

SECTION 1: Identification

1.1. Identification

Product form	: Mixture
Trade name	: Cobalt-Based Alloys Powder
Article number	: Fusionis Disc Modelstar S MoguCast EH MoguCera C MoguCera C Disc Starbond Co Starbond CoS Starbond CoS Disc basic Starbond LFC Starbond Easy Starbond Easy Disc Starbond Lot Starwire Cleon KB Cleon MG ecoNEM star Novobond Easy Disc NovoCera C Disc NovoChrom C NovoChrom FH CORiTEC CoCr Mo Disc

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Medical device
Recommended use	: Medical device
Restrictions on use	: Restricted to professional users

1.3. Supplier

Manufacturer/Supplier
S&S Scheftner GmbH
Dekan-Laist-Str. 52
Mainz, 55129
Deutschland
T +49 (0) 6131 94 71 40
service@scheftner.dental

Email competent person
sds@kft.de

Importer
MEDAGENT, Inc.
264 Lafayette Road, Suite 7
Portsmouth, NEW HAMPSHIRE 03801
UNITED STATES
T 603 - 5702039

1.4. Emergency telephone number

Emergency number	: For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)
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Cobalt-Based Alloys Powder

Safety Data Sheet

according to US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitization, Category 1	H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Germ cell mutagenicity Category 2	H341	Suspected of causing genetic defects
Carcinogenicity Category 1B	H350	May cause cancer
Reproductive toxicity Category 1B	H360	May damage fertility or the unborn child
Combustible Dust		May form combustible dust concentrations in air
Full text of H statements : see section 16		

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: May form combustible dust concentrations in air
H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H360 - May damage fertility or the unborn child

Precautionary statements (GHS US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Cobalt-Based Alloys Powder

Safety Data Sheet

according to US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
cobalt	CAS-No.: 7440-48-4	50 – 70	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Repr. 1B, H360

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: D powder. Sand.
Unsuitable extinguishing media	: Water. Carbon dioxide (CO2). Foam. Chemical powder.

5.2. Specific hazards arising from the chemical

Explosion hazard	: Avoid formation of dust. Potential dust explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Metal oxides.

Cobalt-Based Alloys Powder

Safety Data Sheet

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations. In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid dust formation. Do not breathe dust.
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6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust.
Measures in case of dust release	: Avoid dust formation.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid sub-soil penetration.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Notify authorities if product enters sewers or public waters.
Other information	: Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Avoid breathing dust.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: No specific measures are necessary. Store locked up.
Incompatible products	: Strong acids. Oxidizing agent. Strong bases.
Information about storage in one common storage facility	: Keep away from food, drink and animal feeding stuffs.

Cobalt-Based Alloys Powder

Safety Data Sheet

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cobalt-Based Alloys Powder	
USA - OSHA - Occupational Exposure Limits	
Local name	Total Dust (Inert or Nuisance Dust)
OSHA PEL (TWA) [1]	15 mg/m ³
OSHA PEL (TWA) [2]	50 mppcf
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts
cobalt (7440-48-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Cobalt and inorganic compounds, as Co
ACGIH OEL TWA	0.02 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm func changes. Notations: DSEN; RSEN; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	COBALT AND INORGANIC COMPOUNDS
BEI (BLV)	15 µg/l Parameter: Cobalt - Medium: urine - Sampling time: End of shift at end of workweek - Notations: Ns
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Cobalt metal, dust, and fume (as Co)
OSHA PEL (TWA) [1]	0.1 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Exposure limit values of other components

Chromium (7440-47-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Metallic chromium, as Cr(0)
ACGIH OEL TWA	0.5 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Resp tract irr
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	CHROMIUM
BEI (BLV)	0.7 µg/l Parameter: Total chromium - Medium: urine - Sampling time: End of shift at end of workweek - Notations: Pop
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Chromium

