

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 BOLD: MC-EB-450-BK,BL,G,Y,P,PU,R,E
Ink for MCKEE EXTRA BOLD: MC-EB-450-BKT,BLT,RT

Company : ZEBRA CO., LTD.
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN

TEL: +81-3-3268-1193
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.

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

Details are given on the Annex II .

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.

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

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	91–117 °C
Flash point	25–33 °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

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 applied to Dangerous goods and comes under UN No.3175.

○About Ink

The contents are as follows when transport only ink

International regulation

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

Special precautions

Prevent from falling, stumbleing 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

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: 2015-03-04

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

Annex II of Material Safety Data Sheet

Date of issue:2010-12-10
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3. Composition/information on ingredients			BK	BL	R	G	Y	P	PU	E
Component and Amount	CAS No.	Reference Number in Gazetted List in Japan (Japanese Chemical Substances Control Act)								
1-Methoxy-2-propanol	107-98-2	(2)-404	70-80%	70-75%	70-75%	65-70%	70-75%	70-75%	70-75%	65-70%
Ethanol	64-17-5	(2)-202		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%
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%
Resins	Nondisclosure		1-10%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%	10-15%
Dyes	Nondisclosure		5-15%	5-10%	1-5%	5-10%	5-10%	1-5%	1-5%	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	BL	R	G	Y	P	PU	E
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	BL	R	G	Y	P	PU	E
Applicable							

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

BK	BL	R	G	Y	P	PU	E
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	BL	R	G	Y	P	PU	E
Not applicable							

Fire Service Law

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

BK	BL	R	G	Y	P	PU	E
○	○	○	○	○	○	○	○

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	BL	R	G	Y	P	PU	E
Flammable liquid							

Civil Aviation Law

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

BK	BL	R	G	Y	P	PU	E
Flammable liquid							