

SAFETY DATA SHEET

MSDS No. EA-H-0042

Date Revised: 4/Sep/2020

1. Identification of the substance / preparation and of the company

Product : Magic INK Refill 60ml
 Color : Black, Red, Blue, Green, Yellow, Brown, Orange, Violet, Yellow Green,
 Yellow Ocher, Sky Blue, Pink, Gray, Pale Orange, Dark Brown, Olive Green
 Company : Teranishi Chemical Industry Co., Ltd.
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2. Hazards identification

This product is considered safe under normal use conditions.
 Although the following classifications are adopted to the ink, its volume in the pen is a little and it is not considered as hazardous.

GHS Classification (Japan)

Hazards Class	Hazard Class and Category
Flammable liquid	Flam. Liq. 3
Acute toxicity (Oral)	Acute Tox. 5 (Black, Blue, Yellow, Yellow Green, Yellow Ocher, Gray, Pale Orange, Dark Brown, Olive Green : Isobutyl alcohol)
Acute toxicity (Dermal)	Acute Tox. 5 (Black, Blue, Yellow, Yellow Green, Yellow Ocher, Gray, Pale Orange, Dark Brown, Olive Green : Isobutyl alcohol)
Acute toxicity (inhalation : Vapors)	Acute Tox. 5 (Black, Blue, Yellow, Yellow Green, Yellow Ocher, Gray, Pale Orange, Dark Brown, Olive Green : Isobutyl alcohol)
Skin corrosion/irritation	Acute Tox. 4 (Brown, Pink : 1-methoxy-2-propanol)
Serious eye damage/eye irritation	Skin Irrit. 2 (m-Xylene, 1-methoxy-2-propanol) Eye Dam. 2A-2B (m-Xylene, Isobutyl alcohol, 1-methoxy-2-propanol, Rosin)
Skin sensitization	Skin Sens. 1 (Black, Blue : Rosin)
Reproductive toxicity	Repr. 2 (m-Xylene)
Specific target organ toxicity - single exposure	STOT SE 3 (narcotic effects) (m-Xylene, Isobutyl alcohol, 1-methoxy-2-propanol) STOT SE 3 (respiratory tract irritation) (Black, Blue, Yellow, Yellow Green, Yellow Ocher, Pale Orange, Dark Brown, Olive Green : Isobutyl alcohol)
Specific target organ toxicity - repeated exposure	STOT RE 1 (nervous) (m-Xylene)
Hazardous to the aquatic environment	Aquatic Acute 2 (m-Xylene)

GHS Hazard Pictgrams :



Signal words : Danger

Hazard Statement : Flammable liquid and vapor
 May be harmful if swallowed
 May be harmful in contact with skin
 May be harmful if inhaled (vapors)
 Causes skin irritation
 Causes serious eye irritation

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May cause an allergic skin reaction
 Suspected of damaging fertility or the unborn child
 May cause drowsiness and dizziness
 May cause respiratory irritation
 Causes damage to organs (nervous) through prolonged or repeated exposure
 Toxic to aquatic life

Precautionary Statements :

Do not handle until all safety precautions have been read and understood.
 Use only in the well-ventilated areas. Recap after use.
 Be careful of handling not to spill.
 Do not shake and drop to avoid ink leakage or damage.
 Keep out of reach of children.
 Keep cool and protect from sunlight. Keep away from hot surfaces.
 Do not eat, drink or smoke when using this product.
 If on skin: Wash with soap and water.
 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes.
 If eye irritation persists, get medical advice/attention.
 If you feel unwell or skin irritation occurs, get medical advice/attention.
 Wash thoroughly after handling.
 Keep away from ignition sources such as heat/sparks/open flame.
 Avoid release to the environment. - if this is not the intended use.

3. Composition / Information on ingredients

CHEMICAL PRODUCT : Mixture (Oil based marking pen ink)

Ingredients	CAS No.	% BY WEIGHT							
		Black	Red	Blue	Green	Yellow	Brown	Orange	Violet
m-Xylene	108-38-3	58	73	59	74	68	64	77	68
Isobutyl alcohol	78-83-1	14	-	14	-	14	-	-	-
1-methoxy-2-propanol	107-98-2	-	-	-	-	-	12	-	-
Benzyl alcohol	100-51-6	-	-	-	4	-	-	-	-
Resin	Confidential	16	20	21	15	15	17	18	29
Oil Dye	Confidential	12	7	3	2	3	7	5	1
Copper compound (Oil Dye)	Confidential	-	-	3	5	-	-	-	1
Addition-agent etc.	Confidential	-	< 0.1	-	-	-	-	-	1

