

Safety Data Sheet

1. Identification of the mixture and of the company

Product name : Ink for MCKEE EXTRA FINE: MO-120-MC-BK ①, BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for MCKEE CARE EXTRA FINE REPLACEABLE TYPE: YYTS5-BK①,
 BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for REPLACEABLE INK CARTRIDGE FOR YYTS5: RYYTS5-BK①,
 BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for MCKEE KNOCK: P-YYSS6-BK ①, BL, G, P, R
 Ink for MCKEE ULTRA FINE: YTH3-BK ①, BL, R
 Ink for HI MCKEE: MO-150-MC-BK ②, BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for HI MCKEE CARE REPLACEABLE TYPE: YYT5-BK ②,
 BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for REPLACEABLE INK CARTRIDGE FOR YYT5: RYYT5-BK ②,
 BL, LB, G, LG, Y, P, PU, R, OR, LE, E
 Ink for MCKEE KNOCK BOLD : P-YYSB6-BK②, BL, R
 Ink for ONAMAE MCKEE Double-ended: YYTS7-BK ③
 Ink for ONAMAE MCKEE FINE: YYSS7-BK ③
 Ink for NAME PEN FINE: MO-12A1-SNZ-BK ③, BL, R
 Ink for Parment Marker Bullet Tip: PMB-BK② , BL, R, G
 Ink for Parment Marker Chisel Tip: PMC-BK② , BL, R, G
 Ink for M-80: M-80-BK② , BL, R, G

Company : ZEBRA CO., LTD.

TEL:
 FAX:
 Emergency telephone

Product use : Infill Ink for above product

2. Hazards identification

GHS classification

Details are given on the Annex I .

GHS label elements

Pictograms or Symbol

• All ink except BK②, BL

Flame



Exclamation mark



Health Hazard



•BK② ink

Flame



Exclamation mark



•BL ink

Flame



Exclamation mark



Health Hazard



Corrosion

**Signal Word**•All ink except BK② : **Danger**•BK② : **Warning****Precautionary Statements****Prevention**

Read label and Material Safety Data Sheet before use.
 Keep away from heat/sparks/open flames/hot surfaces – No smoking
 Ground/bond container and receiving equipment
 Do not breathe dust/vapours.
 Use explosion-proof electrical/ventilating/light
 Take precautionary measures against static discharge
 Use only non-sparking tools
 Use only outdoors or in a well-ventilated area
 Do not eat, drink or smoke when using this product
 Wear protective gloves/eye protection.
 Wash hand thoroughly after handling
 Avoid release to the environment

Response

In case of fire: Use suitable method for extinction
 Obtain special instructions before use
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF IN EYES: Immediately call a POISON CENTER or doctor/physician .
 Rinse continuously with water for several minutes.
 Remove contact lenses if present and easy to do . Continue rinsing
 If eye irritation persists : Get medical advice/attention
 IF exposed or concerned: Get medical advice/attention
 Get Medical advice/attention if you feel unwell
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Storage

Store in a well ventilated place. Keep cool and container tightly closed.

Disposal

Dispose of contents/container to in accordance with local government regulation.

3. Composition/information on ingredients**Mixture****Component and Amount**

Details are given on the Annex II .

4. First-aid measures

After inhalation:

- Call a POISON CENTER or doctor/physician if you feel unwell
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.

After skin contact:

- Call a POISON CENTER or doctor/physician if you feel unwell
- If skin irritation occurs: Get medical advice/attention

After eye contact:

- Immediately call a POISON CENTER or doctor/physician .
- Rinse continuously with water for several minutes.
- Remove contact lenses if present and easy to do . Continue rinsing

After ingestion:

- Call a POISON CENTER or doctor/physician if you feel unwell

Protection of the person who takes first aid

- Nothing in particular.
-

5. Fire-fighting measures

Suitable Extinguishing media

- Carbon dioxide, dry chemical powder, water fog, foam

Prohibition extinguishing media for safety reason

- Water spray (straight)

Specific hazards

- Highly flammable. Will be easily ignited by heat, sparks or flames.
- May produce toxic fumes if burning.

Specific fire fighting procedures

- Spray water if have no effect on extinguishing fire because of very low flash point.
- If safe to do so, move undamaged containers from the fire area.
- If can't move the container , cool containers and surrounding with spray water.
- Cool containers with large quantities of water until well after extinguished the fire.

Special protective equipment for fire-fighters

- Fire-fighting should be performed from the windward side.
- Respiratory protection, and other suitable protective equipment

Special protective equipment for fire-fighters

6. Accidental release measures

Personal precautions

- The pollution area should be established as off limits without concerned persons.

