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

- · 1.1 Product identifier
- · Trade name: Disposable Desiccant Cartridge
- · Article number: F42048-0065, F42048-0100
- 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · Application of the substance / the mixture Absorbent
- · 1.3 Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

Bel-Art Products 661 Route 23 Wayne, NJ 07470 (800) 423-5278

· 1.4 Emergency telephone number: +1 (800) 457-4280

SECTION 2: Hazards identification

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

Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H350i, H360F, H411.

The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H317, H334, H350, H360.

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



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

Repr. 1 H360: May damage fertility or the unborn child



Carc. 1 H350: May cause cancer.



health hazard

Carc. 1B H350i May cause cancer by inhalation.

Repr. 1B H360F May damage fertility.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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(Contd. of page 1)

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

R49-60-61: May cause cancer by inhalation. May impair fertility. May cause harm to the unborn child.



N; Dangerous for the environment

R51/53:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

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

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS).





· Signal word Danger

Hazard-determining components of labelling:

cobalt dichloride

· Hazard statements

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H317, H334, H350, H360.

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H350i, H360F, H411.

H317: May cause an allergic skin reaction.

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

H350 May cause cancer.

H360: May damage fertility or the unborn child.

H350i May cause cancer by inhalation.

H360F May damage fertility.

H411 Toxic to aquatic life with long lasting effects.

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· Precautionary statements

The following Precautionary Statements are applicable only to the OSHA GHS regulations and not the specific CLP regulation: P261, P302+P352.

P261 Avoid breathing dust.

P281 Use personal protective equipment as required.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of water.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Additional information:

Contains cobalt dichloride. May produce an allergic reaction.

Restricted to professional users.

- · Hazard description:
- · WHMIS-symbols:

D2A - Very toxic material causing other toxic effects



NFPA ratings (scale 0 - 4)



Health = 2Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



*2 Health = *2 ○ Fire = 0

REACTIVITY | Reactivity = 0

- * Indicates a long term health hazard from repeated or prolonged exposures.
- · HMIS Long Term Health Hazard Substances

None of the ingredients are listed.

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

SECTION 3: Composition/information on ingredients

- · 3.2 Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

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cobalt dichloride	< 1%
 ▼ T Repr. Cat. 2 R49-60; ▼ Xn R22-68; ▼ Xn R42/43; ▼ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F ◆ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ↑ Acute Tox. 4, H302; Skin Sens. 1, H317 	- 170

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: No special measures required.
- · After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

· After skin contact:

Unlikely route of exposure.

Brush off loose particles from skin.

Immediately wash with water and soap and rinse thoroughly.

· After eve contact:

Unlikely route of exposure.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders when ingested.

Allergic reactions

· Hazards

Danger of impaired breathing.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

May cause sensitisation by inhalation and skin contact.

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

Treat skin and mucous membrane with antihistamine and corticoid preparations.

Contains cobalt dichloride. May produce an allergic reaction.

If necessary oxygen respiration treatment.

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In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: None.
- 5.2 Special hazards arising from the substance or mixture

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

- 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information No further relevant information available.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

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

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

Particular danger of slipping on leaked/spilled product.

6.2 Environmental precautions:

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

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

· 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

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Avoid breathing dust.

Wash hands before breaks and at the end of work.

- Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

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- · Information about storage in one common storage facility: Store away from foodstuffs.
- · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

o. i control parameters		
· Ingredients with limit values that require monitoring at the workplace:		
112926-00-8 precipitated silica (silica - amorphous)		
PEL (USA)	20mppcf or 80mg/m3 /%SiO2	
REL (USA)	Long-term value: 6 mg/m³ See Pocket Guide App. C	
TLV (USA)	TLV withdrawn	
EL (Canada)	Long-term value: 4* 1,5** mg/m³ Precipitated and gel;*total;**respirable	
EV (Canada)	Long-term value: 10 mg/m³	
7646-79-9 cobalt dichloride		
PEL (USA)	Long-term value: 0,1* mg/m³ as Co; *for metal dust and fume	
REL (USA)	Long-term value: 0,05 mg/m³ as Co; metal dust & fume	
TLV (USA)	Long-term value: 0,02 mg/m³ as Co, BEI	
EL (Canada)	Long-term value: 0,02 mg/m³ as Co; ACGIH 2B	

- **DNELs** No further relevant information available.
- · PNECs No further relevant information available.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale dust / smoke / mist.

Pregnant women should strictly avoid inhalation or skin contact.

· Respiratory protection:

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

Particulate mask should filter at least 99% of airborne particles.

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· Protection of hands:



Protective gloves

Wear protective gloves to handle contents of damaged or leaking units.

