

# Material Safety Data Sheet



## Cadmium Orange deep

**Product Code:** PS-CA0040

**Department:** cadmium dry pigments

**C.A.S.:** 12656-57-4, 7727-43-7

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### Section: 1 Identification

**Product name:** Cadmium pigment

**company:** KAMA pigments  
7442 St-hubert montréal Québec, H2R 2N3  
phone : 514 272 2173 fax : 514 948 5253  
email : info@kamapigment.com

**us d.o.t. / un name:** not regulated for transport

**recommended uses:** pigment for use in plastics, artists' colors, paints; coloring material for use in ceramics and glass. not for use in tattoo inks, cosmetics any medical related applications

**emergency telephone no.:** usa – chemtrec: 1-800-424-9300 outside usa: +1 703-527-3887

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### Section: 2 Hazard Identification

**ghs hazard classification:** not classified

**ghs label elements:** signal word: no signal word  
label codes / pictograms: no pictograms  
hazard statements: none under ghs classification

**precautionary statements :** prevention : none assigned under ghs

**response :** none assigned under ghs

**storage :** none assigned under ghs

**disposal :** none assigned under ghs

**other hazards / u.s. - hazards not otherwise classified / un ghs - other hazards which do not result in classification:**  
see 29 cfr 1910.1027 for the osha cadmium standard.

note – cadmium pigments are much less hazardous than other cadmium compounds as they are extremely insoluble. this greatly reduces the risk of absorption of cadmium into the body and also greatly reduces their environmental hazard. as such, the producer - james m. brown ltd. – has not classified their cadmium pigments as hazardous under the ghs system for the us or under eu reach standards. the category “cadmium and cadmium compounds” is regulated under various u.s. laws (sara 313, cercla, rcra, osha cadmium standard at 29 cfr 1910.1027, california proposition 65, various state lists, etc.) as indicated on this safety data sheet.

per the osha cadmium standard - do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in regulated areas, carry the products associated with these activities into regulated areas, or store such products in those areas. (regulated area = area wherever an employee's exposure to airborne concentrations of cadmium is, or can reasonably be expected to be in excess of the permissible exposure limit - see section 8).

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## Section: 3 Composition / Information on Ingredients

Product name: Cadmium pigment

chemical composition:

components:	cas no.	%
as mixtures, all colors may contain (see note 1):		25-100
C.I pigment red 108 – cadmium sulfoselenide red	58339-34-7	
C.I pigment orange 20 – cadmium sulfoselenide orange	12656-57-4	
C.I pigment yellow 35 - cadmium zinc sulfide yellow	8048-07-5	
plus		
C.I pigment white 21 – barium sulfate (see note 2)	7727-43-7	0-75
synonyms: as listed under components		
chemical family: inorganic pigments		

note 1: these substances are specifically excluded from the specific classification and labelling entries in the ghs table covering cadmium compounds. they have been self-classified by the producer as not hazardous on the basis of their physical and chemical properties – particularly their extreme insolubility. a risk assessment conducted by the eu concluded that these products offer no significant hazard to either human health or the environment. their reach registration has confirmed that no classifications apply – either for human health or the environment.

note 2: barium sulfate is present in extended / reduced strength (lithopone-like) pigments/colors. it may also be present at lower levels in cadmium “pure” type pigments to control strength to customers’ standards

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## Section: 4 First-Aid Measures

first aid/ response

skin : first aid responders should wear personal protective equipment  
if on skin: promptly wash off with soap & water. remove contaminated clothing. get medical advice/attention if irritation occurs. wash contaminated clothing before reuse.

eyes : if in eyes: rinse cautiously with water for several minutes. remove contact lenses, if present and easy to do. continue rinsing. get medical advice/attention if irritation occurs.

inhalation : if inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. get medical advise / attention if any adverse symptoms occur.

ingestion : if swallowed: rinse mouth with water, then drink water to dilute. induce vomiting only under the direction of medical personnel. never give anything by mouth if the victim is unconscious. get medical attention if large quantity is ingested or if you feel unwell.

most important symptoms/effects, acute and delayed : as inorganic powder, inhalation of dust may cause dryness of mouth, coughing; dust contact eyes may cause irritation / soreness. no symptoms expected from skin contact other than temporary coloration of the affected area. ingestion may cause slight irritation of mouth and throat.

indication of immediate medical attention and special treatment needed, if necessary  
call a poison center/doctor/physician in the event of major inhalation or ingestion.

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## Section: 5 Fire-Fighting Measures

suitable extinguishing media :	water : (x-as fog)                      foam : (x)                      co2: (x)                      dry chemical: (x) non-flammable – use media suitable for the surrounding area.
specific hazards in case of fire :	fire conditions may emit toxic / irritating fumes (cadmium oxide, sulfur dioxide) and gases (sulfur dioxide) upon thermal decomposition.
special fire fighting procedures firefighters :	in case of fire involving this material, do not enter the fire area without full protective equipment including self-contained breathing apparatus. stay upwind and isolate the area of those without protective equipment/ respiratory protection. collect all fire control water for proper disposal – do not allow it to enter drains or waterways.

