SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: InnoMetal Calium polysulfide
Other names: -
MSDS name: EN_InnoMetal_MSDS_ Calium polysulfide

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

1.2.1. Application of the substance / the mixture
Additional component

1.2.2. Applications advised against
No further relevant information available.

1.3. Details of the supplier of the safety data sheet

InnoMetal GmbH
Einsteinstr. 12
D-33104 Paderborn
Fon: +49 (0)221 9582011
info@Innometal.de

1.4. Emergency telephone number

Monday – Friday, 9:00 am - 4:00 pm
+49 (0)221 958 2011

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Skin corrosion, Category 1 B, H314 Acute aquatic toxicity, Category 1, H400.

Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS05 GHS09
Signal word: Danger
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
EUH031 Contact with acids liberates toxic gas.
Precautionary statements:
P280Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273 Avoid release to the environment.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

Inhalation of dust or fumes leads to irritation of respiratory system. Inhalation of higher

concentrations may cause metal fume fever.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Substance

Description: Alloy of substances listed below with non-hazardous additions.

Labelling (CLP):

CAS	EINECS	Chemical name	Hazard pictograms	Signal word	Hazard statements
39365-88-3	-	Calium polysulfide	GHS05, GHS09	Danger	H: 314, 400 EUH: 031

Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: The following applies to sulphides in general: release of hydrogen sulphide (CNS disorders, impaired locomotors coordination, cardiovascular disorders) in the stomach possible after swallowing. Risk of blindness! Irritation and corrosion, irritant effects, Cough, Shortness of breath, Nausea, Vomiting.
Take affected persons out of danger area and lay down.
After inhalation: Supply fresh air; consult doctor.
After skin contact: wash off with plenty of water. Swab with polyethylene glycol 400. Immediately remove
contaminated clothing. Call a physician immediately.
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.
After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing agents:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
For safety reasons unsuitable extinguishing agents:
For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Combustible material
Risk of dust explosion.
Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: Sulphur oxides

5.3. Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe
distance or by wearing suitable protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, and consult an expert.
Advice for emergency responders: Protective equipment see section 8.
Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7.2 and 10.5).

6.2. Environmental precautions

Do not allow to enter sewers/ surface or ground water.
Do not empty into drains.

6.3. Methods and material for containment and cleaning up

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.
Storage temperature: no restrictions.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1, no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.
Additional information: The lists valid during the making were used as basis.

8.2. Exposure controls

Respiratory protection: Required when dusts are generated.
Recommended Filter Type: Filter P 2 (acc. To DIN 3181) for solid and liquid particles of harmful substances. The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carries out according to the instructions of the producer. These measures have to be properly documented.
Protection of hands:


Protective gloves
Tightly fitting safety goggles
full contact:
Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min
splash contact:
Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).
The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.
This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Eye protection: Goggles recommended during refilling.
Body protection: Protective work clothing. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier
General protective and hygienic measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information
Appearance:
Form: solid
Colour: red brown
Odour: characteristic
PH-value: 13 (at 10 g/l 20 °C)
Change in condition
Melting point: 200 - 250 °C
Boiling point: No information available.
Flash point: No information available.
Evaporation rate: No information available.
Flammability (solid, gas): No information available.
Lower explosion limit: No information available.
Upper explosion limit : No information available.
Vapour pressure: No information available.
Relative vapour density: No information available.
Relative density: 1,65 g/cm3 at 20 °C

Water solubility: 500 g/l at 20 °C
Partition coefficient: n No information available.
Octanol/water
Auto-ignition temperature: No information available.
Decomposition temperature: > 460 °C
Viscosity, dynamic: No information available.
Explosive properties: No information available.
Oxidizing properties: No information available
Bulk density 1.000 - 1.200 kg/m3.

9.2. Other information
No further relevant information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Risk of dust explosion.

10.2. Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions
acids
A risk of explosion and/or of toxic gas formation exists with the following substances:
Exothermic reaction with:
Fluorine
Risk of ignition or formation of inflammable gases or vapours with:
nitrogen oxides, potassium dichromate
hydrogen sulphide

10.4. Conditions to avoid
No further relevant information available.

10.5. Incompatible materials
No further relevant information available.

10.6. Hazardous decomposition products
No further relevant information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Nausea, Vomiting.
Acute inhalation toxicity:
Symptoms: mucosal irritations, Cough, Shortness of breath
Causes burns.
Eye irritation:
Causes eye burns.
Causes serious eye damage.
Risk of serious damage to eyes.
Risk of blindness!
Specific target organ toxicity – single exposure:
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity – repeated exposure:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard:
No aspiration toxicity classification.
Further information:
Quantitative data on the toxicity of this product are not available.
Other information

The following applies to sulphides in general: release of hydrogen sulphide (CNS disorders, impaired locomotors coordination, cardiovascular disorders) in the stomach possible after swallowing.
Further data:
Other dangerous properties cannot be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity: No further relevant information available.
Terrestrial toxicity:
No further relevant information available.

12.2. Persistence and degradability

No further relevant information available.

12.3. Bio-accumulative potential

General notes: Do not allow product to reach ground water, water course or sewage system.

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

Not applicable.

12.6. Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendation
Contact manufacturer for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue:
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste Codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Uncleaned packaging:
Recommendation: cleansing may be taken for refuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

SECTION 14: Transport information

14.1. UN number
ADR, IMDG, IATA: 3262

14.2. UN proper shipping name
ADR: 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE), 8, II
IMDG, IATA: 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE), 8, II

14.3. Transport hazard class(es)
ADR:

Class: 8 CORROSIVE SOLID, BASIC, INORGANIC
Label: 8
IMDG, IATA:

Class: 8 CORROSIVE SOLID, BASIC, INORGANIC

14.4. Packing group
ADR, IMDG, IATA: II

14.5. Environmental hazards
Marine pollutant: yes Symbol (fish and tree)
Special marking (ADR): Symbol (fish and tree)
Special marking (IATA): Symbol (fish and tree)

14.6. Special precautions for user
Warning: Miscellaneous dangerous substances and articles.
Danger code (Kemler): 80
EMS number: F-A S-B

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:
ADR
Excepted quantities (EQ): E1
Limited quantities (LQ) LQ27
Transport category 3
Tunnel restriction code E
UN "Model Regulation": UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (POTASSIUM(POLY)SULFIDE), 8, II

SECTION 15: Regulatory information

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

National regulations:
Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

15.2. Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

16.1. Wording of R und H phrases

Relevant phrases
(serves as the explanation for only the hazard and risk phrases noted in the MSDS, e.g. in chapter 3)
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life

R31 Contact with acids liberates toxic gas.
R34 Causes burns.
R50 Very toxic to aquatic organisms.

16.2. Further information

The information provided in this material safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warrant or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This information shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.