



Sigma Inks
12113 Kirkham Road
Poway, CA 92064
USA

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 06/29/2015

Reviewed on 06/29/2015

1 Identification

- **Product identifier**
- **Trade name: MP Metallic Colors Series**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Sigma Inks (US)
12113 Kirkham Road
Poway, CA 92064 USA
Phone: (888) 424-9300
Website: www.sigmainks.com or contact distributor: www.printexusa.com
- **Emergency telephone number:**
Chemtrec (US): (800) 424-9300
Chemtrec (Outside US): (703) 527-3887 (Collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 4 H227 Combustible liquid.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Warning
- **Hazard statements**
Combustible liquid.
- **Precautionary statements**
Keep away from flames and hot surfaces. – No smoking.
Wear protective gloves / eye protection / face protection.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**
44.7 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

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| · Dangerous Components: | | | |
|------------------------------------|--------------------------|--|--------|
| CAS: 763-69-9 RTECS: UF 3325000 | Ethyl 3-ethoxypropionate | ⚠ Flam. Liq. 3, H226 | 24-27% |
| CAS: 108-94-1 RTECS: GW 1050000 | Cyclohexanone | ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H332 | 16-26% |
| CAS: 9002-86-2 RTECS: KV0350000 | polyvinyl chloride | ⚠ STOT SE 3, H335 | 3-16% |
| CAS: 12001-26-2 | Mica | | 10-14% |
| | Pigment | ⚠ STOT SE 3, H335 | 11-16% |

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
If eye irritation occurs, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
Combustible liquid. Vapors can travel to a source of ignition and flash back.
Explosive mixtures may occur at temperatures at or above flashpoint.
- **Advice for firefighters**
- **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** Protect from heat.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with occupational exposure limits:**

108-94-1 Cyclohexanone

| | |
|-----|---|
| PEL | Long-term value: 200 mg/m ³ , 50 ppm |
| REL | Long-term value: 100 mg/m ³ , 25 ppm Skin |
| TLV | Long-term value: 50 mg/m ³ , 20 ppm Skin |

12001-26-2 Mica

| | |
|-----|---|
| PEL | Long-term value: 20 mppcf ppm <1% crystalline silica |
| REL | Long-term value: 3* mg/m ³ *respirable dust; containing < 1% quartz |
| TLV | Long-term value: 3* mg/m ³ *as respirable fraction |

· **Ingredients with biological limit values:**

108-94-1 Cyclohexanone

| | |
|-----|---|
| BEI | 80 mg/L urine end of shift at end of workweek 1.2-Cyclohexanediol with hydrolysis (nonspecific, semi-quantitative) |
| | 8 mg/L urine end of shift Cyclohexanol with hydrolysis (nonspecific, semi-quantitative) |

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.



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- **Protection of hands:** Not required.
- **Eye protection:**



Goggles recommended during refilling.

* 9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid
Color: See product specification

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/Melting range: Not determined.
Boiling point/Boiling range: 153 °C (307 °F)

· **Flash point:** 43 °C (109 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 377 °C (711 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower: 1.1 Vol %
Upper: 9.8 Vol %

· **Vapor pressure @ 20 °C (68 °F):** 5 hPa (4 mm Hg)

· Density:

Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

Dynamic: Not determined.
Kinematic: Not determined.

· Solvent content:

Organic solvents: 76.7 %
VOC content: 76.7 %



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· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat, flame and ignition sources.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

| | | |
|---|---------------|-----------------------|
| · LD/LC50 values that are relevant for classification: | | |
| 763-69-9 Ethyl 3-ethoxypropionate | | |
| Oral | LD50 | 5000 mg/kg (rat) |
| Dermal | LD50 | 4080 mg/kg (rabbit) |
| Inhalative | LC50/4 h | >998 mg/l (rat) |
| | LC50/96 hours | 67.26 mg/l (Trout) |
| 108-94-1 Cyclohexanone | | |
| Oral | LD50 | 1535 mg/kg (rat) |
| Dermal | LD50 | 948 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 8000 mg/l (rat) |
| | LC50/96 hours | 491.475 mg/l (Trout) |
| | LC50/48 hrs | 257.42 mg/l (daphnia) |

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
 Group 1 - Carcinogenic to humans
 Group 2A - Probably carcinogenic to humans
 Group 2B - Possibly carcinogenic to humans
 Group 3 - Not classifiable as to its carcinogenicity to humans
 Group 4 - Probably not carcinogenic to humans

| | | |
|-----------|--------------------|---|
| 108-94-1 | Cyclohexanone | 3 |
| 9002-86-2 | polyvinyl chloride | 3 |

· **NTP (National Toxicology Program)**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients are listed.



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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

763-69-9 Ethyl 3-ethoxypropionate

EC50 75.95 mg/l (Green algae) (96 Hr)
785 mg/l (daphnia)

108-94-1 Cyclohexanone

EC50 137.349 mg/l (Green algae) (96 hr)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Recycle or dispose with household trash.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1210
- **UN proper shipping name**
- **DOT** Printing ink
- **ADR** UN1210 Printing ink
- **IMDG, IATA** PRINTING INK
- **Transport hazard class(es)**

· **DOT**



- **Class** 3 Flammable liquids
- **Label** 3

· **ADR**



- **Class** 3 (F1) Flammable liquids



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· **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids
 · **Label** 3
 · **Packing group**
 · **DOT, ADR, IMDG, IATA** III
 · **Environmental hazards:** Not applicable.
 · **Special precautions for user** Warning: Flammable liquids
 · **Danger code (Kemler):** 30
 · **EMS Number:** F-E,S-D
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 60 L
 On cargo aircraft only: 220 L

· **ADR**
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· **IMDG**
 · **Limited quantities (LQ)** 5L
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml
 · **UN "Model Regulation":** UN1210, Printing ink, 3, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 · **Sara**

| | |
|--|--------------------------|
| · Section 355 (extremely hazardous substances): | |
| None of the ingredients are listed. | |
| · Section 313 (Specific toxic chemical listings): | |
| 7429-90-5 | Aluminium |
| · TSCA (Toxic Substances Control Act): | |
| 763-69-9 | Ethyl 3-ethoxypropionate |
| 28262-63-7 | Acrylic Resin |
| 108-94-1 | Cyclohexanone |
| 9002-86-2 | polyvinyl chloride |
| 7429-90-5 | Aluminium |

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· **California Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

| | | |
|-----------|--------------------|----|
| 108-94-1 | Cyclohexanone | A3 |
| 9002-86-2 | polyvinyl chloride | A4 |
| 7429-90-5 | Aluminium | A4 |

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** Non-Regulated Material

· **Signal word** Warning

· **Hazard statements**

Combustible liquid.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.
Wear protective gloves / eye protection / face protection.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· **State Right to Know**

All ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision** 06/29/2015 / 2

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods



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DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Flam. Liq. 4: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**

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