

Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

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

1.1. Product identifier

Product name Cobalt Sulphate

CAS number 10026-24-1 EC number 233-334-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Uses advised against No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier LAPİSCHEM KİMYA SAN. ve TİC. A.Ş.

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info@lapischem.com www.lapischem.com

1.4. Emergency telephone number

National emergency telephone

number

Health Service: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Health hazards Acute Tox. 4 - H302, Serious eye damage/eye irritation.2 -H319, Sensitisation - Respiratory,1B H334, Sensitisation - Skin.1-

H317, Germ cell mutagenicity 2- H341, Carcinogenicity (inhalation)1B -H350i, Reproductive toxicity,1B -H360F, Hazardous to

the aquatic environment – Acute Hazard,1 -H400, Hazardous to the aquatic environment – Chronic Hazard,1 -H410

2.2. Label elements

Hazard pictograms







Signal word Danger

Hazard statements

H302 Harmful if swallowed. H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction..

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SAFETY DATA SHEET COBALT SULPHATE

Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

H341 - Suspected of causing genetic defects H350i - May cause cancer by inhalation

H360F - May damage fertility

H410 - Very toxic to aquatic life with long lasting effects

H400 Very toxic to aquatic life

Precautionary statements P264 Wash contaminated skin thoroughly after handling.

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

P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves / protective clothing / eye protection / face protection.

P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor / physician.

P273 Avoid release to the environment

P301+P312 - IF SWALLOWED: Call a POISON CENTER, a doctor if you feel unwell

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P304+P340 - IF INHALED: Remove person to fresh air and keep 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.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention

Contains Cobalt sulphate

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Cobalt sulphate >%99

CAS number: 10026-24-1 EC number: 233-334-2

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm

and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure

breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to

drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway.

Loosen tight clothing such as collar, tie or belt.

Skin contact Rinse with water.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart.

Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated

clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be

dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation

: Acute toxicity : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. // Chronic toxicity : Signs and symptoms of exposure : Adverse symptoms may include the following: wheezing and breathing difficulties asthma reduced fetal weight

increase in fetal mortality skeletal malformations.

Symptoms/injuries after skin contact : Acute toxicity : May cause an allergic skin reaction. // Chronic toxicity : Adverse symptoms

may include the following: irritation redness reduced fetal weight increase in fetal mortality skeletal malformations. Symptoms/injuries after eye contact: Acute toxicity: Causes serious eye irritation. // Chronic toxicity: Adverse symptoms may include the following: pain or irritation

Symptoms/injuries after ingestion : Acute toxicity : May cause allergy or asthma symptoms or breathing difficulties if inhaled. //

Chronic toxicity: Signs and symptoms of exposure: Adverse symptoms may include the following: reduced fetal weight, increase in fetal mortality, skeletal malformation

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Carbon dioxide, dry powder or waterfog. Use fire-extinguishing media

suitable for the surrounding fire.

Unsuitable extinguishing media None

5.2. Special hazards arising from the substance or mixture

Specific hazards This material is very toxic to aquatic lifewith long lasting effects. Fire water contaminated with this material

must be contained and prevented from being discharged to any waterway, sewer or drain

In case of fire, toxic gases may be formed. Sulphurous gases (SOx). Cobalt oxides

5.3. Advice for firefighters

Protective actions during

firefighting

Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify

appropriate authorities.

Special protective equipment for

firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic

environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers,

waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and

dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Neutralise with alkali. Caution. May generate heat. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordancewith the requirements of

the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See

Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this

safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty

containers.

Advice on general occupationalhygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each workshift and before

eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in accordance with local regulations. Keep only inthe original container. Keep container tightly closed,

in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in theevent of spillage. The storage area floor should be leak-tight,

jointless and not absorbent.

Storage class Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous

materials causing chronic effects

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

DNEL/DMEL (Workers)		
Long-term - local effects, inhalation	0.1052 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	0.025 mg/kg bodyweight/day	
Long-term - local effects, inhalation	0.0166 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0.6 μg/L	
PNEC aqua (marine water)	2.36 μg/L	
PNEC (Sediment)		
PNEC sediment (freshwater)	9.5 mg/kg dwt	
PNEC sediment (marine water)	9.5 mg/kg dwt	
NEC (Soil)		
PNEC soil	10.9 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	0.373 µg/L	

Cobalt sulphate heptahydrate (10026-24-1)		
United Kingdom	Local name	Cobalt and Cobalt compounds (as Co)
United Kingdom	WEL TWA (mg/m³)	0.1 mg/m³

8.2. Exposure controls

Protective equipment







Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensurecontrol measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contactis possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

Hygiene measures Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the

workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection Respiratory protection complying with an approved standard should be worn if a risk assessment indicates

inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable forits intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with

replaceable filter cartridges should comply with European Standard EN136.