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.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses

- · **Body protection:** Protection may be required for spills.
- · Limitation and supervision of exposure into the environment

No further relevant information available.

· Risk management measures

See Section 7 for additional information. No further relevant information available.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Plastic canister with a perforated cloth top containing granular

material

Colour: Blue to pink granular material in a clear amber canister

Odour:Odour threshold:pH-value:Odour threshold:Not determined.Not applicable.

· Change in condition

Melting point/Melting range: 1710 °C (3110 °F) (Silica gel)
Boiling point/Boiling range: 2230 °C (4046 °F) (Silica gel)

Flash point: Not applicable.Flammability (solid, gaseous): Not determined.

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· Auto/Self-ignition temperature: Not determined. · Decomposition temperature: Not determined.

Self-igniting: Product is not self-igniting.

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

· Explosion limits:

Lower: Not determined. Upper: Not determined. · Vapour pressure: Not applicable.

Density at 20 °C (68 °F): 2,1 g/cm3 (17,525 lbs/gal)

· Relative density Not determined. · Vapour density Not applicable. · Evaporation rate Not applicable.

· Solubility in / Miscibility with

Insoluble. water:

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

· Viscosity:

Dynamic: Not applicable. Kinematic: Not applicable.

 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong alkali.

Reacts with strong acids.

Risk of dust explosion if enriched with fine dust in the presence of air.

- · 10.4 Conditions to avoid Moisture.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products:

Possible in traces.

Toxic metal oxide smoke

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SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:
- LD/LC50 values relevant for classification:

7646-79-9 cobalt dichloride

Oral LD50 80 mg/kg (rat)

- Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitisation:

Sensitising effect by skin contact is possible by prolonged exposure.

Sensitising effect through inhalation is possible by prolonged exposure.

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

May cause cancer.

May damage fertility or the unborn child.

Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

Carc. 1B, Repr. 1B

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: Toxic for aquatic organisms
- 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.
- · Ecotoxical effects:
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

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

Toxic for aquatic organisms

Also poisonous for fish and plankton in water bodies.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- vPvB: Not applicable.

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· 12.6 Other adverse effects No further relevant information available.

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. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- · Uncleaned packaging:
- · **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· **DOT** Not Regulated

Classification as a MARINE POLLUTANT is based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.

UN3077

· ADR, IMDG, IATA

· 14.2 UN proper shipping name

 \diamondsuit

Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 kg (11 lb.)

· **DOT** Not Regulated

· ADR 3077 ENVIRONMENTALLY HAZARDOUS

SUBSTANCE, SOLID, N.O.S. (cobalt dichloride)

• IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

SOLID, N.O.S. (cobalt dichloride), MARINE

POLLUTANT

· IATA Environmentally hazardous substance, solid, n.o.s.

(cobalt dichloride)

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(Contd. of page 10) · 14.3 Transport hazard class(es) · DOT · Class Not Regulated · ADR · Class 9 (M7) Miscellaneous dangerous substances and articles. · Label 9 · IMDG, IATA · Class 9 Miscellaneous dangerous substances and articles. · Label · 14.4 Packing group · DOT Not Regulated · ADR, IMDG, IATA · 14.5 Environmental hazards: Product contains environmentally hazardous substances: cobalt dichloride · 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): 90 · EMS Number: F-A,S-F · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: ______ · ADR · Limited quantities (LQ) 5 kg · Excepted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g Transport category · Tunnel restriction code Ε · IMDG · Limited quantities (LQ) 5 kg (Contd. on page 12)

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Code: E1

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· Excepted quantities (EQ)

Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

UN "Model Regulation": UN3077, ENVIRONMENTALLY HAZARDOUS

SUBSTANCE, SOLID, N.O.S. (cobalt dichloride), 9, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65 (California):
- · Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

- **Carcinogenic Categories**
- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer)

112926-00-8 precipitated silica (silica - amorphous) 7646-79-9 cobalt dichloride

2B

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

- · Canada
- · Canadian Domestic Substances List (DSL)

All ingredients are listed.

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· Canadian Ingredient Disclosure list (limit 0.1%)

7646-79-9 cobalt dichloride

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients are listed.

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· Substances of very high concern (SVHC) according to REACH, Article 57

7646-79-9 cobalt dichloride

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

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.

· Relevant phrases

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H350i May cause cancer by inhalation.
- H360F May damage fertility.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- R22 Harmful if swallowed.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R49 May cause cancer by inhalation.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R60 May impair fertility.
- R68 Possible risk of irreversible effects.

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

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

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WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1 Muta. 2: Germ cell mutagenicity, Hazard Category 2 Carc. 1B: Carcinogenicity, Hazard Category 1B

Repr. 1B: Reproductive toxicity, Hazard Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

·Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

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