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## Section: 6 Accidental Release Measures

personal precautions:	wear full protective equipment (see section 8). keep unprotected personnel out of the area. remove contaminated clothing/equipment and wash thoroughly after handling / cleaning the spill.
environmental precautions:	do not release to sewers, waterways and the environment. dispose of properly via licensed chemical waste hauler (see section 13).
methods and material for containment and clean up:	scoop, shovel or use a vacuum with a hepa filter to collect spill. avoid generating dust; if needed lightly damp down material with water to control dust levels. place into a properly labeled impermeable bag/container and seal. material will be classified as rcra hazardous waste and must be labelled in accordance with the osha cadmium standard - 29 cfr 1910.1027(m)(3)(ii).

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## Section: 7 Handling And Storage

Handling procedures:	wear full protective equipment (see section 8). use with adequate ventilation. avoid scattering into the air / generating dust. clean spills promptly and avoid release to the sewer system/ waterways/environment. employ good housekeeping techniques to control dust build-up on equipment and work area. remove contaminated equipment/clothing and wash thoroughly after handling. keep container sealed when not in use. do not eat, drink, smoke, chew tobacco or gum, apply cosmetics while handling or in work area using this product.
storage needs, including incompatibilities:	store only in the original sealed containers in a cool, dry area. store away from food, drink, animal feedstuffs. store away from ignition sources, concentrated acids and powerful oxidizing agents.

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## Section: 8 Exposure Control/Personal Protection

control parameters:	see 29 cfr 1910.1027 for the osha cadmium standard
exposure limits:	u.s. osha pel : 0.0025 mg/m <sup>3</sup> twa action level as cd; 0.005 mg/m <sup>3</sup> twa, as cd; 0.2 mg/m <sup>3</sup> twa and 0.6 mg/m <sup>3</sup> ceiling limit as cd dust for dry color formulators; 0.2 mg/m <sup>3</sup> twa selenium compound as se; 15 mg/m <sup>3</sup> twa total dust as barium sulfate, 5 mg/m <sup>3</sup> twa respirable fraction as barium sulfate
u.s. acgih tlv :	0.01 mg/m <sup>3</sup> twa, inhalable as cd, 0.002 mg/m <sup>3</sup> twa respirable as cd; 0.2 mg/m <sup>3</sup> twa selenium compound, as se; 10 mg/m <sup>3</sup> twa total dust as barium sulfate
appropriate engineering controls :	use local / mechanical exhaust to maintain air concentrations below occupational exposure standards (see above)
personal protective equipment respiratory protection :	half mask air-purifying respirator equipped with a high efficiency particulate air filter for airborne concentrations up to ten times the permissible exposure limit (see 29 cfr 1910.1027(g) for proper equipment for higher exposure levels)
hand protection :	use chemical resistant gloves (rubber, pvc)
eye protection :	vented goggles or full face shield or other appropriate protective equipment that complies with 29 cfr1910.133; access to an eyewash fountain
other protective equipment :	labcoat; coveralls to protect skin; head coverings, boots or foot coverings; access to a safety drench shower

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## Section: 9 Physical and Chemical Properties

appearance :	yellow, orange, red or maroon colored powder	odor :	no odor
flammable limits :	n/a	odor threshold :	n/a
vapor pressure (mm hg) :	n/a	ph (5% in water) :	approx. 7
vapor density (air=1) :	n/a	melting point / freezing point (°c) :	n/a
relative density/specific gravity :	3.5 – 5.5	boiling point (°c) :	n/a
solubility in water (@20°c) :	insoluble	flash point (°f) :	n/a
partition coefficient(n-octanol/water) :	no data available	evaporation rate :	n/a
auto ignition temp. (°c) :	not known	viscosity :	n/a
decomposition temp. :	>300 (572°f)		
flammability :	not flammable		

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## Section: 10 Stability And Reactivity

reactivity :	may react with strong acids yielding toxic/flammable hydrogen sulfide gas, toxic hydrogen selenide and possibly soluble toxic cadmium salts
chemical stability :	stable when stored in sealed package under recommended storage conditions
possibility of hazardous reactions :	hazardous polymerization will not occur
conditions to avoid :	contact with incompatibles; high heat (=0°c or 536°f); dust in vicinity of ignition sources, electrical or spark generating equipment
incompatible materials :	concentrated acids, strong oxidizing agents
hazardous decomposition products :	fire/thermal decomposition can produce hazardous fumes (cadmium oxide, selenium dioxide) and gases (sulfur dioxide)

