

Material Safety Data Sheet

INKCUPS

Candymark Edible Ink

Candymark Cyan

Inkcups requests that the users of this product study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should notify its employees, contractors and agents of the information in this MSDS and any product hazards and safety information.

1. Product and company identification

Identification of the substance or mixture

Product name : Candymark Edible Ink
Product code : Candymark Cyan
Company : Inkcups Corp.
310 Andover St.
Danvers, MA
01923 USA
www.inkcups.com
E-mail: info@inkcups.com
Phone: (978) 646-8980

Emergency telephone number : US - 800-424-9300 International - +001-703-527-3887

2. Hazards identification

Physical state : Liquid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : No specific hazard.
CAUSES SEVERE EYE BURNS. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. MAY CAUSE SKIN IRRITATION.
No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.

Routes of entry : Absorbed through skin. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : No known significant effects or critical hazards.

Skin : Harmful in contact with skin. Moderately irritating to the skin.

Inhalation : No known significant effects or critical hazards.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Other special considerations

Medical conditions aggravated by over-exposure : None known.

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Name	CAS number	%	Exposure limits
PROPYLENE GLYCOL	57-55-6	30 - 50	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hours.
BENZYL ALCOHOL	100-51-6	10 - 30	AIHA WEEL (United States, 10/2011). TWA: 10 ppm 8 hours.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

- Eye contact** : Affected individual should remove contact lens, if present. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.
- Skin contact** : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Get medical attention if irritation develops.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

- Flammability of the product** : Non-flammable.
- Products of combustion** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides
- Fire hazards in the presence of various substances** : Flammable in the presence of the following materials or conditions: heat.
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : Keep unnecessary personnel away. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Use suitable protective equipment (section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Small spill : Absorb with an inert material and place in an appropriate waste disposal container.
Large spill : Use appropriate containment to avoid environmental contamination. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal.

7 . Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Do not reuse container.
- Storage** : Keep container tightly closed. Store in a dry, cool and well-ventilated area. Store away from incompatible materials (see Section 10). Store in accordance with local regulations.

8 . Exposure controls/personal protection

- Engineering measures** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

8 . Exposure controls/personal protection

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

* Occupational Exposure Limit(s), if available, are listed in section 3

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: 95°C (203°F)

Values provided should not be construed as specifications. See product specification for additional information.

10 . Stability and reactivity

- Stability** : The product is stable.
- Hazardous polymerization** : Will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

<u>Ingredient name</u>	<u>CAS #</u>	<u>Result</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
PROPYLENE GLYCOL	57-55-6	LD50 Dermal	Rabbit	20800 mg/kg	-
		LD50 Intramuscular	Rat	14 g/kg	-
		LD50 Intramuscular	Rat	20000 mg/kg	-
		LD50 Intraperitoneal	Rat	6660 mg/kg	-
		LD50 Intravenous	Rat	6800 mg/kg	-
		LD50 Intravenous	Rat	6423 mg/kg	-
		LD50 Oral	Rat	20 g/kg	-
		LD50 Subcutaneous	Rat	28000 mg/kg	-
		LD50 Subcutaneous	Rat	22500 mg/kg	-
		TDL _o Intraperitoneal	Rat	19500 mg/kg	-
BENZYL ALCOHOL	100-51-6	LD50 Dermal	Rabbit	2000 mg/kg	-
		LD50 Intra-arterial	Rat	441 mg/kg	-
		LD50 Intraperitoneal	Rat	400 mg/kg	-
		LD50 Intravenous	Rat	53 mg/kg	-
		LD50 Oral	Rat	1.5 mL/kg	-
		LD50 Oral	Rat	1660 mg/kg	-
		LD50 Oral	Rat	1230 mg/kg	-
		LDLo Intraperitoneal	Rat	650 mg/kg	-
		LDLo Subcutaneous	Rat	1700 mg/kg	-
		TDL _o Intraperitoneal	Rat	514 mg/kg	-

Chronic effects

No known significant effects or critical hazards.

Other toxic effects on humans

11 . Toxicological information

No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.

Specific effects on humans

Mutagenicity / Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
PROPYLENE GLYCOL	-	Acute EC50 >1000 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	US EPA	Acute EC50 1000 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	US EPA	Acute EC50 110 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 >10000000 µg/l Fresh water	Daphnia - Water flea - Daphnia magna - 6 to 24 hours	48 hours
	-	Acute LC50 34060 to 39339 mg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - <=7 days	96 hours
	-	Acute LC50 15052 to 17561 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	-	Acute LC50 5122 to 6011 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	-	Acute LC50 4919 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	-	Acute LC50 1000 mg/l Marine water	Crustaceans - Amphipod - Chaetogammarus marinus - Young - 5 mm	48 hours
	-	Acute LC50 55770000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - <=7 days	96 hours
	-	Acute LC50 1020000 µg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - <24 hours	48 hours
	-	Acute LC50 710000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - <=7 days	96 hours
	BENZYL ALCOHOL	-	Acute LC50 460000 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm
-		Acute LC50 15000 µg/l Marine water	Fish - Inland silverside - Menidia beryllina - 40 to 100 mm	96 hours
-		Acute LC50 10000 µg/l Fresh water	Fish - Bluegill - Lepomis macrochirus - 33 to 75 mm	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains

13 . Disposal considerations

and sewers.

14 . Transport information

DOT Classification : Refer to the bill of lading for proper shipping information.

15 . Regulatory information

United States

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304: No products were found.
SARA 311/312 Hazards identification: Immediate (acute) health hazard

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

State regulations

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: BENZYL ALCOHOL; C.I. ACID BLUE 9, DISODIUM SALT
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: PROPYLENE GLYCOL; 1,2-PROPANEDIOL
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: 1, 2-PROPANEDIOL; BENZENEMETHANOL
Rhode Island Hazardous Substances: None of the components are listed.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists : **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. See Section 11 for more detailed information on health effects and symptoms.

Europe

Hazard symbol or symbols :



Risk phrases : R20/22- Harmful by inhalation and if swallowed.

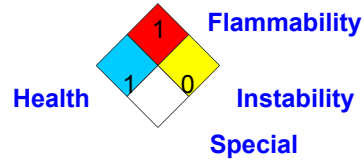
16 . Other information

Label requirements : CAUSES SEVERE EYE BURNS. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. MAY CAUSE SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0
Personal protection	B

National Fire Protection Association (U.S.A.) :



History

Date of issue : 23 September 2014

Date of previous issue : No previous validation

 Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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