

# Material Safety Data Sheet

Date of issue: 2010-12-10  
Revision Date: 2015-03-04

## 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: YYTH3-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 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

Company : ZEBRA CO., LTD.  
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 FAX: +81-3-3268-1197  
 Emergency telephone : +81-3-3268-1193  
 This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
 (Japan time)

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

Flame



Exclamation mark



Health Hazard



#### Signal Word

Details are given on the Annex I .

#### Hazard statement

Details are given on the Annex I .

## Precautionary Statements

### Prevention

Read label and Material Safety Data Sheet before use.  
Keep away from heat/sparks/open flames/hot surfaces – No smoking  
Do not breathe dust/vapours.  
Ground/bond container and receiving equipment  
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  
IF ON SKIN : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
If skin irritation occurs or you feel unwell : Get medical advice/attention  
If in eyes : Rinse cautiously with water for several minutes.  
Remove contact lenses if present and easy to do – continue rinsing.  
IF SWALLOWED: Immediately call a doctor/physician. Do not induce vomiting

### 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.

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## 3. Composition/information on ingredients

### Mixture

#### Component and Amount

Details are given on the Annex II .

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## 4. First-aid measures

### After inhalation:

Get Medical advice/attention if you feel unwell  
Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### After skin contact:

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

### After eye contact:

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

### After ingestion: expected immediate and delayed symptoms.

Immediately call a doctor/physician . Rinse mouth. Do NOT induce vomiting  
Eye, skin and respiratory tract irritation occurs.  
Headache, nausea, dizziness, lethargy, diarrhea, ataxia occurs.

### Protection of the person who takes first aid

Nothing in particular.

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## 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

Extremely 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

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## 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)

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## 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**

<b>Appearance</b>	Coloring liquid
<b>Odour</b>	Peculiar odour
<b>pH</b>	No data available
<b>Melting point / Coagulating point</b>	No data available
<b>Boiling point</b>	84.0–117.0 °C
<b>Flash point</b>	All ink except BK③ : 25.3–33.4 °C BK③ : 19.4 °C
<b>Explosive limit UEL</b>	No data available
<b>Explosive limit LEL</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Specific gravity</b>	0.95–0.98
<b>Water solubility</b>	No data available

Partition coefficient n-octanol/water	No data available
Igniton 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**

Details are given on the Annex I .

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

○Country of manufacture : JAPAN  
NAME PEN FINE

MO-12A1-SNZ-BK ,BL,R

○Country of manufacture : CHINA  
MCKEE KNOCK

P-YYSS6-BK ,BL,G,P,R

**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  
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2. Hazards identification		BK ①	BK ②	BK ③	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
<b>Physical hazards</b>															
Flammable liquids	Category 2			○											
	Category 3	○	○		○	○	○	○	○	○	○	○	○	○	○
Pyrophoric liquids	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Self-heating mixtures	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Corrosive to metals	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>Health hazards</b>															
Acute toxicity-Oral	Category 5		○		○	○	○	○	○	○	○	○	○	○	○
	Not classified	○		○											
Acute toxicity-Dermal	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Acute toxicity-Inhalation : vapour	Not classified	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Acute toxicity-Inhalation : mist	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Skin corrosion / irritation	Category 3	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Serious eye damage / eye irritation	Category 2	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Respiratory or skin sensitization	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Germ cell mutagenicity	Category 1	○		○	○	○	○	○	○	○	○	○	○	○	○
	Classification not possible		○												
Carcinogenicity	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Reproductive toxicity	Category 1	○		○	○	○	○	○	○	○	○	○	○	○	○
	Classification not possible		○												
Specific target organ toxicity (Single exposure)	Category 1 (nerve center, kidney, systemic toxicity)	○		○	○	○	○	○	○	○	○	○	○	○	○
	Category 3 (narcotic effects)		○												
	Category 3 (narcotic effects, respiratory tract irritation)	○		○	○	○	○	○	○	○	○	○	○	○	○
Specific target organ toxicity (Repeated exposure)	Category 1 (liver)	○		○	○	○	○	○	○	○	○	○	○	○	○
	Category 2 (blood vessel, liver, spleen)	○		○	○	○	○	○	○	○	○	○	○	○	○
	Category 2 (nerve)	○		○	○	○	○	○	○	○	○	○	○	○	○
	Classification not possible		○												
Aspiration hazard	Category 2	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>Environmental hazards</b>															
Hazardous to the aquatic environment (acute)	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hazardous to the aquatic environment (chronic)	Classification not possible	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>GHS label elements</b>															
<b>Pictograms or Symbol</b>															
	Flame	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Exclamation mark	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Health Hazard	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>Signal Word</b>															
	DANGER	○		○	○	○	○	○	○	○	○	○	○	○	○
	WARNING		○												
<b>Hazard statement</b>															
Highly flammable liquid and vapour				○											
Flammable liquid and vapour		○	○		○	○	○	○	○	○	○	○	○	○	○
May be harmful if swallowed		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Causes mild skin irritation		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Causes serious eye damage		○	○	○	○	○	○	○	○	○	○	○	○	○	○
May cause genetic defects		○		○	○	○	○	○	○	○	○	○	○	○	○
May damage fertility or the unborn child		○		○	○	○	○	○	○	○	○	○	○	○	○
Causes damage to organs (nerve center, kidney, systemic toxicity)		○		○	○	○	○	○	○	○	○	○	○	○	○
May cause drowsiness or dizziness		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Causes damage to organs (liver) through prolonged or repeated exposure		○		○	○	○	○	○	○	○	○	○	○	○	○
May cause damage to organs (blood vessel, liver, spleen) through prolonged or repeated exposure		○		○	○	○	○	○	○	○	○	○	○	○	○
May be harmful if swallowed and enters airways		○	○	○	○	○	○	○	○	○	○	○	○	○	○



