Material Safety Data Sheet

Cobalt sulphate (CoSO4.7H2O)

SECTION 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

Product Name	**Cobalt sulphate**
Other Names	Sulfuric acid cobalt (II) salt heptahydrate; Cobaltous sulphate heptahydrate
Product Code	N/A
Recommended Use	As a fertilizer ingredient
Restrictions of Use	Refer to Section 15
Company Identification	Samarth Metachem Pvt. Ltd.
CAS No	10026-24-1
Date of SDS Preparation	15 April 2024

SECTION 2: HAZARD IDENTIFICATION

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No	Process Chemicals and Raw Materials
Pictograms	
Signal Word	**DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Acute oral toxicity Cat.4	H302	Harmful if swallowed.
Skin irritation Cat.2	H315	Causes skin irritation.
Eye irritation Cat.2	H319	Causes serious eye irritation.
Respiratory sensitisation Cat.1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation Cat.1	H317	May cause an allergic skin reaction.
Carcinogenicity Cat.2	H351	Suspected of causing cancer.
Reproductive toxicity Cat.2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity repeated exposure Cat.1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment Acute/chronic at1	H400/H410	Very toxic to aquatic life with long lasting effects.

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Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Storage Code	Storage Statement
P405	Store locked up

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

SECTION 3: COMPOSITION INFORMATION

INGREDIENT	CAS No.	COBALT CONTENT
Cobalt (II) sulphate hydrous	10026-24-1	>20%

SECTION 4: FIRST AID MEASURES

Routes of Exposure:	
If in eyes	Flush with plenty of water for several minutes, holding eyelids open if necessary. Remove contact lenses if present and easy to do. If eye irritation persists: Get medical advice/attention.
If on skin	Remove contaminated clothing and wash before reuse. Wash affected area thoroughly with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
If ingested	Rinse mouth. Never give anything by mouth to an unconscious person. If wallowed do not induce vomiting. Call a poison center or doctor/physician if you feel unwell.
If inhaled	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance If needed.

Most important symptoms and effects, both acute and delayed	
Symptoms:	
Eyes	Causes severe eye irritation.
Skin	Causes skin irritation. May cause an allergic skin reaction.
Ingested	Harmful if swallowed. Ingestion of large quantities may lead to diarrhoea, abdominal pain, nausea, drop in body temperature, drop in blood pressure. Toxic effect to kidneys, heart and pancreas.
Inhaled	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Chronic	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Toxic effect to kidneys, heart and pancreas.

SECTION 5: FIRE FIGHTING MEASURES

Hazard Type	Non-Flammable
Hazards from combustion products	Sulphur oxides, May release cobalt dusts and acid fume.
Suitable Extinguishing media	Use extinguishing media suitable for surrounding area.
Precautions for firefighters and special protective clothing	Breathing apparatus and protective gloves.
HAZCHEM CODE	2Z

SECTION 6: ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Wear appropriate protective clothing as detailed in Section 8. Exclude non-essential people from the area.
Environmental precautions:
Avoid from entering drains, waterways or sewers.
Methods and material for containment and cleaning up:
Contain spill and sweep up. Collect and place in sealable containers. Avoid generating dust. Dispose of according to Section 13.

SECTION 7: HANDLING AND STORAGE

Handling	Read label before use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Avoid generating dusts. Use only outdoors or in a well ventilated area. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective clothing as detailed in Section 8. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.
Storage	Store away from incompatible materials listed in Section 10. Keep out of the reach of children. Store locked up. Keep container tightly closed. Store in accordance with NZS 8409; Management of Agrichemicals.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls	If dusts are generated use local extraction to control.

Personal Protection Equipment: 	
Eyes	Wear close fitting safety glasses or goggles to prevent dust getting in eyes. Ensure eye wash facilities should be available.
Skin/Hands	When contact with product is likely, wear protective gloves and overalls
Respiratory	If dusts present wear dust mask.
General	Do not eat, drink or smoke while using this product. Remove protective Clothing and wash daily after work. Contaminated clothing should not be allowed out of the workplace.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Crystals or powder
Colour	Red or rose
Odour	Odourless
Odour Threshold	Not available
pH	(100g.L^{-1} in water, 20ºC) ~4
Boiling Point	Not available
Melting Point	>41ºC (release of crystalline water)
Freezing Point	Not available
Flash Point	Not available
Flammability	Does not ignite
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	1.95 g/cm^3
Bulk Density	1215 kg.m-3
Water Solubility	Soluble

Partition Coefficient	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	735=ºC
Kinematic Viscosity	Not available
Particle Characteristics	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability of Substance	Stable under normal conditions.
Possibility of hazardous reactions	Not available
Conditions to Avoid	No specific conditions. Releases water of crystallisation when heated.
Incompatible Materials	No specific incompatibilities.
Hazardous Decomposition Products	Sulphur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects:	
Swallowed	Harmful if swallowed. Ingestion of large quantities may lead to diarrhoea, abdominal pain, nausea, drop in body temperature, drop in blood pressure. Toxic effect to kidneys, heart and pancreas.
Dermal	Not applicable.
Inhalation	Not triggered.
Eye	Causes severe eye irritation.
Skin	Causes skin irritation. May cause an allergic skin reaction.

Chronic Effects:	
Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure. Toxic effect to kidneys, heart and pancreas.

SECTION 12: ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

Persistence and degradability	No data available.
Bioaccumulation	No data available.
Mobility in Soil	No data available.
Other adverse effects	No data available.

SECTION 13: DISPOSAL INFORMATION

Disposal Method	Dispose of product only by using according to label or at an approved landfill. Recycle where possible. Do not contaminate bodies of water with chemical or empty container. Refer to the Local council bylaws and Land Waste Management Authority. Dissolved material in excess water is normally suitable for disposal in storm water system.
Container Disposal	Rinse containers thoroughly prior to re-use. Otherwise render unusable, and dispose of as hazardous waste.

SECTION 14: TRANSPORT INFORMATION

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

Road, Rail, Sea and Air Transport



UN No	3077
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID N.O.S
Marine Pollutant	Yes
EmS No.	F-A, S-F

Special Provisions	If the product's individual container is below 5kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

SECTION 15: REGULATORY INFORMATION

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020	
EPA Approval Code	Additives, Process Chemicals and Raw Materials (Carcinogenic) - HSR002512
GHS Classification	Acute oral toxicity Cat.4 Skin irritation Cat.2 Eye irritation Cat.2 Respiratory sensitisation Cat.1 Skin sensitisation Cat.1 Carcinogenicity Cat.2 Reproductive toxicity Cat.2 Specific target organ toxicity – repeated exposure Cat.1 Hazardous to the aquatic environment Acute/chronic Cat.1

HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	100kg
Emergency Response Plan (Schedule 5)	100kg
Secondary Containment (Schedule 5)	100kg
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Restrictions of use	None known.