

SAFETY DATA SHEET

DCS LED CURABLE IRF4 INK

1. Identification

Product Name: Direct Color Systems LED CURABLE INK IRF4
Product Identifier: Printing Ink; Mixture
Use: For Industrial Use Only by Qualified Personnel
Manufacturer: Direct Color Systems
Address: 99 Hammer Mill Rd.
Rocky Hill, CT USA 06067-3771
Emergency Phone Number: CHEMTREC(+1) 703-527-3887
Date Updated: 04/02/15

2. Hazards Identification

GHS Classification
of the Mixture:

Flammable Liquids	Not Classified
Acute Toxicity(Oral)	Not Classified
Acute Toxicity(Dermal)	Not Classified
Acute Toxicity(Inhalation, mist)	Not Classified
Skin Corrosion/Irritation	Category 1C, H314
Serious eye damage/eye irritation	Category 1, H318
Respiratory or Skin Sensitization	Category 1, H317
Germ Cell Mutagenicity	Not Classified
Reproductive Toxicity	Not Classified
Hazardous to the aquatic environment (Acute)	Not Classified
Hazardous to the aquatic environment(Chronic)	Not Classified

GHS Label elements:

Pictograms or Symbols:



Signal Word: Danger

Hazard Statement: H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.

Precautionary Statements:

Prevention:

P201 : Obtain special instructions before use.
P202 : Do not handle until all safety precautions have been read and understood.

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P261 : Avoid breathing gas/mist/vapors/spray.

P264 : Wash skin thoroughly after handling.

P272 : Contaminated work clothing should not be allowed out of the workplace.

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

P281 : Use personal protective equipment as required.

Response:

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 : IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position 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. Continue rinsing.

P308+P313 : IF exposed or concerned: Get medical advice/attention.

P310 : Immediately call a POISON CENTER or doctor/physician.

P333+P313 : If skin irritation or rash occurs: Get medical advice/attention.

P363 : Wash contaminated clothing before reuse.

Storage:

P405 : Store locked up.

Disposal:

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

3. Composition/Information on Ingredients

Hazards Identification	CAS #	Weight %
2-Propenoic acid, (tetrahydro-2-furanyl)methyl ester	2399-48-6	9-60%
2-Propenoic acid, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-	5888-33-5	15-35%
Phosphine Oxide	75980-60-8	2-10%
Carbon Black	1333-86-4	0-5%

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4. First Aid Measures

Skin:

Wash with soap and water and rinse thoroughly for 15 minutes. Get medical attention if blisters or inflammation are present on the skin.

Eyes:

Flush eyes and under eyelids for 15 minutes with water. Seek medical attention if irritation or redness persists.

Inhalation:

Move to fresh air. Seek medical attention if irritation persists.

Ingestion:

Do not induce vomiting. Rinse mouth with water but do not swallow and get medical attention. Call Poison Control or Physician immediately.

5. Fire Fighting Measures

Flammable Properties:

Flash Point: 118C (245F)

Extinguishing Media:

Water spray for cooling, foam, carbon dioxide, dry chemical, or Halon for fire suppression.

Hazardous Combustion Products:

Material is a flammable liquid but must be preheated for combustion. May burn in fire conditions releasing products, which may be toxic (CO, CO₂, and volatile organics).

Fire Fighting Procedures:

Wear approved MSHA/NIOSH breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Precautions:

Evacuate personnel from the area. Shut off all sources of ignition; No flares, smoking, or flames in the area. Wear protective equipment.

Environmental Precautions:

Do not flush to sewer or waterways.

Dike with soil. Cover with a sheet to prevent expanding odor.

Methods for Cleaning up:

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For small spills, use absorbent media. Dispose of the absorbent media according to local, regional, and national regulations.

For large spills, enclose the spilled liquid with sand. Recover the liquid while covering it with an oil-resistant antistatic sheet. Dispose of material according to local, regional, and national regulations.

7. Handling and Storage

In accordance with good industrial practices, handle with care and avoid personal contact.

Wear protective gloves, safety goggles, and other protective clothing.

Avoid contact with skin, eyes, and clothing.

Keep out of direct sunlight and away from heat source.

Keep tightly closed.

Keep from freezing.

Keep from oxidizing agents.

Use adequate ventilation.

8. Exposure Controls/Personal Protection

Engineering Controls:

Facilities storing or utilizing this substance should be equipped with an eyewash facility and a safety shower.

