Safety data sheet
according to 1907/2006/EC, Article 31

Heimerle + Meule
Heimerle + Meule Group

Printing date: 28.07.2023 *Version number 11 (replaces version 10)* *Revision: 28.07.2023*

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

· **1.1 Product identifier**

· **Trade name:**

Potassium silver cyanide 54%

Kaliumsilbercyanid 54%

· **Article number:** 86900415

· **CAS Number:**
506-61-6
· **EC number:**
208-047-0

· **Index number:**
006-007-00-5

· **Registration number** 01-2120753799-33-0001

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Not approved for private consumers.

· **Application of the substance / the mixture**

Pure chemical substance
Electroplating material

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

Heimerle + Meule GmbH
Dennigstrasse 16
D-75179 Pforzheim

Telefon +49 (0) 7231 940-0
Telefax +49 (0) 7231 940-2199
www.heimerle-meule.com

· **Further information obtainable from:**
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Abteilung BASU - Bau/Arbeitssicherheit/Umwelt
Department BASU - Construction / Occupational Safety / Environment
sds@heimerle-meule.com

IATA - 24h Emergency Contact - IATA - 24h Emergency Contact -
(Dangerous goods emergency number)
+49 172 739 6970
· **1.4 Emergency telephone number:**

DEUTSCHLAND - GERMANY:
Vergiftungs-Informations-Zentrale Freiburg, ++49 761 19240 (24 h)
(Poisoning Information Center)
GREAT BRITAIN:
National Poisons Information Service +44 121 507 4123
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111 - In Scotland: NHS 24 - dial 111
IRELAND
+353 1 809 2166 (7 Days 8 am -10 pm)
Healthcare Professionals: +353 1 809 2566
ITALY:
Istituto Superiore di Sanità (ISS) +3906499906140
Centro Antiveleni
Bergamo: +39 800 883300

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Firenze +39 055 794 7819
Milano: +39 055 794 7819
Roma +39 06 68593726
Roma +39 06 49978000
Roma +39 06 3954343
KROATIA - REPUBLIKA HRVATSKA:
(+385) 01 2348 342
ESTLAND - ESTONIA:
Tervisemeti Mürgistusteabekeskuse
National (24/7): 16662
(+372) 7943 794
LETTLAND - LATVIA:
Valsts Toksikoloģijas centrs, Saindēšanās un zāļu informācijas centrs,
(24h) 112
(24h) +371 67042473
LITAUEN - LIETUVOS RESPUBLIKA:
Poison Information Bureau (24/7), Tel.: +8 5 236 20 52
Apsinuodijimų informacijos biuras
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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

corrosion

Met. Corr.1 *H290 May be corrosive to metals.*
Skin Corr. 1A *H314 Causes severe skin burns and eye damage.*
Eye Dam. 1 *H318 Causes serious eye damage.*

environment

Aquatic Acute 1 *H400 Very toxic to aquatic life.*
Aquatic Chronic 1 *H410 Very toxic to aquatic life with long lasting effects.*

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS05 GHS09

· **Signal word** *Danger*
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

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· **Precautionary statements**

P273	Avoid release to the environment.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
EUH032 Contact with acids liberates very toxic gas.
EUH071 Corrosive to the respiratory tract.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
CAS: 506-61-6 potassium dicyanoargentate
· **Identification number(s)**
· **EC number:** 208-047-0
· **Index number:** 006-007-00-5
· **Description:** Pure substance

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Personal protection for the First Aider.
Take affected persons out of danger area and lay down.
Involve doctor immediately after a accident or unwell
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Call a doctor immediately.
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
A person vomiting while laying on their back should be turned onto their side.
Rinse out mouth and then drink plenty of water.
· **Information for doctor:** Cyanides poisoning
· **4.2 Most important symptoms and effects, both acute and delayed**
Cyanosis
Cyanides poisoning

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· ***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:***
Fire-extinguishing powder
Extinguishing powder. Do not use water.
Use fire extinguishing methods suitable to surrounding conditions.
· ***For safety reasons unsuitable extinguishing agents:***
Carbon dioxide

Water

Water with full jet
· ***5.2 Special hazards arising from the substance or mixture***
Formation of very toxic gases is possible during heating or in case of fire.
Hydrogen cyanide (HCN)
· ***5.3 Advice for firefighters***
· ***Protective equipment:***
Wear fully protective suit.
Mount respiratory protective device.

Wear self-contained respiratory protective device.

Beware: Filter masks provide protection for a short period of time only. They should only be used in exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages and fire
· ***Additional information***
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Mount respiratory protective device.
Mount respiratory protective device with combination filter B / P3
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective clothing.
· ***6.2 Environmental precautions:***
Keep contaminated washing water and dispose of appropriately.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· ***6.3 Methods and material for containment and cleaning up:***
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Any unavoidabledeposit of dust must be regularly removed.
Thorough dedusting.
Keep receptacles tightly sealed.
he usual precautionary measures are to be adhered to when handling chemicals.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
· **Information about fire - and explosion protection:** *No special measures required.*

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Observe official regulations on storing packagings .
Observe official regulations on storing packagings .
Prevent any seepage into the ground.
· **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from foodstuffs.
· **Further information about storage conditions:**
This product is hygroscopic.
Store receptacle in a well ventilated area.
Keep container tightly sealed.
Store under lock and key and out of the reach of children.
· **Storage class:** *8 B*
· **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 506-61-6 potassium dicyanoargentate	
AGW (Germany)	Long-term value: 0.01E mg/m³ 2(I);DFG,EU,10

