SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Corporation 4000 Monroe Road Charlotte, NC, 28205 Telephone No.: +1 704 331 7000 **Information of the substance/preparation:** Product Safety 1-704-331-7710 **Emergency tel. number:** +1 800-424-9300 CHEMTREC

Trade name:	**HI Card, MS20003-3, 30-50% RH**
Material number:	248771
Chemical family:	cobalt dichloride on cardboard
Primary product use:	Indicator for air humidity

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Respiratory sensitisation	:	Category 1
Skin sensitisation	:	Category 1
Carcinogenicity (Inhalation)	:	Category 1B
Reproductive toxicity	:	Category 1B

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350i May cause cancer by inhalation.
H360 May damage fertility or the unborn child.

Precautionary statements :

Prevention:

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/ vapours/ spray.

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No additional hazards are known except those derived from the labelling.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : cobalt dichloride on cardboard

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Cobalt dichloride	7646-79-9	0.025 - 0.25

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

General advice : Take off all contaminated clothing immediately.
Show this safety data sheet to the doctor in attendance.

If inhaled : INHALATION: If exposed to excessive levels of dust or fumes, remove to fresh air and get medical attention. Get medical attention if cough and other symptoms develop.
Remove to fresh air.

In case of skin contact : Avoid contact with skin.
Wash area with mild soap and copious amounts of water.
Remove contaminated clothing and shoes.
Wash clothing before reuse.

If skin irritation occurs: Get medical advice/ attention.

In case of eye contact	:	Do not rub affected area. Rinse immediately with plenty of lukewarm water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
If swallowed	:	Do NOT induce vomiting. Call your local Poison Control Center (In the U.S. call 1-800-222-1222).
Most important symptoms and effects, both acute and delayed	:	The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry powder Foam Carbon dioxide (CO2)
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	:	In case of fire can be formed: breathable cobalt/cobalt oxide dust
Further information	:	Wear full protective clothing and NIOSH/MSHA-approved positive pressure, self-contained breathing apparatus.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Wearing appropriate personal protective equipment, contain spill and collect into a suitable container. No special precautions required.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	:	Take up uncontaminated material and pass on for further processing. Take up contaminated material by mechanical means, load

into clean containers, and dispose of in accordance with legal regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage : Keep tightly closed in a dry and cool place.

Technical measures/Precautions : Store in a dry place.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Cobalt dichloride	7646-79-9	TWA	0.02 mg/m3 (Cobalt)	ACGIH
	Further information: Pulmonary function, Asthma, Myocardial effects, Substances for which there is a Biological Exposure Index or Indices (see BEI® section), Confirmed animal carcinogen with unknown relevance to humans, varies			

Engineering measures : none

Personal protective equipment

Respiratory protection : Follow facility guidelines.

Hand protection
Remarks : Wear protective gloves. Wash thoroughly after handling.

Eye protection : Follow facility guidelines in the absence of dusts.

Skin and body protection : Use of proper hygiene practices in the workplace is recommended.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Plates

Colour : blue to pink

Odour	:	none
Odour Threshold	:	Not relevant
pH	:	4.5 - 6
Melting point	:	not determined
Boiling point	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	not determined
Upper explosion limit	:	not tested.
Lower explosion limit	:	not tested.
Combustion number :		not determined
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	not tested.
Density	:	not tested.
Bulk density	:	not tested.
Solubility(ies)		
Water solubility	:	partly soluble, max. 0,25% $CoCl_2$ can be leached out.
Solubility in other solvents	:	not tested.
Partition coefficient: n-octanol/water	:	not determined
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	no data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Flow time	:	Not applicable
Explosive properties	:	no data available

Oxidizing properties	:	not tested.
Sublimation point	:	not determined
Minimum ignition energy	:	not tested.
Particle size	:	not tested.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	None known.
Conditions to avoid	:	Exposure to moisture (hygroscopic).
Incompatible materials	:	Water
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Skin contact
Ingestion

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: no data available
Acute inhalation toxicity	:	Remarks: no data available
Acute dermal toxicity	:	Remarks: no data available

Skin corrosion/irritation

Product:

Remarks: no data available

Serious eye damage/eye irritation

Product:

Remarks: no data available

Respiratory or skin sensitisation

Product:

Remarks: no data available

Carcinogenicity

IARC	Listed
OSHA	Not listed
NTP	Not listed

Experience with human exposure

Product:

General Information : The possible symptoms known are those derived from the labelling (see section 2).

Further information

Product:

Remarks: No data is available on the product itself.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: no data available

M-Factor (Acute aquatic toxicity) : 10

Persistence and degradability

Product:

Biodegradability : Remarks: no data available

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: no data available

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: no data available

Other adverse effects

Product:

Additional ecological information	:	water endangering

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	This product, if discarded as sold, is not a Federal RCRA hazardous waste.
Waste Code	:	NONE
Waste from residues	:	This product, if discarded as sold, is not a Federal RCRA hazardous waste. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.
Contaminated packaging	:	Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT	not restricted
IATA	not restricted
IMDG	not restricted

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

A characteristic waste RQ of 100 lbs applies to this product in a waste form: NONE

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Acute Health Hazard Chronic Health Hazard
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This product contains the chemical or chemicals listed below which are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and the requirements of 40 CFR Part 372:

Cobalt Compounds	Not Assigned	0.25 %
Cobalt	7440-48-4	0.12 %

Clean Water Act

Contains no known priority pollutants at concentrations greater than 0.1%.

The components of this product are reported in the following inventories:

TSCA Listed on TSCA

TSCA list

SECTION 16. OTHER INFORMATION

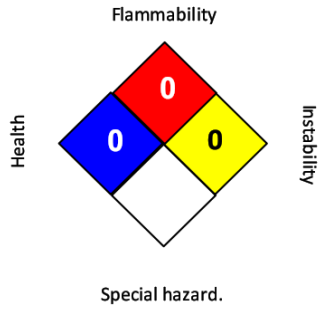
Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations

Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

NFPA:



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