

Material Safety Data Sheet

Pigment Yellow 110

1. Identification

Product identifier used on the label

Pigment yellow 110

Recommended use of the chemical and restriction on use

Recommended use*: colouring component

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

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Other means of identification

Chemical family: Isoindolinone

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 Classification of the product

Combustible Dust Combustible Dust (1) Combustible Dust

Label elements

Signal Word:

Warning

Hazard Statement:

May form combustible dust concentration in air.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

This product does not contain any components classified as hazardous under the referenced regulation.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:

Remove contaminated clothing. Wash thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.

If swallowed:

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: dry powder, foam

Unsuitable extinguishing media for safety reasons: carbon dioxide

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation. Closed containers should only be opened in well-ventilated areas.

Protection against fire and explosion:

Avoid dust formation. Take precautionary measures against static discharges.

Dust can form an explosive mixture with air.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Avoid all sources of ignition: heat, sparks, open flame.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Personal protective equipment Respiratory protection:

Wear a NIOSH-certified (or equivalent) particulate respirator.
Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields. Wear face shield if splashing hazard exists.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Due to the colouring properties of the product closed work clothes should be used, to avoid stains during manipulation. Eye wash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

Form:	powder	
Odour:	odourless	
Odour threshold:	No applicable information	
Colour: pH value:	available. yellow	
decomposition point:	not applicable	(Directive 92/69/EEC, A.1)
Boiling point:	> 400 °C	
Flash point:	The substance / product decomposes therefore not determined.	(Directive 92/69/EEC, A.10)
Flammability:	not applicable	
Lower explosion limit:	not highly flammable	
Upper explosion limit:		
Autoignition:	For solids not relevant for classification and labelling.	(BAM)
Vapour pressure:	For solids not relevant for classification and labelling.	(BAM)
Density:	For solids not relevant for classification and labelling.	(BAM)
Bulk density:	> 600 °C 510 °C	
Partitioning coefficient n-octanol/water (log Pow):	not applicable, solid with a melting temperature over 300 °C 1.81 g/cm ³ (20 °C)	(Directive 92/69/EEC, A.3)
Self-ignition temperature:	181 kg/m ³ 0 (23 °C) 20 °C not self-igniting > 350 °C	(VDI 2263, sheet 1, 1.4.1)

Viscosity, dynamic:	not applicable
%volatiles:	none
Solubility in water:	< 0.03 mg/l (20 °C)
Molar mass:	641.94 g/mol
Evaporation rate:	The product is a non-volatile solid.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties: not fire-propagating

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.
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Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product may contain explosive fine dust or such dust may be produced by abrasion during transport or product transfer.

Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

Incompatible materials

strong oxidizing agents, strong bases, strong acids

Hazardous decomposition products

Decomposition products:

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Primary routes of entry

Eyes

Skin

Inhalation.

Ingestion.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Type of value:

LD50

Species: rat

Value: > 5,000 mg/kg (similar to OECD guideline 401)

No mortality was observed.

Inhalation

Type of value: LC50

Species: rat

Value: > 1,000 mg/l

Exposure time: 4 h

Type of value:

LC50

Species: rat

Value: > 1.04 mg/l (similar to OECD guideline 403)

Exposure time: 4 h

No mortality was observed.

Dermal

Type of value: LD50

Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin. Skin

Result: non-irritant

Species: rabbit Result: non-irritant Method: other

Eye

Result: non-irritant

Species: rabbit

Result: non-irritant

Method: other

Sensitization

Assessment of sensitization: The substance did not cause skin sensitization in humans.

The substance did not cause skin sensitization in humans.

Species: human

Result: Non-sensitizing.

An aqueous solution was tested.

The chemical structure suggests a sensitizing effect.

Species: human

Result: Non-sensitizing.

Method: Human patch test

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. The product has not been tested. The statement has been

derived from

substances/products of a similar structure or composition.

Genetic toxicity

Assessment of mutagenicity: In the majority of tests performed (bacteria) a mutagenic effect was not

found. A mutagenic effect was also not observed in in-vivo assays.

Genetic toxicity in vitro: Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: No data available.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility

impairing effect. The results were determined in a Screening test (OECD 421/422). The product has

not been tested. The statement has been derived from substances/products of a similar structure or

composition.

Teratogenicity Assessment of teratogenicity: In animal studies the substance did not cause malformations. The

results were determined in a Screening test (OECD 421/422). The product has not been tested. The

statement has been derived from substances/products of a similar structure or composition.

Other Information

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

No data can be given due to the product's insolubility in water.

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

No toxic effects occur within the range of solubility.

LC50 (96 h) > 100 mg/l, *Brachydanio rerio* (OECD Guideline 203, static)

The details of the toxic effect relate to the nominal concentration. Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates

EC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants

EC50 (72 h) > 100 mg/l (growth rate), *Desmodesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

No observed effect concentration (72 h) \geq 100 mg/l (growth rate), *Desmodesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish

No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates No data available regarding toxicity to daphnids.

Assessment of terrestrial toxicity

No toxic effects have been observed in studies with soil living organisms.

Toxicity to terrestrial plants

No data available.

Other terrestrial non-mammals

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge, domestic/EC20 (30 min): approx. 810 mg/l

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

Elimination information

5.46 % BOD of COD (28 d) (calculated) (aerobic, activated sludge, domestic, non-adapted)

Assessment of stability in water

No data available.

Bioaccumulative potential

Assessment bioaccumulation potential

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Bioaccumulation potential

No data available.

Mobility in soil

Assessment transport between environmental compartments

Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen (AOX): 44.2 %

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in accordance with national, state and local regulations. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

15. Regulatory Information

VOC content:

none

Federal Regulations Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Fire (Combustible Dust);

NFPA Hazard codes:

Health : 1 Fire: 2 Reactivity: 0 Special: **HMIS III rating**

Health: 1 Flammability: 1 Physical hazard: 0

16. Other Information