**Annex II of Material Safety Data Sheet**

Date of issue:2010-12-10  
Revision Date:2015-03-04

**3. Composition/information on ingredients**

Component and Amount	CAS No.	Reference Number in Gazetted List in Japan (Japanese Chemical Substances Control)	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	65-75%	70-80%	45-55%	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	1-10%		20-30%	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	1-10%			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		1-10%												
Methyl ethyl ketone	78-93-3	(2)-542	0-1%			0-1%	0-1%	0-1%	0-1%	0-1%	0-1%	0-1%	0-1%	0-1%	0-1%	0-1%
Resins		Nondisclosure	1-10%	1-10%	5-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%
Dyes		Nondisclosure	5-15%	5-15%	10-20%	5-10%	1-5%	5-10%	5-10%	1-5%	1-5%	5-10%	5-10%	1-5%	5-10%	5-10%
Additives		Nondisclosure		1-10%												

**8. Exposure control/ personal protection**

Chemical name	Permissible concentration		Administrative levels
	The Japan Society for Occupational Health	ACGIH TLVs and BEIs	Ministry of Health, Labour and Welfare(JAPAN)
1-Methoxy-2-propanol	Not established	100 ppm(TWA, 2009), 150 ppm(STEL/C, 2009)	Not established
Ethanol	Not established	1000 ppm(STEL/C, 2009)	Not established
2-Propanol	400ppm(2009)	200 ppm(TWA, 2009), 400 ppm(STEL/C, 2009)	200 ppm
Benzyl alcohol	Not established	Not established	Not established
Methyl ethyl ketone	200ppm(2009)	200 ppm(TWA, 2009), 300 ppm(STEL/C, 2009)	200 ppm

**15. Regulatory information(Japan)**

**Industrial Safety and Health Act**

**Article 57-2 paragraph (1) "notifiable substances"**

	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	○		○											

**Order for Enforcement Article 1, 6, 9-3 Appended Table 1 item(IV) dangerous substances ·inflammable substances**

BK (1)	BK (2)	BK (3)	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Applicable													

**Poisonous and Deleterious Substances Control Law Article 2 Appended Table 1 and 2**

BK (1)	BK (2)	BK (3)	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
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**

BK (1)	BK (2)	BK (3)	BL	R	G	Y	P	PU	E	OR	LB	LE	LG
Not applicable													

**Fire Service Law**

**Article 2 paragraph (7) hazardous material Appended Table 1  
Category IV Class I petroleum non water soluble  
Category IV Class II petroleum non water soluble**

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

**Ship Safety Act**

**Regulations for the carriage and storage of dangerous goods in ship Article 2, 3  
dangerous goods public notice Appended Table 1**

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

**Civil Aviation Law**

**Ordinance for Enforcement Article 194 dangerous goods public notice Appended Table 1**

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