

Safety Data Sheets



Cobalt green light Pg50

Product code: PS-CO0030

Department: cobalt dry pigments

C.A.S. : 68186-85-6

Section: 1 Identification

Product	Pigment Cobalt Green Light Pg50
Color index	Pigment green 50, CI Constitution #77377 * CPMA # 13-31-3
Substance use	Colorant, artists paint, coatings coloring, inks and plastics.
Company supplying the SDS:	KAMA pigments
Address:	7442 St-Hubert Montréal Québec, H2R 2N3
Phone:	514 272 2173 fax: 514 948 5253
Email:	info@kamapigment.com

Section: 2 Hazard Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

HGS Label Elements

Signal Word

GHS Classification

The product does not require a hazard warning label in accordance with GHS criteria.

Hazard statements

Precautionary Statements

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P281 – Use personal protective equipment as required.
P391 – Collect spillage.
P403 + 233 – Store in a well-ventilated place. Keep container tightly closed."

Section: 3 Composition / Information on Ingredients

CHEMICAL NAME	COMMON NAME AND SYNONYMS	CAS NUMBER	%
Cobalt titanate green spinel	CI Pigment Green 50 CI Constitution #77377 CPMA # 13-31-3	68186-85-6	99-100

Composition comments This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.

Section: 4 First Aid Measures

Inhalation	Remove to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.
Skin contact	Wash the skin immediately with soap and water. Get medical attention if irritation develops or persists.
Eye contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed, do NOT induce vomiting. Give several glasses of water to dilute contents of stomach and call a physician.
Most important symptoms/effects, acute and delayed	Contact with eyes may cause irritation. Inhalation of dusts may cause respiratory irritation. Contact with skin may cause irritation.
General information	If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Where there is a potential for eye exposure to this substance, an eye wash fountain should be provided within the immediate work area for emergency use.

Section: 5 Fire Fighting Measures

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire.
Specific hazards arising from the chemical	None known.
Special protective equipment/precautions for firefighters	Use protective equipment appropriate for surrounding materials.
Fire fighting equipment/instructions	Not a fire hazard.
General fire hazards	This product is not flammable.

Section: 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material.
Methods/materials for containment/cleaning up	Avoid dust formation. Following product recovery, flush area with water. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container.
Environmental precautions	Do not discharge into drains, water courses or onto the ground.

Section: 7 Handling And Storage

Precautions for safe handling	Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Keep formation of airborne dusts to a minimum. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store in closed original container in a dry place. Room temperature - normal conditions. Use care in handling/storage. Keep in properly labelled containers.

Section: 8 Exposure Control/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

METALS	TYPE	VALUE	PERCENT	FORM
Cobalt metal, dust and fumes	PEL	0.1 mg/m ³	24-30%	(as Co) Dust and fume.
Chromium (III) and compounds	PEL	1 mg/m ³	43-50%	(as Cr)
Zinc compounds	none		3 - 10%	(as Zn)

S. ACGIH Threshold Limit Values

METALS	TYPE	VALUE	PERCENT	FORM
Cobalt metal, dust and fumes	TWA	0.02 mg/m ³	24-30%	(as Co)
Chromium (III) and compounds	TWA	0.5 mg/m ³	43-50%	(as Cr)
Zinc compounds	none		3 - 10%	(as Zn)

US. NIOSH: Pocket Guide to Chemical Hazards

METALS	TYPE	VALUE	PERCENT	FORM
Cobalt metal, dust and fumes	TWA	0.05 mg/m ³	24-30%	(as Co) Dust and fume.
Chromium (III) and compounds	TWA	0.5 mg/m ³	43-50%	(as Cr)

Biological limit values

ACGIH Biological Exposure Indices

CONSTITUENTS	VALUE	FORM	DETERMINANT	SPECIMEN
Cobalt metal, dust and fumes	15 µg /l (as Co)	Co	Cobalt	Urine
	1 µg /l (as Co)	Co	Cobalt	Blood

