

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

1 Identification

- **Product identifier**
- **Trade name:** Hydrosorb
- **Article number:** AR1249
- **Recommended use and restriction on use**
- **Recommended use:** Anti-moisture agent
- **Restrictions on use:** Contact manufacturer
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Alpha Resources
3090 Johnson Rd
Stevensville, MI. 49127
- **Emergency telephone number:**
ChemTrec.
+(703)527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

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

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**

There are no other hazards not otherwise classified that have been identified.

0 % of the mixture consists of component(s) of unknown toxicity.

- **Label elements**

- **GHS label elements**

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

(Cont'd. on page 2)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 1)

· **Hazard pictograms:**



GHS03 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

cobalt dichloride
magnesium perchlorate

· **Hazard statements:**

H272 May intensify fire; oxidizer.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H335 May cause respiratory irritation.

· **Precautionary statements:**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P221	Take any precaution to avoid mixing with combustibles.
P210	Keep away from heat.
P284	In case of inadequate ventilation wear respiratory protection.
P220	Keep/Store away from clothing/combustible materials.
P261	Avoid breathing dust.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO ₂ , powder or water spray.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

(Cont'd. on page 3)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021





Trade name: Hydrosorb

(Cont'd. of page 2)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7778-18-9	calcium sulphate, natural	50-100%
10034-81-8	magnesium perchlorate	15-25%
	 Ox. Sol. 2, H272  Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
7646-79-9	cobalt dichloride	≤ 2.5%
	 Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360  Acute Tox. 4, H302; Skin Sens. 1, H317	

· **Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
- **After inhalation:**
Supply fresh air.
Seek immediate medical advice.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After skin contact:**
Brush off loose particles from skin.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:**
Asthma attacks
Breathing difficulty
Coughing
Allergic reactions
Irritant to skin and mucous membranes.
Irritant to eyes.
May cause respiratory irritation.
- **Danger:**
Danger of impaired breathing.
Suspected of causing genetic defects.

(Cont'd. on page 4)



Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 3)

May cause cancer.

May damage fertility or the unborn child.

· **Indication of any immediate medical attention and special treatment needed:**

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

Later observation for pneumonia and pulmonary edema.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

Contains cobalt dichloride. May produce an allergic reaction.

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

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

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use water spray, dry chemical, CO₂, or appropriate foam.

· **For safety reasons unsuitable extinguishing agents:** None.

· **Special hazards arising from the substance or mixture**

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

May intensify fire; oxidizer.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information:** Cool endangered product with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**

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

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Take any precaution to avoid mixing with combustibles.

Isolate area and prevent access.

· **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.

· **Methods and material for containment and cleaning up:**

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Cont'd. on page 5)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

See Section 13 for disposal information.

(Cont'd. of page 4)

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
 - Avoid contact with the eyes and skin.
 - Prevent formation of dust.
 - Use only in well ventilated areas.
 - Any deposit of dust which cannot be avoided must be regularly removed.
 - Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
 - Take any precaution to avoid mixing with combustibles.
- **Information about protection against explosions and fires:**
 - Substance/product can reduce the ignition temperature of flammable substances.
 - May intensify fire; oxidizer.
 - Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Provide ventilation for receptacles.
 - Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Do not store together with acids.
 - Store away from flammable substances.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s):** No 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:**

7778-18-9 calcium sulphate, natural

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
EL (Canada)	Long-term value: 10 mg/m ³ inhalable
EV (Canada)	Long-term value: 10 mg/m ³ inhalable

(Cont'd. on page 6)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 5)

LMPE (Mexico)	Long-term value: 10* mg/m ³ *fracción inhalable
7646-79-9 cobalt dichloride	
PEL (USA)	Long-term value: 0.1* mg/m ³ as Co; *for metal dust and fume
REL (USA)	Long-term value: 0.05 mg/m ³ as Co; metal dust & fume
TLV (USA)	Long-term value: 0.02 mg/m ³ as Co, BEI
EL (Canada)	Long-term value: 0.02 mg/m ³ as Co; IARC 2B
LMPE (Mexico)	Long-term value: 0.02 mg/m ³ A3, IBE; como Co

- **Exposure controls**
- **Engineering measures** Provide adequate ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
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.
Avoid contact with the eyes and skin.
- **Engineering controls:**
Take any precaution to avoid mixing with combustibles.
Provide adequate ventilation.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Eye protection:**
Face protection



Safety glasses

- **Body protection:** Impervious protective clothing
- **Limitation and supervision of exposure into the environment** Do not release into any body of water.

(Cont'd. on page 7)



Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Page 7 of 13

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 6)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General information

· Appearance:

Form: Granulate

Color: Blue

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Change in condition:

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Contact with combustible material may cause fire.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

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

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Oxidizer

· Vapor pressure: Not determined.

· Density: Not determined.

