

Material Safety Data Sheet

Product Code: **Thermochromic Powder**

1. Product and Company Information

1.1 Product Identifiers:

Product Name: Thermochromic Powder

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

Product Class: Thermochromic powder for use in color change inks. May be used to prepare color change plastic masterbatch.

1.3 Details of the supplier of the safety data sheet:

QCR Solutions Corp
P.O. Box 7850
Port Saint Lucie FL, 34985
Tel: 772-237-5354
Fax: 772-672-3544

1.4 Emergency Phone Number: 772-237-5354

2. Hazardous Identification

2.1 Classification of the substance or mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin Sens. 1: H317 - May cause allergic skin reaction.
Eye Dam. 1 : H318 - Causes serious eye damage.

2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

H317: May cause allergic skin reaction.
H318: Causes serious eye damage.

[Prevention]

P261: Avoid breathing dust.
P272: Contaminated work clothing should not be allowed out of the workplace
P280: Wear protective glove/eye protection/face protection

[Response]

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

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310: Immediately call a POISON CENTER / doctor
P321: Specific treatment (see on this label)
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.

[Storage]

P403+P233: Store in a well ventilated place. Keep container tightly closed.

[Disposal]

P501: Dispose of contents / container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Classification 1994/45/EC: Xn; R62 Xi; R41-43
Symbols: Xn: Harmful

3. Composition / Information on Ingredients

3.1 Substances

Hazardous Ingredients	Classification	Conc.	CAS
4,4'-Isopropylidenedi phenol	Repr. 2: H361f; STOT SE 3: H335; Eye Dam. 1: H318; Skin Sens. 1: H317;	10-20%	80-05-7

4. First Aid Measures

4.1. Description of first aid measures

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

For inhalation:

Move the exposed person to fresh air. Seek medical attention.

For skin contact: Remove contaminated clothing and shoes. Wash thoroughly with mild soap and warm water. Consult a physician if there is persisting irritation. Wash clothing before reuse.



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For eye contact: Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

For swallowing: Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING.

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

Skin contact: Irritating to the skin.

Eye contact: Irritating to the eyes.

Inhalation: Irritating to respiratory system. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.

Ingestion: Ingestion may cause nausea and vomiting.

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

Skin contact: Itching. Wash off immediately with plenty of soap and water.

Eye contact: May cause irritation to the eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

Inhalation: Inhalation of dust may cause shortness of breath.

Ingestion: Ingestion may cause nausea and vomiting. If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media

Use as appropriate: carbon dioxide (CO₂), dry chemical, foam.

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

5.3 Special protective equipment and precautions for fire-fighters

Wear suitable respiratory equipment when necessary.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Methods and materials for containment and cleaning up

Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

Waste disposal: This material must be disposed within accordance with federal, state, and local ordinances.

6.3 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing

7.2 Conditions for safe storage, including any incompatibles

Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.

7.3 Specific end use(s)

Apart from the uses mentioned in Section 1.2 no other specific uses are stipulated.

7.4 Suitable Packaging:

Plastic Containers

7.5 Further Information:

On processing FF powders for masterbatch heating may result in generation of formaldehyde. Ensure adequate ventilation of all fumes.

8. Exposure Control & Personal Protection

Exposure Limits

4,4'-Isopropylidenediphenol

WEL 8-hr limit ppm: -

WEL 15 min limit ppm: -

WEL 8-hr limit mg/m³ total

inhalable dust:-

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WEL 8-hr limit mg/m3 total respirable dust:-
WEL 8-hr limit mg/m3: 10
WEL 15 min limit mg/m3: -
WEL 15 min limit mg/m3 total inhalable dust:-
WEL 15 min limit mg/m3 total respirable dust:-

8.1 Control parameters

Components with workplace control parameters.
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. If these are not sufficient to maintain concentrations of vapors below the relevant exposure limits, suitable respiratory protective equipment should be worn.

Personal protective equipment

Individual protection measures

Wear chemical protective clothing.

Eye/face protection

Approved safety goggles

Skin protection – Hand protection

Chemical resistant gloves (PVC).