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection	Safety glasses with side-shields.
Skin protection	
Hand protection	Rubber or plastic gloves. PVC disposable gloves. Use impervious gloves.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever work place conditions warrant a respirator's use. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. MSHA/NIOSH respirators approved for dusts TC-21C or NIOSH approved cartridges for Non-oil aerosols, N95, N99, N100 (42 CFR 84).
Thermal hazards	Not applicable.
General hygiene considerations	Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

Section: 9 Physical and Chemical Properties

Physical state	Solid
Form	Powder
Color	Green
Odor	None
Odor threshold	Not applicable
pH	9.6
Melting point/freezing point	Not applicable
Initial boiling point/range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid,gas)	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not applicable
Solubility (water)	Negligible
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Explosive limit	Not applicable
Explosivity	Not applicable

Section: 10 Stability And Reactivity

Reactivity	Not available.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

Section: 11 Toxicological Information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	Contact with skin may cause irritation.
Eye contact	May irritate eyes.
Ingestion	No adverse effects due to ingestion are expected.

Symptoms related to the physical, chemical and toxicological characteristics Product dust may be irritating to eyes, skin and respiratory system.

Information on toxicological effects

Acute toxicity May cause respiratory irritation. May be slightly irritating to skin and eyes.

COBALT TITANATE GREEN SPINEL

	COMPONENTS	SPECIES	TEST RESULTS
Inhalation	LD50	Rat	Not Tested
Oral	LD50	Rat	> 10000 mg/kg

Skin corrosion/irritation Contact with skin may cause irritation.

Serious eye damage/eye irritation May irritate eyes.

Respiratory or skin sensitization

Respiratory sensitization No data available.

Skin sensitization No data available.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not available.

Reproductive toxicity No data available.

Specific target organ toxicity - single exposure No data available.

repeated exposure No data available.

Aspiration hazard No data available.

Chronic effects No data available.

Further information Repeated overexposure to this compound may cause eye, skin and respiratory tract irritation. Some compounds of the metals used in the manufacturing of this material have demonstrated various toxic properties. However, there is no evidence that this material has these toxic characteristics. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished material do not necessarily reflect the properties of the component metals or oxides.

Section: 12 Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	The product is not expected to be biodegradable.
Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Mobility in soil	No data available.
Mobility in general	No data available.
Other adverse effects	None known.

Section: 13 Disposal Considerations

Disposal instructions	All wastes must be handled in accordance with local, state and federal regulations.
Hazardous waste code	Not regulated.
Waste from residues/unused product	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section: 14 Transport Information

DOT Not regulated as dangerous goods.
 IATA Not regulated as dangerous goods.
 IMDG Not regulated as dangerous goods.
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 Not available.

Section: 15 Regulatory Information

IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans. (Group 2B, Monograph #52).

US federal regulations

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

SARA 311/312 Hazardous chemical

SARA 313 (TRI reporting)

CHEMICAL NAME

Cobalt compound

Chromium compound

Zinc compound

CAS NUMBER	% BY WT.
N/A	100
N/A	100
N/A	100

Other federal regulations

Clean Air Act (CAA) Section 112

Hazardous Air Pollutants (HAPs) List

Accidental Release Prevention (40 CFR 68.130)

Cobalt compound (CAS N/A)
 Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

US - Pennsylvania RTK - Hazardous Substances:

Cobalt compound (CAS N/A)
 All compounds of this substance are considered environmental hazards Cobalt compound (CAS N/A)

US. California Controlled Substances. CA Department of Justice
 (California Health and Safety Code Section 11100)

US. California. Candidate Chemicals List. Safer Consumer

Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

US. Massachusetts RTK - Substance List

US. New Jersey Worker and Community Right-to-Know Act

US. Pennsylvania RTK - Hazardous Substances

US. Pennsylvania Worker and Community Right-to-Know Law

US. Rhode Island RTK

US. California Proposition 65

Not listed.
 Cobalt compound (CAS N/A)
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 This product has not been analyzed for all of the listed chemicals; however no listed chemicals are intentionally added. Trace amounts of listed chemicals may be present due to impurities in the raw materials used to manufacture this product.

International Inventories

country(s) or region	inventory name	on inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances(PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section: 16 Other Information

Reference	Manufacturer's material safety data sheet.
Prepared by	Kama pigments

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Last revision: 2023-09-14