· Relative density: Not determined.

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with:

Water: Soluble.

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

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No relevant information available.

10 Stability and reactivity

· Reactivity: No relevant information available.

· Chemical stability: Stable under normal temperatures and pressures.

(Cont'd. on page 8)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 7)

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:**
May intensify fire; oxidizer.
Reacts with strong acids.
Reacts with organic substances.
- **Conditions to avoid:** No relevant information available.
- **Incompatible materials:** Take any precaution to avoid mixing with combustibles.
- **Hazardous decomposition products:**
Oxygen
Toxic metal oxide smoke

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
- 7646-79-9 cobalt dichloride**
- Oral LD50 80 mg/kg (rat)
- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** May cause sensitisation by inhalation and skin contact.
- **Additional toxicological information:**
Carcinogenic if inhaled.
Toxic and/or corrosive effects may be delayed up to 24 hours.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7646-79-9 cobalt dichloride

2B

- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

- **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):**

May cause sensitisation by inhalation and skin contact.
Irritating to eyes, respiratory system and skin.

- **Repeated dose toxicity:** Danger of very serious irreversible effects.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Muta. 2, Carc. 1B, Repr. 1B

- **Germ cell mutagenicity:** Suspected of causing genetic defects.

(Cont'd. on page 9)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 8)

- **Carcinogenicity:** May cause cancer.
- **Reproductive toxicity:** May damage fertility or the unborn child.
- **STOT-single exposure:** May cause respiratory irritation.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Toxic for aquatic organisms
- **Persistence and degradability:** No relevant information available.
- **Behavior in environmental systems**
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Other adverse effects:** No 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. 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.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
 - **DOT**
- UN1481
Product is additionally classified as a MARINE POLLUTANT 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

(Cont'd. on page 10)

Safety Data Sheet








acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 9)

·	greater than 400kg (882 pounds) for a solid.
· ADR, IMDG, IATA	UN1481
· UN proper shipping name	
	Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1.0 kg (2.2 lb).
· DOT, IATA	PERCHLORATES, INORGANIC, N.O.S. (CONTAINS MAGNESIUM PERCHLORATE)
· ADR	1481 PERCHLORATES, INORGANIC, N.O.S. (CONTAINS MAGNESIUM PERCHLORATE), ENVIRONMENTALLY HAZARDOUS
· IMDG	PERCHLORATES, INORGANIC, N.O.S. (CONTAINS MAGNESIUM PERCHLORATE), MARINE POLLUTANT
· Transport hazard class(es)	
· DOT	
	
· Class	5.1 Oxidizing substances
· Label	5.1
· ADR	
 	
· Class	5.1 (O2) Oxidizing substances
· Label	5.1
· IMDG	
 	
· Class	5.1 Oxidizing substances
· Label	5.1
· IATA	
	
· Class	5.1 Oxidizing substances
· Label	5.1

(Cont'd. on page 11)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 10)

· Packing group	II
· DOT, ADR, IMDG, IATA	
· Environmental hazards	Product contains environmentally hazardous substances: cobalt dichloride
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Oxidizing substances
· Danger code (Kemler):	50
· EMS Number:	F-H,S-Q
· Segregation groups	Perchlorates
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 kg On cargo aircraft only: 25 kg
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· 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
· UN "Model Regulation"	UN 1481 PERCHLORATES, INORGANIC, N.O.S. (CONTAINS MAGNESIUM PERCHLORATE), 5.1, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 304 (emergency release notification):**

None of the ingredients are listed.

· **Sections 311/312 (hazardous chemical threshold planning quantity in pounds):**

None of the ingredients are listed.

(Cont'd. on page 12)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 11)

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7646-79-9 cobalt dichloride

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are 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):**

10034-81-8 magnesium perchlorate

NL

· **IARC (International Agency for Research on Cancer):**

7646-79-9 cobalt dichloride

2B

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

None of the ingredients are listed.

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%):**

7646-79-9 cobalt dichloride

· **Canadian Ingredient Disclosure list (limit 1%):**

None of the ingredients are listed.

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.

· **Date of preparation / last revision** 11/24/2015 / -

· **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

EINECS: European Inventory of Existing Commercial Chemical Substances

(Cont'd. on page 13)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 11/24/2015

Reviewed on 9/21/2021

Trade name: Hydrosorb

(Cont'd. of page 12)

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Ox. Sol. 2: Oxidising Solids, Hazard Category 2
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
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
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

• Sources

Website, European Chemicals Agency ([http://http://echa.europa.eu/](http://echa.europa.eu/))
Website, US EPA Substance Registry Services ([http://http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do))
Website, Chemical Abstracts Registry, American Chemical Society (<https://www.cas.org>)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers
SDS Prepared by:
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Tampa, Florida USA 33602-2902
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Website: www.chemtelinc.com