Respiratory protection

Wear suitable respiratory equipment.

Environmental Exposure Controls

Appropriate local exhaust ventilation is required.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

FORM:	Powder
COLOR:	Various
ODOR:	Slight
ODOR THRESHOLD:	no data available
pH:	no data available
MELTING POINT:	no data available
Decomposition temp:	no data available
BOILING RANGE:	100C
FLASH POINT:	no data available
EVAPORATION RATE:	no data available
IGNITION TEMPERATURE:	no data available

FLAMMABILITY:	no data available
UPPER EXPLOSION LIMIT:	no data available
LOWER EXPLOSION LIMIT:	no data available
VAPOR PRESSURE:	no data available
VAPOR DENSITY:	no data available
RELATIVE DENSITY:	no data available
WATER SOLUBILITY:	Insoluble
VISCOSITY:	no data available
Partition coefficient:	no data available

9.2 Other safety information

no data available

10. Reactivity / Stability

10.1 Reactivity

Avoid sparks, flames, heat and sources of ignition.

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

Heating during moulding will generate high levels of formaldehyde vapours which should be vented.

1.4 Conditions to avoid

No Significant Hazard.

1.5 Incompatible materials

Avoid contact with: Strong bases.

10.6 Hazardous decomposition products

Formaldehyde may be generated and other harmful fumes.

11. Toxicology Measures

11.1 Information on toxicological effects

Toxicological Information
4,4'-Isopropylidenediphenol
Oral Rat LD50: 4240 mg/kg
Oral Mouse LD50: 2500 mg/kg
Dermal Rabbit LD50: 3 mL/kg

Skin corrosion/irritation No test data available
Serious eye damage/irritation No test data available
Respiratory or skin sensitization No test data available
Germ cell mutagenicity No test data available
Carcinogenicity No test data available

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Reproductive toxicity No test data available
STOT-single exposure No test data available
STOT-repeat exposure No test data available
Aspiration hazard No test data available
 Likely routes to exposure

12. Ecological Information

12.1 Toxicity

4,4'-Isopropylidenediphenol
 Green algae EC50/96h: 3.1
 Fathead minnows LC50/96h: 4.6
 Daphnia LC50/48h: 10.2

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Other effects

Harmful to aquatic organisms

13. Disposal Considerations

13.1 Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance. Do not empty into drains, sewers or water-courses.

14. Transport Information

14.1 DOT (US)

Not dangerous goods

14.2 IMDG

Not dangerous goods

14.3 IATA

Not dangerous goods

15. Regulatory Information

Ingredient : 4,4'-Isopropylidenediphenol

TSCA: Yes

MA: Yes

SARA313: Y1.0

CALPROP65: No

CWA307: No

CAA112: No
 CWA311: No
 SARA302: No
 SARA304: No

Regulations

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

16. Other Information

Revision: Revision 4: Major revision to include the requirements of the HCS/HazCom 2012 Final Rule. Formaldehyde was removed from the SDS because it is below the reportable limit of 0.1%.

Text Hazard Statements from Section 3

R37 - Irritating to respiratory system.
 R41 - Risk of serious damage to eyes.
 R43 - May cause sensitisation by skin contact.
 R52 - Harmful to aquatic organisms.
 R62 - Possible risk of impaired fertility.

Skin Sens. 1: H317 - May cause an allergic skin reaction.
 Eye Dam. 1: H318 - Causes serious eye damage.
 STOT SE 3: H335 - May cause respiratory irritation.
 Repr. 2: H361f - Suspected of damaging fertility.

HMIS® Classification: (scale 0 – 4)

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

PERSONAL PROTECTION 1

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and belief, accurate as of the date indicated on this document. QCR Solutions Corp is not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of this product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health risks or hazards and should be used with caution. QCR Solutions Corp urges the customer receiving this SDS to study it carefully to become aware of the hazards, if any. In the interest of safety, you should notify your employees, agents, contractors, etc. of the information on this sheet and make it available to anyone using this product and request your customers to inform their employees, customers and agents as well.

The information contained in this SDS is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of this product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Revision Date: May 27, 2015