· **Regulatory information** *AGW (Germany): TRGS 900*
· **Additional information:** *The lists valid during the making were used as basis.*

· **8.2 Exposure controls**
· **Appropriate engineering controls** *No further data; see section 7.*
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Do not eat, drink, smoke or sniff while working.
Storing food in the working area is prohibited.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
According to EC Directive 89/686/EEC

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· ***Respiratory protection:***
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Beware: Filter masks provide protection for a short period of time only. They should only be used in exceptional cases, that is if a small amount of the substance has spilled out or in order to fight spillages and fire.
according EN 14387
according to EN 143
· ***Recommended filter device for short term use:***
Filter P3
Combination filter B-P3
· ***Hand protection***

Protective gloves

according to EN 374
To avoid skin problems reduce the wearing of gloves to the required minimum.
Only use chemical-protective gloves with CE-labelling of category III.
Sensibilisation by the components in the glove materials is possible.
Check the permeability prior to each anewed use of the glove.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Prior to working with gloves the rubbing in with tanniferous skin-protecting agents for the avoidance of skin softening due to perspiration is recommended.
· ***Material of gloves***
Natural rubber, NR
Recommended thickness of the material: ≥ 0.5 mm
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.35 mm
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 3).
Value for the permeation: Level ≤ 3
· ***Not suitable are gloves made of the following materials:***
Leather gloves
Strong material gloves
· ***Eye/face protection***

Tightly sealed goggles

according to EN 166
· ***Body protection:***
Alkaline resistant protective clothing

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Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Solid
· **Colour:**	White
· **Odour:**	Like bitter almonds
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	~350°C (~662°F)
· **Boiling point or initial boiling point and boiling range**	Undetermined.
· **Flammability**	Product is not flammable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH**	9.6 (14%)
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **Dynamic:**	Not applicable.
· **Solubility**	
· **water at 20°C (68°F):**	143 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density at 20°C (68°F):**	2.36 g/cm³ (19.69 lbs/gal)
· **Relative density at 20°C (68°F)**	3.5 g/cm³ (29.21 lbs/gal)
· **Vapour density**	Not applicable.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Crystalline
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Molecular weight**	199 g/mol
· **Change in condition**	
· **Evaporation rate**	Not applicable.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void

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· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	May be corrosive to metals.
· **Desensitised explosives**	Void

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Contact with acids releases very toxic gases
Reacts with acids, alkalis and oxidising agents.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** Acids
· **10.6 Hazardous decomposition products:** Hydrogen cyanide (prussic acid)

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
Dermal	LD50	mg/kg (Rat)

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.
· **Serious eye damage/irritation** Causes serious eye damage.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties** Substance is not listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment** Not applicable.
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Remark:** Very toxic for fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Water hazard class 3 (German Regulation - AwSV): extremely hazardous for water.
Very toxic for aquatic organisms

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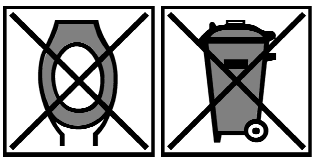
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.
· **Waste disposal key:**
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Packaging which is uncleaned or soiled with product remains is to be treated like the product itself
Packaging free of product remains is to be supplied refuse for recycling. Only if no adequate collecting system is available, they may be disposed of through the domestic rubbish
· **Recommended cleansing agents:** *Water, without cleansing agents.*

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SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	*UN1759*
· **14.2 UN proper shipping name**	
· **ADR**	*UN1759 CORROSIVE SOLID, N.O.S. (potassium dicyanoargentate), ENVIRONMENTALLY HAZARDOUS*
· **IMDG, IATA**	*CORROSIVE SOLID, N.O.S. (potassium dicyanoargentate)*
· **14.3 Transport hazard class(es)**	
· **ADR**	

· **Class**	*8 Corrosive substances.*
· **Label**	*8*
· **IMDG, IATA**	

· **Class**	*8 Corrosive substances.*
· **Label**	*8*
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	*II*
· **14.5 Environmental hazards:**	*Environmentally hazardous substance, solid*

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· **Marine pollutant:**	Yes (P)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Stowage Category**	A
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **Transport category**	2
· **IMDG**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **IATA**	
· **Remarks:**	24h emergency contact - (Dangerous goods emergency number) +49 172 739 6970
· **UN "Model Regulation":**	UN 1759 CORROSIVE SOLID, N.O.S. (POTASSIUM DICYANOARGENTATE), 8, II, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

· **GADSL - Global Automotive Declarable Substance List** Substance is not listed.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **Seveso category**
H1 ACUTE TOXIC
E1 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

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· ***National regulations:***

· ***Technical instructions (air):***

Class	Share in %
I	100.0

· ***Waterhazard class:*** .

· ***Other regulations, limitations and prohibitive regulations*** -
· ***15.2 Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Reasons for revise***
If necessary, this saftey data sheet can revised according to legal guidelines.

Our current version for your reference is available on our website
www.heimerle-meule.com

· ***Department issuing SDS:***

Abteilung BASU - Bau/Arbeitssicherheit/Umwelt
Department BASU - Construction / Occupational Safety / Environment

sds@heimerle-meule.com
.
· ***Contact:***
Herr Thomas Knuth
thomas.knuth@heimerle-meule.com
sds@heimerle-meule.com
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
AwSV: Ordinance on facilities for handling water-polluting substances (German regulation).
TRGS: Technical rules for hazardous substances (German regulation)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
P: Marine Pollutant
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
· **** Data compared to the previous version altered.***