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## Section: 11 Toxicological Information

potential health effects:	
routes of exposure :	skin, eyes, inhalation, ingestion
skin, eyes, inhalation :	inhalation of dust may cause respiratory irritation. dust contact with eyes may cause irritation.
ingestion :	this route of exposure is not likely. no known effects.
chronic:	gross overexposure over many years may lead to kidney damage but this should never happen given modern working conditions
acute toxicity :	a range of values have been reported for several species. oral ld50 values are normally >5000 mg/kg
skin corrosion / irritation :	not expected to be irritating
serious eye damage / irritation :	no test data available; may cause irritation but below ghs classification
respiratory or skin sensitization :	not expected to be sensitizing
germ cell mutagenicity :	no test data available; producer has not classified as mutagen
carcinogenicity :	u.s. listed carcinogen: none ( ) osha (*) ntp (*) iarc (*) other (*) as generic class of "cadmium and cadmium compounds": osha-ca: carcinogen defined with no further categorization; ntp-k: known to be a human carcinogen; iacr-1: carcinogenic to humans producer has assigned no ghs classification due to the extreme insolubility of cadmium pigments as compared to other classified soluble compounds
reproductive toxicity :	no ghs hazard classification
aspiration hazard :	no data available; no ghs hazard classification
interactive effects:	no data available
specific target organ toxicity :	single exposure: no ghs hazard classification; repeated/chronic exposure: no ghs hazard classification-gross overexposure over many years may lead to kidney damage

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## Section: 12 Ecological Information

ecotoxicity :	the extreme insolubility of these pigments indicate that they offer no significant hazard. no actual testing has been done and as such, it is recommended to avoid release to the environment and waterways.
toxicity - aquatic :	no test data available
toxicity to daphnia :	no test data available
toxicity - terrestrial :	no test data available
persistance & degradability:	highly stable insoluble inorganic compound – not expected to degrade in the environment; not within the definition of pbt or vpvb
bioaccumulative potential :	highly insoluble in both water and all organic solvents – not expected to bioaccumulate
mobility in soil :	movement of these highly insoluble products through the soil will only occur by physical movement of the material itself.
other adverse effects :	no further data available

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## Section: 13 Disposal Considerations

disposal methods:	dispose of contents / container in accordance with local, regional, national, international regulations. dispose of in sealed, impermeable containers, using a licensed chemical waste hauler. per the osha cadmium standard, the warning labels for containers of contaminated protective clothing, equipment, waste, scrap, or debris shall include at least the following information: danger contains cadmium may cause cancer causes damage to lungs and kidneys avoid creating dust.
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## Section: 14 Transport Information

by road or rail - u.s. d.o.t. regulated: yes ( ) no (x) rq: (n/a)  
if regulated, un proper shipping name: hazard class: ( )  
un identification no.: ( ) packing group: ( ) label required: ( )  
u.s. marine pollutant: yes ( ) no (x\*) severe u.s. marine pollutant: yes ( ) no (x)  
emergency response guide no.: ( )  
inland b/l: \*though the generic category of "cadmium and cadmium compounds" is on the u.s. marine pollutant list, cadmium pigments are not un classified marine pollutants.

by sea - imdg regulated: yes ( ) no (x) stowage category: n/a  
by air - iata regulated: yes ( ) no (x) pkg instruction no.: n/a  
special precautions: read msds before handling

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## Section: 15 Regulatory Information

u.s. tsca: we certify that all components of this product are registered under the regulations of the toxic substances control act.  
u.s. sara title iii, sect. 313 : listed (x\*) not listed ( ) \*all colors are listed as cadmium compounds.  
yellows are also listed as zinc compounds.  
oranges, reds, maroons are also listed as selenium compounds.

u.s. rcra hazardous waste : no (\*) yes ( ) rcra # : (\*) \*waste product should be tested (tclp method) to see if it meets the definition of unlisted hazardous waste, characteristic of toxicity for cadmium, d006. the pigment itself, due to its high insolubility, does not meet the soluble level for cadmium to be classified as rcra hazardous waste. waste labelling is still required under the osha cadmium standard (see section 13).

u.s. cercla : no ( ) yes (x\*) rq (\*)  
\*as part of the generic category "cadmium and compounds" with no rq assigned to the generic broad class

u.s. california proposition 65 listed : yes (x\*) no ( )  
\*as part of the generic category "cadmium and compounds"

hmis: health (2) flammability (0) reactivity (0)

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## Section: 16 Other Information

reference manufacturer's material safety data sheet  
prepared by kama pigments

abbreviations / acronyms: n/a=not applicable; lel=lower explosion limit; uel=upper explosion limit; pel=permissible exposure limit; stel=short term exposure limit; tlv=threshold limit value; twa=time weighted average over 8 hour workday; ld50 or lc50=lethal dose or lethal concentration that kills 50% of dosed group; mg=milligram; g=gram; kg=kilogram; ppm=parts per million; m=meter; loa=lowest observed adverse effect level; c.i.=colour index.

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