



Safety Data Sheet
acc. to OSHA HCS

Printing date 01/10/2019

Reviewed on 01/10/2019

1 Identification

Product identifier

Trade name: Ceramill Sintron

Application of the substance / the mixture Auxiliary for dental technology

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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2 Hazard(s) identification

Classification of the substance or mixture



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 1B H350 May cause cancer. Route of exposure: Inhalation.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Additional information:

Note: This product as sold is a solid material. If used properly in a milling machine, no exposure to hazardous components should occur. If dust is generated and exposure occurs, the following classification and labeling apply:

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

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Hazard pictograms

GHS07 GHS08

Signal word Danger**Hazard-determining components of labeling:**

cobalt

Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer. Route of exposure: Inhalation.

Suspected of damaging fertility or the unborn child.

Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Obtain special instructions before use.

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

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

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

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *2

Fire = 0

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.

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vPvB: Not applicable.

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3 Composition/information on ingredients**Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

7440-48-4 cobalt	60-70%
7440-47-3 chromium	20-30%
7439-98-7 molybdenum	1-10%

4 First-aid measures**Description of first aid measures****General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed**

Most Important symptoms and effects, both acute and delayed: May cause skin and eye irritation. Harmful if swallowed. May cause allergic skin reaction (sensitization.) May cause asthma symptoms or difficulty breathing. Inhalation of fumes may cause metal fume fever with flu-like symptoms. Prolonged inhalation of dust or fumes from this product may cause perforation of the nasal septum and damage to the lungs. Suspected of damaging fertility. May cause cancer. Risk of cancer depends on duration and level of exposure.

Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required for breathing difficulty or asthma-like symptoms.

5 Fire-fighting measures**Extinguishing media****Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.**For safety reasons unsuitable extinguishing agents:** Water**Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters

Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing.

Protective equipment: Do not inhale explosion gases or combustion gases.**Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid formation of dust.

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Use respiratory protective device against the effects of fumes/dust/aerosol.

Environmental precautions:

Prevent product from entering drains. Do not flush into surface water or storm drains. Notify authorities as required by local, state and federal regulations.

Methods and material for containment and cleaning up:

Collect dry material. If dust is generated in the processing of the product, avoiding the creation of airborne dust. Nonsparking tools should be used. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air.). Place in a suitable container for disposal.

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.

Protective Action Criteria for Chemicals**PAC-1:**

7440-48-4 cobalt: 0.18 mg/m³

7440-47-3 chromium: 1.5 mg/m³

7439-98-7 molybdenum: 30 mg/m³

PAC-2:

7440-48-4 cobalt: 2 mg/m³

7440-47-3 chromium: 17 mg/m³

7439-98-7 molybdenum: 330 mg/m³

PAC-3:

7440-48-4 cobalt: 20 mg/m³

7440-47-3 chromium: 99 mg/m³

7439-98-7 molybdenum: 2,000 mg/m³

7 Handling and storage**Handling:****Precautions for safe handling**

Avoid breathing dust. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wear impervious gloves, chemical safety goggles and appropriate protective clothing when handling this material. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep containers closed when not in use. Keep product away from heat, flames and other sources of ignition. Potential dust explosion hazard - use good housekeeping to prevent accumulation of dust in the work area. Dry powders can build static electricity charges when subjected to friction or transfer and in mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.

Conditions for safe storage, including any incompatibilities**Storage:**

Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with acids.

Further information about storage conditions:

Store in dry conditions.

Store receptacle in a well ventilated area.

Keep receptacle tightly sealed.

Keep away from heat and all sources of ignition.

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Specific end use(s) No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical systems:** No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:****7440-48-4 cobalt**PEL Long-term value: 0.1* mg/m³
as Co; *for metal dust and fumeREL Long-term value: 0.05 mg/m³
as Co; metal dust & fumeTLV Long-term value: (0.02) NIC-0.02* mg/m³
*inh. fraction; NIC-Skin, DSEN, RSEN, BEI**7440-47-3 chromium**PEL Long-term value: 1 mg/m³REL Long-term value: 0.5* mg/m³
metal+inorg.compds.as Cr; See Pocket Guide App. CTLV Long-term value: 0.003 0.5** mg/m³
inh. fraction, *as Cr(III), **metal**7439-98-7 molybdenum**PEL Long-term value: 15* mg/m³
Total dust, as MoTLV Long-term value: 10 3** mg/m³
as Mo; *inhalable fraction ** respirable fraction**Ingredients with biological limit values:****7440-48-4 cobalt**BEI 15 µg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Cobalt (background)1 µg/L
Medium: blood
Time: end of shift at end of workweek
Parameter: Cobalt (background, semi-quantitative)**Exposure controls**

