



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier Cobalt(ii) Sulfate Heptahydrate

Other means of identification

SDS number 1UG

Materion Code 1UG

CAS number 10026-24-1

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Advanced Chemicals Inc.

Address 407 N 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States

Telephone 414.212.0257

E-mail advancedmaterials@materion.com

Contact person Noreen Atkinson

Emergency phone number Chemtrec 800.424.9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Sensitization, respiratory	Category 1
Sensitization, skin	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B

Environmental hazards

Hazardous to the aquatic environment, acute hazard	Category 1
Hazardous to the aquatic environment, long-term hazard	Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Harmful if swallowed. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. In case of inadequate ventilation wear respiratory protection. Avoid breathing dust.

Response	Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Cobalt(ii) Sulfate Heptahydrate		10026-24-1	100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician or poison control center immediately.
Skin contact	Not available.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician or poison control center immediately.
Ingestion	Rinse mouth thoroughly. Call a physician or poison control center immediately.
Most important symptoms/effects, acute and delayed	Not available.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water spray.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Decomposition of this product may yield oxides of sulfur and nitrogen.
Special protective equipment and precautions for firefighters	Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Not available.
Methods and materials for containment and cleaning up	Not available.
Environmental precautions	Not available.

7. Handling and storage

Precautions for safe handling	Not available.
Conditions for safe storage, including any incompatibilities	Not available.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Material	Type	Value
Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1)	TWA	0.02 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1)	15 µg/l	Cobalt	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

Other Not available.

Respiratory protection Not available.

Thermal hazards Not available.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Not available.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 1355 °F (735 °C)

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure < 0.0000001 kPa at 25 °C

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 3.71 g/cm³ estimated at 25 °C

Molecular formula	Co-O4-S
Molecular weight	281.09 g/mol
Specific gravity	3.71 at 25 °C

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Not available.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Not available.
Incompatible materials	Not available.
Hazardous decomposition products	Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity

Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Not available.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not available.

12. Ecological information

Ecotoxicity

Product	Species	Test Results
Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 2.67 - 4.57 mg/l, 96 hours
Persistence and degradability	Not available.	
Bioaccumulative potential	Not available.	
Mobility in soil	Not available.	
Other adverse effects	Not available.	

13. Disposal considerations

Disposal instructions	Not available.
Waste from residues / unused products	Not available.
Contaminated packaging	Not available.

14. Transport information

DOT

UN number	UN3077
UN proper shipping name	Environmentally hazardous substances, solid, n.o.s. (Cobalt(ii) Sulfate Heptahydrate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Special precautions for user	Not available.
Special provisions	8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
Packaging exceptions	155
Packaging non bulk	213
Packaging bulk	240

IATA

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Cobalt(ii) Sulfate Heptahydrate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	9L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

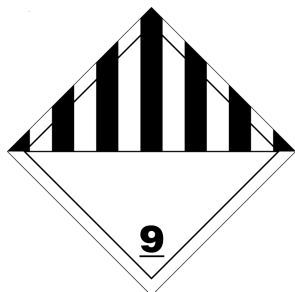
IMDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt(ii) Sulfate Heptahydrate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III

Environmental hazards

Marine pollutant No.
EmS F-A, S-F
Special precautions for user Not available.

DOT; IATA; IMDG



15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Contaminate candidate list

Food and Drug Administration (FDA)

Barred from use in human food

US state regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1) Listed: June 2, 2000

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Cobalt(ii) Sulfate Heptahydrate (CAS 10026-24-1)

16. Other information, including date of preparation or last revision

Issue date	10-24-2016
Revision date	01-12-2018
Version #	02
Disclaimer	Not available.