Cobalt-Based Alloys Powder

Safety Data Sheet

according to US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

OSHA PEL (TWA) [1]	0.5 mg/m ³ (II) compounds (as Cr) 0.5 mg/m ³ (III) compounds (as Cr) 1 mg/m ³ metal and insol. salts (as Cr)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Molybdenum (7439-98-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Molybdenum, metal and insoluble compounds, as Mo
ACGIH OEL TWA	10 mg/m ³ (I - Inhalable particulate matter) 3 mg/m ³ (R - Respirable particulate matter)
Remark (ACGIH)	TLV® Basis: LRT irr
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Molybdenum (as Mo)
OSHA PEL (TWA) [1]	5 mg/m ³ Soluble compounds 15 mg/m ³ Insoluble Compounds - Total dust
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Silicon (7440-21-3)	
USA - OSHA - Occupational Exposure Limits	
Local name	Silicon
OSHA PEL (TWA) [1]	15 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Manganese (7439-96-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Manganese, elemental and inorganic compounds, as Mn
ACGIH OEL TWA	0.02 mg/m ³ (R - Respirable particulate matter) 0.1 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Manganese
OSHA PEL (Ceiling)	5 mg/m ³ compounds (as Mn) 5 mg/m ³ fume (as Mn)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls
Environmental exposure controls

- : Ensure good ventilation of the work station. Provide local exhaust or general room ventilation.
- : Avoid release to the environment.

Cobalt-Based Alloys Powder

Safety Data Sheet

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8.3. Individual protection measures/Personal protective equipment

Hand protection:
Chemically resistant protective gloves. Nitrile rubber. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear
Eye protection:
Wear closed safety glasses. EN 166
Skin and body protection:
Wear suitable protective clothing. EN ISO 13688
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Dust formation: dust mask. P3. EN 143. . Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

Other information:

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Color	: Gray
Odor	: odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: Not applicable
Flammability (solid, gas)	: Dust may form flammable mixture with air
Vapor pressure	: Not applicable
Relative vapor density at 20°C	: Not applicable
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosion limits	: No data available
Explosive properties	: Product is not explosive.
Oxidizing properties	: Non oxidizing material.

9.2. Other information

No additional information available

Cobalt-Based Alloys Powder

Safety Data Sheet

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

Strong acids. Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Cobalt-Based Alloys Powder	
ATE US (oral)	828.441 mg/kg body weight
cobalt (7440-48-4)	
LD50 oral rat	550 mg/kg body weight (OECD 425 method)
LC50 Inhalation - Rat (Dust/Mist)	< 0.05 mg/l/4h (OECD 436 method)
ATE US (oral)	550 mg/kg body weight

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.

cobalt (7440-48-4)	
IARC group	2B - Possibly carcinogenic to humans, 2A - Probably carcinogenic to humans

Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified
Viscosity, kinematic	: Not applicable
Symptoms/effects after inhalation	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.

Cobalt-Based Alloys Powder

Safety Data Sheet

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Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long lasting harmful effects to aquatic life.

cobalt (7440-48-4)	
LC50 - Fish [1]	> 100 (96h; Danio rerio; OECD 203)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202 method)
ErC50 algae	270 mg/l (70 h, Selenastrum capricornutum, (OECD 201 method))

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Disposal must be done according to official regulations. Do not dispose of with domestic waste.
Do not discharge into drains or the environment.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

Cobalt-Based Alloys Powder

Safety Data Sheet

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IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory


Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

cobalt, Powder	CAS-No. 7440-48-4	50 – 70%
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15.2. International regulations

No additional information available

15.3. US State regulations

 **WARNING:** This product can expose you to Chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
cobalt(7440-48-4)	U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

Cobalt-Based Alloys Powder

Safety Data Sheet

according to US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

Revision date : 10/18/2022
Data sources : European Chemicals Agency, <http://echa.europa.eu/>. Supplier Safety Data Sheet.
Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark 3
D-64347 Griesheim

Phone: +49 6155-8981-400
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SDS Service: +49 6155 8981-522

Contact person : Dr. Andreas Kretzschmar

Full text of H-phrases	
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration

Cobalt-Based Alloys Powder

Safety Data Sheet

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Abbreviations and acronyms	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

KFT SDS US 00

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.