Protective equipment and emergency measure

- Do not touch the leakage or its damaged container without suitable protection.
- Do not walk through the leakage.
- Keep sufficient ventilation if the area is indoor.
- Remove ignition sources.

Environmental precautions

- Keep away from drains, and prevent from releasing to the environment.

Methods for cleaning up

- Use non-flammable absorbent materials, and put them in airtight container.
- Dispose of absorbent in accordance with law.

Prevention of secondary disaster

- Remove nearby ignition source and hot surface.

Equipped with suitable extinguishing media. (Preparation for in case of ignition)

7. Handling and storage

Handling

Technical measures

Do suitable equipment measures and use suitable protection that refer to "8. Exposure control/ personal protection".

Local exhaust ventilation and general ventilation

Use local exhaust ventilation and general ventilation that refer to "8. Exposure control/ personal protection".

Caution

When handling do not use high temperature articles, spark and fire.

Handle container with care, do not make it turn over, drop, give impact and drag.

Do not breathe, contact and swallow.

Maintain air concentrations below exposure limit using exhaust ventilation.

Do not eat, drink or smoke when using this product.

Wash hand thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Avoid contact

Refer to section 10 about stability and reactivity.

Storage

Incompatible materials

Refer to section 10 about stability and reactivity.

Storage condition

Store away from heat/sparks/open flames – No smoking

Store in a well ventilated place. Keep cool and container tightly closed.

Store locked up.

The Containers

Use the container that our company filled up when ship products

8. Exposure control/ personal protection

Exposure limit values

Details are given on the Annex II.

Equipment measures

Put up local exhaust ventilation. Use explosion-proof electrical/ventilating/lighting.

Take precautionary measures against static discharge.

Put up emergency eyewash and shower in case of storage or handling about this product.

Protection

Respiratory protection

Use suitable respiratory protection.

Hand protection

Use suitable protective gloves.

Eye protection

Use suitable eye protection.

Skin/body protection

Use suitable face protection.

Hygiene measures

Do not eat ,drink or smoke when using this product.

Wash thoroughly after handling.

9.Physical and chemical properties

Appearance	Coloring liquid
Odour	Peculiar odour
pH	No data available
Melting point / Coagulating point	No data available
Boiling point	84.0–117.0 °C
Flash point	All ink except BK③ : 25.3–33.4 °C BK③ : 19.4 °C
Explosive limit UEL	No data available
Explosive limit LEL	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific gravity	0.95–0.98
Water solubility	No data available
Partition coefficient n-octanol/water	No data available
Ignition point	No data available
Decomposition point	No data available

10. Stability and reactivity

Chemical stability	This product is stable in normal condition.
Materials to Avoid	Strong oxidizing agent
Conditions to avoid	High temperature
Incompatible materials	Strong oxidizing agent
Hazardous decomposition products	Nothing in particular.

11. Toxicological information

Details are given on the Annex I .

12. Ecological information

Hazardous to the aquatic environment(acute)	Classification not possible
Hazardous to the aquatic environment(chronic)	Classification not possible
Degradability	No data is available
Bioaccumulative potential	No data is available
Mobility in soil	No data is available

13. Disposal considerations**Waste residues**

Disposal must be made according to official regulations.

Avoid release to the environment.

Contaminated container and packaging

Do not flush into the sewer.

Remove all contents when you dispose of empty containers.

14. Transport information

○About Product

This products is not applied to Dangerous Goods because of ink storage type marking pen.

○About Ink

International regulation

All ink except BK③

IMDG (maritime transport)

UN No.	1993
Class	3
Packing Group	III
Marine Pollutant	Not applicable

ICAO/IATA (air transport)

UN No.	1993
Class	3
Packing Group	III

BK③ ink

IMDG (maritime transport)

UN No.	1993
Class	3
Packing Group	II
Marine Pollutant	Not applicable

ICAO/IATA (air transport)

UN No.	1993
Class	3
Packing Group	II

Special precautions

Prevent from falling, stumbling and doing damage when the container loading..

Avoid acute vibration and friction for container.

If there are some indications of hazard in transporting like acute leak in transporting, take emergency measures and report the accident at once to disaster management agency.

Avoid transport with foods or feeds.

15. Regulatory information(Japan)

Details are given on the Annex II.

16. Other information

In this sheet, the contents of ingredients and the value of physical and chemical properties

are not guaranteed performance.

The information contained in this sheet is based on the data available at now.