Use Process enclosures, local exhaust ventilation, or other engineering controls.

Control parameters:

ACGIH -Not Established

OSHA –Not Established

Respiratory protection:

Chemical cartridge respirator for an organic vapor, or pressure self-contained breathing apparatus.

Hand protection:

Chemical resistant gloves made of Butyl rubber or Polyethylene-polyvinyl alcohol laminated rubber.

Eye protection:

Safety Glasses with side shields, goggles, or face shield.

Skin and body protection:

Suitable safety clothes, aprons, shoes and protective boots.

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9. Physical and Chemical Properties of Ink

General Information: Colored liquid with mild odor.

pH:	Not applicable
Boiling point:	94° C
Melting point:	-71° C
Flash point:	>119° C (closed cup)
Autoflammability:	None
Oxidizing properties:	None
Vapor density:	> 3 (air = 1)
Density:	1.03-1.06 g/ml (20° C)
Solubility in Water:	18 g/L
Viscosity:	2 – 10 cps
VOC:	None

10. Stability and Reactivity

Stability:	Stable under normal conditions.
Conditions to avoid:	Avoid heat and freezing temperatures.
Materials to avoid:	Strong Oxidizing materials, peroxides, acids or iron.
Hazardous decomposition products:	Will decompose to form carbon oxides when burned.

11. Toxicology and Health Hazards

Routes of toxicology: Eye, skin, inhalation, and oral.

Acute Health Hazards: Overexposure of eye surface to ink may be mildly irritating.
Overexposure of skin to ink may cause irritation, redness and swelling.
Inhalation or overexposure to ink vapors may result in respiratory tract irritation and anesthesia.
Ingestion may cause upset stomach.

Chronic Health Hazards: None known.

Mutagenicity: The components are not reported to produce mutagenic effects in humans.

Carcinogenicity: The components are not reported to produce carcinogenic effects in humans.

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Irritancy of product: Exposure of ink to eye, skin, and inhalation may irritate tissue.

Acute Toxicity Estimates:

Acute oral toxicity :

Not Determined

Acute dermal toxicity:

Not Determined

Acute inhalation toxicity (mist):

Not Determined

Skin and Eye:

Skin corrosion/irritation:

Causes skin irritation. (Rabbit) 4.8/8.0. (4h) (occluded exposure)

Causes severe skin burns. (Rabbit) Draize Test 7.7/8.0.(24 h)

Serious eye damage/eye irritation

Causes serious eye irritation. (Rabbit) Draize Test 38/110.

Sensitization:

Not Determined

Mutagenicity:

Not Determined

Carcinogenicity:

Not Established IARC, NTP, EU, OSHA and ACGIH.

Reproductive Toxicity:

Not Determined

Chronic toxicity or long term toxicity:

Not Determined

Aspiration hazard:

Not Determined

12. Ecological Information

Ecotoxicity:

Not Determined

Persistence/degradability:

Not Determined

Bioaccumulation:

Not Determined

Mobility:

Not Determined

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13. Disposal Considerations

Waste from residues:

Burn in a chemical incinerator equipped with an afterburner and scrubber. Consult an expert on the disposal of recovered material.

Any contaminated packaging:

Do not put other material into the used container and do not use it for other purpose.

Wash the inside of the container before disposal.

Comply with all federal, state and local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

14. Transport Information

The UN classification number

UN Class: Not applicable

UN Number : Not applicable

Proper shipping Name: Not applicable

Packing Group: Not applicable

Marine Pollutant: Not applicable

Specific precautionary transport measures and conditions:

Avoid falling, dropping, shocking and dragging a container.

Protect a container from direct sunlight.

By 49 CFR 172.101 published by the US department of Transportation, this product is **not** considered Dangerous Goods.

DOT listing: None

Packing group: None

DOT Labels required: None

Marine pollutant: Components are not listed as marine pollutants.

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

All components are on TSCA, EINECS/ELINCS, AICS, DSL, ENCS, and ECL.

All components are REACH registered and not listed in Annex XIV of EC No., 1907/2006 REACH Restriction.

All components are not listed on SARA Title III 313.

Regulatory information with regard to this product in your country or region should be examined by the end user.

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16. Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall only be used as a guide. Direct Color Systems offers this information as a service to our customers and shall not be held liable for any damage resulting from handling or from contact with the above product.

END OF SDS