Ventilation: Use with adequate general or local exhaust ventilation to minimize exposure levels. Control releases to the environment. Use explosion-proof equipment where required. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Respiratory Protection: Use an approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to local regulations for specific standards where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with applicable regulations and good industrial hygiene practice. Follow 29 CFR 1910.1025, 1910.1018, and 1910.1029 for specific respiratory protection requirements when working with the applicable compounds.

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Personal protective equipment:**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Wash hands before breaks and at the end of work.

Keep away from foodstuffs, beverages and feed.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands: Protective gloves

Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties**General Information****Appearance:**

Form: Solid

Color: Silver grey

Odor: Odorless

Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.

Upper: Not determined.

Vapor pressure: Not determined.

Density at 20 °C (68 °F): 7.9 g/cm³ (65.9255 lbs/gal)

Relative density Not determined.

Vapor density Not determined.

Evaporation rate Not applicable.

Solubility in / Miscibility with

Water: Insoluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not applicable.

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Kinematic:
Other informationNot determined.
No further relevant information available.**10 Stability and reactivity****Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:**

Toxic metal oxide smoke

Poisonous gases/vapors

11 Toxicological information**Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

Other information (about experimental toxicology):Cobalt: Oral rat LD50: 550 mg/kg, inhalation rat LC50 \leq 0.05 mg/L, dermal rat LD50 > 2000 mg/kg

Chromium: Oral rat LD50 >5000 mg/kg (read across), inhalation rat LC50 > 5.41 mg

Additional toxicological information:

Germ Cell Mutagenicity: Chromium: Metallic chromium tested negative in an in-vitro mammalian cell transformation test. Molybdenum: There is no information on molybdenum but sodium molybdate was negative in a chromosome aberration assay. This product is not expected to present a risk of genetic damage.

Carcinogenicity: Cobalt and cobalt compounds are classified by IARC as possibly carcinogenic to humans (Group 2B). Molybdenum has caused lung cancer in studies with laboratory animals.

Reproductive Toxicity: Cobalt: In a 15 gestation study, rats were given 25, 50 and 100 mg/kg of cobalt powder. It was concluded that cobalt administered by gavage up to 100 mg/kg was not embryotoxic or teratogenic.

Specific Target Organ Toxicity:

Single Exposure: Cobalt has been shown to cause dermatitis in humans.

Repeat Exposure: Cobalt: Workers exposed to cobalt in excess of 0.1 mg/m³ showed symptoms of coughing, wheezing, shortness of breathing, and lung damage.**Carcinogenic categories****IARC (International Agency for Research on Cancer)**

7440-48-4 cobalt: 2B

7440-47-3 chromium: 3

NTP (National Toxicology Program)

7440-48-4 cobalt: R

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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Waste treatment methods****Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****UN-Number**

DOT, ADR, ADN, IMDG, IATA Void

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA Void

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA Class Void

DOT, ADR, ADN, IMDG, IATA Class Void

DOT, ADR, IMDG, IATA Class Void

DOT, ADR, IMDG, IATA Class Void

Environmental hazards:**Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** Void

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15 Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture**
Sara**Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

7440-48-4 cobalt

7440-47-3 chromium

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Chemicals known to cause cancer:

7440-48-4 cobalt

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenic categories**EPA (Environmental Protection Agency)**

7440-47-3 chromium: D

TLV (Threshold Limit Value established by ACGIH)

7440-48-4 cobalt: A3

7440-47-3 chromium: A4

7439-98-7 molybdenum: A3

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Hazard-determining components of labeling:

cobalt

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**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.

Training hints

Employees who use the product have to be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

Date of preparation / last revision 01/10/2019 / -**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 1B: Carcinogenicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