Half mask and quarter mask respirators with replaceable filter cartridges should comply with European

Standard EN140.

Environmental exposure controls Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be

checked to ensure they comply with the requirements of environmental protection legislation. Insome cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or

watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Solid, crystalline

Colour Red.Brown
Odour Odourless

Odour threshold Not applicable.

pH : 4,5-5,1 100 g/l 20 °C

Melting point 98°C

Initial boiling point and range No specific test data are available.

Flash point No information available.

Evaporation rate No information required.

Evaporation factor Inconclusive data.

Flammability (solid, gas) Not relevant.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

Relative density 2,03 gr/cm3

Solubility(ies) 376g/l (water)

Viscosity No information required.

Explosive properties No specific test data are available.

9.2. Other information

Other information No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed

storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat. Keep away from sources of ignition - No smoking. Avoid dust formation.

10.5. Incompatible materials

Materials to avoid Strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition

products

 $\label{lem:compose} \mbox{Does not decompose when used and stored as recommended. Thermal decomposition or combustion}$

products may include the following substances: Toxic gases or vapours.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 1.330 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available
Dermal: No data available
Skin corrosion/irritation

Skin - In vitro study

Result: No skin irritation - 15 min

(OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Patch test: - Guinea pig

(OECD Test Guideline 406)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

11.2 Additional Information

Endocrine disrupting properties

Product:

Repeated dose toxicity - Rat - male and female - Oral - 90 Days - NOAEL (No observed adverse effect level) - 3 mg/kg

Symptoms of an acute cobalt intoxication: diarrhoea, loss of appetite, drop in body temperature, drop in blood pressure. Toxic effect on kidneys (proteinuria, anuria), heart, and pancreas

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with

long lasting effects.

LC50/96t/mutu (Fathead minnows) = 3.61 mg/L (CoSO4)

LC50/96h/Salmo gairdneri: 1.5 mg/l (CoCl2)

NOEC: 351.4 mg/L (Fresh water , fish)(Chemical Safety Report)

NOEC: 31802 mg/L (Sea water , fish) (Chemical Safety Report)

EC/LC50: 0.61 mg/L (Fresh water , Invertebrates.) (Chemical Safety Report)

EC/LC50: 2.23 mg/L(Sea water , Invertebrates.) (Chemical Safety Report)

12.2. Persistence and degradability

Persistence and degradability
The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility No data available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This substance is not classified as PBT or vPvB according to current EU criteria.

assessment



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products

wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.

Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be

considered when recycling is not feasible.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using

the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 3077

UN No. (IMDG) 3077

UN No. (ICAO) 3077

UN No. (ADN) 3077

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Cobaltr sulphate)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Cobalt sulphate)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Cobalt sulphate)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAİNS Cobalt sulphate)

14.3. Transport hazard class(es)

ADR/RID class 9

ADR/RID classification code M7

ADR/RID label 9



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

IMDG class 9

ICAO class/division 9

ADN class 9

Transport labels



14.4. Packing group

ADR/RID packing group III
IMDG packing group III
ICAO packing group III
ADN packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-A, S-F

Emergency Action Code 2Z

Hazard Identification Number

(ADR/RID)

Tunnel restriction code (-)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

90

Transport in bulk according to Annex II of MARPOL 73/78 and

Not applicable.

the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Health and Safety at Work etc. Act 1974 (as amended).

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI

2009 No. 1348) (as amended) ["CDG 2009"].

EH40/2005 Workplace exposure limits.



Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (KKDIK) dated 23.06.2017 and numbered 30105.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006

concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as

amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on

classification, labelling and packaging of substances and mixtures (as amended).

Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

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 H350i - May cause cancer by inhalation

H360F - May damage fertility

H410 - Very toxic to aquatic life with long lasting effects

H400 Very toxic to aquatic life

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]

Acute tox. 4; H302 Eye Irrit. 2; H319 Resp. Sens. 1A; H334 Skin Sens. 1; H317 Repr. 1B; H360F Muta. 2; H341 Carc. 1B; H350i Aquatic Acute 1; H400 Aquatic Chronic 1; H410

Issued by Chemical Assessment Specialist: Bora Şen

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Revision 1

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