But this shall not constitute a guarantee for any specific or classification.

Please be alert to handling this product because chemicals shall have unknown hazards.

This sheet may be revised when we get new information.

The information is assumed in the case of large-scale handling on business operations.

They cannot be always applicable to general use of writing instruments.

○Country of manufacture : JAPAN

MCKEE EXTRA FINE	MO-120-MC-BK ,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
MCKEE CARE EXTRA FINE REPLACEABLE TYPE	YYTS5-BK,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
REPLACEABLE INK CARTRIDGE FOR YYTS5	RYYTS5-BK,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
MCKEE ULTRA FINE	YYTH3-BK ,BL,R
HI MCKEE	MO-150-MC-BK ,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
HI MCKEE CARE REPLACEABLE TYPE	YYT5-BK ,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
REPLACEABLE INK CARTRIDGE FOR YYT5	RYYT5-BK ,BL,LB,G,LG,Y,P,PU,R,OR,LE,E
ONAMAE MCKEE Double-ended	YYTS7-BK
ONAMAE MCKEE FINE:	YYSS7-BK
NAME PEN FINE	MO-12A1-SNZ-BK ,BL,R

○Country of manufacture : CHINA

MCKEE KNOCK	P-YYSS6-BK ,BL,G,P,R
MCKEE KNOCK BOLD	P-YYSB6-BK,BL,R

○Country of manufacture : INDONESIA

Parment Marker Bullet Tip	PMB-BK ,BL,R,G
Parment Marker Chisel Tip	PMC-BK ,BL,R,G
M-80	M-80-BK ,BL,R,G

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS) second revised edition 2007
 Recommendation of Occupational Exposure Limits(2009-2010) by The Japan Society for Occupational Health
 2009 TLVs and BEIs by ACGIH

Annex I of Material Safety Data Sheet

Date of issue : 2010-12-10
Revision Date : 2022-09-27

2. Hazards identification

		BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Physical hazards															
Flammable liquids	Category 2	-	-	○	-	-	-	-	-	-	-	-	-	-	-
	Category 3	○	○	-	○	○	○	○	○	○	○	○	○	○	○
Pyrophoric liquids	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Self-heating mixtures	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Corrosive to metals	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Health hazards															
Acute toxicity-Oral	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Acute toxicity-Dermal	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Acute toxicity-Inhalation: vapour	Category 4	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Skin corrosion / irritation	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Serious eye damage / eye irritation	Category 1	-	-	-	○	-	-	-	-	-	-	-	-	-	-
	Category 2A	○	○	○	-	○	○	○	○	○	○	○	○	○	○
Respiratory or skin sensitization	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Germ cell mutagenicity	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Carcinogenicity	Category 1A	○	-	○	○	○	○	○	○	○	○	○	○	○	○
	Classification not possible	-	○	-	-	-	-	-	-	-	-	-	-	-	-
Reproductive toxicity	Category 1A	-	-	○	○	○	○	○	○	○	○	○	○	○	○
	Classification not possible	-	○	-	-	-	-	-	-	-	-	-	-	-	-
Specific target organ toxicity (Single exposure)	Category 2 (nerve center, systemic toxicity)	○	-	-	○	○	○	○	○	○	○	○	○	○	○
	Category 2 (nerve center, kidney)	-	○	-	-	-	-	-	-	-	-	-	-	-	-
	Category 3 (narcotic effects, respiratory)	-	○	○	-	-	-	-	-	-	-	-	-	-	-
Specific target organ toxicity (Repeated exposure)	Category 1 (liver, nerve center)	-	-	○	-	-	-	-	-	-	-	-	-	-	-
	Category 2 (liver, blood vessel)	○	-	-	○	○	○	○	○	○	○	○	○	○	○
	Category 2 (nerve center)	-	○	-	-	-	-	-	-	-	-	-	-	-	-
	Classification not possible	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aspiration hazard	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Environmental hazards															
Hazardous to the aquatic environment	Category 3	-	○	-	-	-	-	-	-	-	-	-	-	-	-
	Classification not possible	○	-	○	○	○	○	○	○	○	○	○	○	○	○
Hazardous to the aquatic environment	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hazardous to the ozone layer	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hazard statement															
Highly flammable liquid and vapour		-	-	○	-	-	-	-	-	-	-	-	-	-	-
Flammable liquid and vapour		○	○	-	○	○	○	○	○	○	○	○	○	○	○
Harmful if inhaled		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Causes serious eye damage		-	-	-	○	-	-	-	-	-	-	-	-	-	-
Causes serious eye irritation		○	○	○	-	○	○	○	○	○	○	○	○	○	○
May cause cancer		○	-	○	○	○	○	○	○	○	○	○	○	○	○
May damage fertility or the unborn child		○	-	○	○	○	○	○	○	○	○	○	○	○	○
May cause damage to organs(nerve center, systemic toxicity)		○	-	-	○	○	○	○	○	○	○	○	○	○	○
May cause damage to organs(nerve center, kidney)		-	○	-	-	-	-	-	-	-	-	-	-	-	-
Causes damage to organs through prolonged or repeated exposure (liver, nerve center)		-	-	○	-	-	-	-	-	-	-	-	-	-	-
May cause damage to organs through prolonged or repeated exposure (liver, blood vessel)		○	-	-	○	○	○	○	○	○	○	○	○	○	○
May cause damage to organs through prolonged or repeated exposure (nerve center)		-	○	-	-	-	-	-	-	-	-	-	-	-	-
May cause respiratory irritation		-	○	○	-	-	-	-	-	-	-	-	-	-	-
May cause drowsiness or dizziness		-	○	○	-	-	-	-	-	-	-	-	-	-	-
Harmful to aquatic life		-	○	-	-	-	-	-	-	-	-	-	-	-	-

