UN Recommendations on the Transport of Dangerous Goods for flammability was used to establish the non-flammability of this product.

16.2 List of abbreviations

| | |
|-----------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CEN | European Committee for Standardisation |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| CAS# | Chemical Abstracts Service number |
| COSHH | Control of Substances Hazardous to Health |
| CSA | Chemical Safety Assessment |
| CSR | Chemical Safety Report |
| DNEL | Derived No Effect Level |
| DPD | Dangerous Preparations Directive 1999/45/EC |
| DSD | Dangerous Substances Directive 67/548/EEC |
| DU | Downstream User |
| ECHA | European Chemicals Agency |
| ES | Exposure Scenario |
| ext-SDS | Extended Safety Data Sheet (SDS with ES attached) |
| EWC | European Waste Catalogue (replaced by LoW - see below) |
| GES | Generic Exposure Scenario |
| GHS | Globally Harmonized System |
| LC50 | Lethal Concentration to 50 % of a test population |
| LD50 | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| MSDS | Material Safety Data Sheet |
| OEL | Occupational Exposure Limit |
| PBT | Persistent, Bioaccumulative and Toxic substance |
| PEC | Predicted Effect Concentration |
| PNEC(s) | Predicted No Effect Concentration(s) |
| PPE | Personal Protection Equipment |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| STOT | Specific Target Organ Toxicity |
| RE | Repeated Exposure |
| (STOT) SE | Single Exposure |
| SVHC | Substances of Very High Concern |
| TWA | Time Weighted Average (long term 8 hours) (short term 15 minutes unless specified otherwise) |
| UN | United Nations |
| vPvB | Very Persistent and Very Bioaccumulative |

16.3 Key literature references and sources for data

Testing in accordance with the method described in 49 CFR 173 Appendix E and UN Recommendations on the Transport of Dangerous Goods for flammability was used to establish the non-flammability of this product.

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation 1272/2008/EC & 1907/2006/EC.

Classification in accordance with 67/458/EEC & 1999/45/EC until June 2015.

16.6 Training advice:

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16.7 Further information:

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