Ingredients	CAS No.	% BY WEIGHT							
		Yellow Green	Yellow Ocher	Sky Blue	Pink	Gray	Pale Orange	Dark Brown	Olive Green
m-Xylene	108-38-3	67	66	68	65	64	64	75	70
Isobutyl alcohol	78-83-1	13	17	-	-	16	15	1	10
1-methoxy-2-propanol	107-98-2	-	-	-	7	-	-	-	-
Benzyl alcohol	100-51-6	< 1	< 1	-	-	-	-	< 1	1
Resin	Confidential	18	14	30	26	19	20	18	15
Oil Dye	Confidential	1	3	-	2	1	< 1	6	3
Copper compound (Oil Dye)	Confidential	1	< 1	2	-	-	-	-	1
Addition-agent etc.	Confidential	-	-	-	-	-	-	-	-

(specifications of the ink formulation)

Copper compound : Blue 0.16%, Green 0.18%, Violet 0.06%, Yellow Green 0.02%,
 Yellow Ocher 0.01%, Sky Blue 0.09%, Olive Green 0.04% as Cu
 Rosin (8050-09-7) : [content rate : Black 2.4%, Blue 2.4%, Gray 0.1%]

[Impurities (The chemical listed by Japanese regulations.

Their concentration is less than the cutoff value.]

Diphenylamine (122-39-4) : [content rate : Black 0.23%, Brown 0.01%, Gray 0.01%, Dark Brown 0.02%]
 Aniline (62-53-3) : [content rate : Black 0.05%, Brown <0.01%, Gray <0.01%, Dark Brown <0.01%]

4-(2,4,4-Trimethylpentan-2-yl)phenol (4-(1,1,3,3-tetramethylbutyl)phenol) (140-66-9) :
 [content rate : Red 0.01%, Blue 0.2%, Green 0.02%, Brown 0.07%, Orange 0.01%, Violet 0.64%,
 Yellow Green <0.01%, Yellow Ocher <0.01%, Pink 0.59%, Pale Orange <0.01%,
 Dark Brown 0.06%, Olive Green <0.01%]
 4-tert-Butylphenol (98-54-4) : [content rate : Violet 0.06%, Pink 0.04%]
 Naphthalene(91-20-3) : [content rate : Dark Brown <0.01%]
 Indene(95-13-6) : [content rate : Dark Brown <0.01%]
 n-Alkylbenzenesulfonic acid and its salts(alkyl C=10-14) : [content rate : Pink 0.2%]
 Toluene (108-88-3) : [content rate : Red <0.01%, Blue 0.03%, Green <0.01%, Brown 0.01%,
 Orange <0.01%, Violet 0.05%, Yellow Green <0.01%, Yellow Ocher <0.01%,
 Pink 0.06%, Dark Brown <0.01%, Pale Orange <0.01%, Olive Green <0.01%]
 Formaldehyde (50-00-0) : [content rate : Red, Blue, Green, Brown, Orange, Violet, Yellow Green,
 Yellow Ocher, Pink, Dark Brown, Pale Orange, Olive Green <0.01%]

4. First aid measures

INHALATION : Move to fresh air. The nasal cavity and the mouth are washed by gargle etc.
 Medical attention is received if necessary.
 SKIN CONTACT : Wash skin with plenty of soap and water. Wash contaminated clothing before use.
 If irritation is continued, get medical attention.
 EYE CONTACT : Rinse cautiously with water. If eye irritation persists, get medical attention.
 INGESTION : Rinse mouth with water or wet towel.
 Immediate induce vomiting unless the victim is unconscious.
 Immediately call a doctor/physician.

5. Fire-fighting measures

EXTINCTION METHOD : Fire is extinguished from the windward by using extinguishing media.
 EXTINGUISHING MEDIA : Dry chemical powder, carbon dioxide, foam etc.

6. Accidental release measures

Do not get in eyes or on skin. Ventilate area.
 Wear suitable protective equipment (gloves, goggles, respiratory protection) when necessary.
 Avoid release to the the environment.
 Wipe up the spilled ink with absorbent material (cloth etc.).
 Keep away from ignition sources such as heat, sparks or open flame.

7. Handling and storage

HANDLING : Avoid contact with skin or eyes. Recap after use.
 Be careful of handling not to spill.
 Use only in the well-ventilated areas.
 Do not treat near the fire, the spark, and the high temperature.
 Do not eat, drink or smoke when using this product.
 STORAGE : Keep away from sunlight. Keep cool and dry in a well-ventilated area.
 Keep away from reach of children.