Annex II of Material Safety Data Sheet

3. Composition/information on ingredients

Component and Amount	CAS No.	Gazetted List in Japan	BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
1-Methoxy-2-propanol	107-98-2	(2)-404	70-75%	75-80%	50-55%	70-75%	70-75%	65-70%	70-75%	70-75%	70-75%	65-70%	70-75%	70-75%	70-75%	70-75%
Ethanol	64-17-5	(2)-202	5-10%	-	25-30%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%	5-10%
2-Propanol	67-63-0	(2)-207	1-5%	-	-	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%	1-5%
Benzyl alcohol	100-51-6	(3)-1011	-	5-10%	-	-	-	-	-	-	-	-	-	-	-	-
Methyl ethyl ketone	78-93-3	(2)-542	<1%	-	-	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Resins	Nondisclosure		5-10%	5-10%	10-15%	15-20%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%
Dyes	Nondisclosure		10-15%	10-15%	15-20%	1-5%	1-5%	5-10%	5-10%	1-5%	1-5%	5-10%	5-10%	1-5%	5-10%	5-10%
Additives	Nondisclosure		-	1-5%	-	-	-	-	-	-	-	-	-	-	-	-

8. Exposure control/ personal protection

	Permissible concentration		Administrative levels
	The Japan Society for Occupational Health	ACGIH	Ministry of Health, Labour and Welfare(JAP)
1-Methoxy-2-propanol	Not established	100ppm(TLV-TWA 2009) 150ppm(TLV-STEL/C 2009)	Not established
Ethanol	Not established	1000 ppm(TLV-TWA 2006)	Not established
2-Propanol	400ppm、980mg/m3 (2021)	200ppm(TLV-TWA 2009) 400ppm(TLV-STEL/C 2009)	200 ppm
Benzyl alcohol	25 mg/m3 (2021)	Not established	Not established
Methyl ethyl ketone	200ppm、590mg/m3 (2021)	200ppm(TLV-TWA 2009) 300ppm(TLV-STEL/C 2009)	200 ppm

15. Regulatory information(Japan)

Industrial Safety and Health Act

Article 57-2 paragraph (1)

	BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
1-Methoxy-2-propanol	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Ethanol	○	-	○	○	○	○	○	○	○	○	○	○	○	○
2-Propanol	○	-	-	○	○	○	○	○	○	○	○	○	○	○
Copper Compounds	-	-	-	○	-	-	-	-	○	-	-	○	-	-
Chromium Compounds	○	-	○	-	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	-	○	-	-	-	-	-	-	-	-	-	-	-	-
Mineral oil	-	-	-	○	○	○	○	○	○	○	○	○	○	○

Order for Enforcement Article 1, dangerous substances •inflammable substances : Applicable

Poisonous and Deleterious Substances Control Law : Not applicable

Act on confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management There of Article 2 Class I , II Designated Chemical Substances : Not applicable

Fire Service Law

	BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Category IV Class I petroleum non water soluble	-	-	○	-	-	-	-	-	-	-	-	-	-	-
Category IV Class II petroleum non water soluble	○	○	-	○	○	○	○	○	○	○	○	○	○	○

Ship Safety Act

	BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Flammable liquid	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Civil Aviation Law

	BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Flammable liquid	○	○	○	○	○	○	○	○	○	○	○	○	○	○