8. Exposure controls / Personal protection

EXPOSURE LIMIT : Non established.
 VENTILATION : Use in well ventilated area.
 PERSONAL PROTECTION : None. Avoid contact with skin or eyes.

Ingredients	CAS No.	ACGIH 2010 TLV
m-Xylene	108-38-3	TWA 100ppm, STEL 150ppm
Isobutyl alcohol	78-83-1	TWA 50ppm
1-methoxy-2-propanol	107-98-2	TWA 100ppm, STEL 150ppm
Benzyl alcohol	100-51-6	N/A

9. Physical and chemical properties

PHYSICAL STATE : liquid (Each color)
 ODOR : Solvent odor
 Relative density : about 0.9
 Flash point : Black, Blue 23 °C, Red, Green, Orange, Violet, Sky Blue 27.5 °C
 Yellow, Yellow Green, Yellow Ocher, Gray, Pale Orange, Olive Green 24.5 °C
 Brown, Pink, Dark Brown 26 °C
 Ignition point : 528 °C (m-Xylene)
 Boiling point : 139 °C (m-Xylene)
 Percent volatile by volume : 68 - 83%
 Vapor pressure (20°C) : 5 mmHg (m-Xylene)
 Vapor density (air=1) : 3.7
 Flammability limits (% by volume) : Lower 1.1% Upper 7.0% (m-Xylene)
 Solubility in water : Insoluble (For dry solid)

10. Stability and reactivity

Not data available : Stable under normal conditions of use.

11. Toxicological information

Product (Ink) : Not data available

Ingredients of raw materials :

ACUTE TOXICITY

m-Xylene : Oral LD50 (rat) 5011mg/kg
 Isobutyl alcohol : Oral LD50 (rat) 2596mg/kg
 1-methoxy-2-propanol : Oral LD50 (rat) >5000mg/kg
 Benzyl alcohol : Oral LD50 (rat) 1230mg/kg
 Diphenylamine : Oral LD50 (rat) 1120mg/kg
 m-Xylene : Dermal LD50 (rabbit) 12180mg/kg
 Isobutyl alcohol : Dermal LD50 (rabbit) 2523mg/kg
 1-methoxy-2-propanol : Dermal LD50 (rabbit) 13000mg/kg

GHS classification (JAPAN)

	Classification
m-Xylene	Skin Irrit. 2 Eye Irrit. 2A Repr. 2 STOT SE 3 (narcotic effects) STOT RE 1 (nervous) Asp. Tox. 1
Isobutyl alcohol	Acute Tox. 5 (oral) Acute Tox. 5 (dermal) Acute Tox. 5 (inhalation-vapors) Skin Irrit. 2 Eye Irrit. 2A STOT SE 3 (respiratory tract irritation, narcotic effects) Asp. Tox. 2
1-methoxy-2-propanol	Acute Tox. 4 (inhalation-vapors) Eye Irrit. 2B STOT SE 3 (narcotic effects)
Benzyl alcohol	Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 3 (inhalation-Vapours) Eye Irrit. 2
Rosin	Eye Irrit. 2B Skin Sens. 1
Diphenylamine	Acute Tox. 4 (Oral) Eye Irrit. 1 Skin Sens. 1 STOT SE 1 (blood system, urinary organs) STOT RE 1 (cardiovascular, blood, bladder) STOT RE 2 (kidney)

12. Ecological information

Product (Ink) : Not data available

GHS classification (JAPAN)

	Classification
m-Xylene	Aquatic Acute 2
Rosin	Aquatic Acute 2 Aquatic Chronic 2
Diphenylamine	Aquatic Acute 1 Aquatic Chronic 1

13. Disposal considerations

Dispose in accordance with local state and federal regulations.

14. Transport information

Protect from sunlight. keep away from heat. Note the water wet.

Avoid rough handling.

Follow all regulations in your countries.

[UN HAZARD CLASS : 3. Flammable liquid (P.G. III)]

UN NUMBER : 1993 (flammable liquid. n.o.s)]

The amount of filling ink : about 60ml (about 54g) per piece

※Please contact the carrier when you send this product overseas. because it contains flammable liquid.

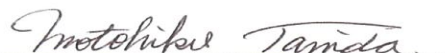
15. Regulatory information

Follow all regulations in your countries.

16. Other informations

Substances do not directly mean legally regulated. It depends on use and other conditions.

*To the best of our knowledge, the information contained here is accurate.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards as described herein. we cannot guarantee that these are the only hazards that exist.*


prepared by chief of laboratory