

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UB-155 Black [uni-ball micro deluxe]
 Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363
 Creation Date : April 19, 2001
 Revision Date : September 30, 2011
 File No. : 066101A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Glycerine	56-81-5	Registered	2002895	< 10
Resins	Registered	Registered	Polymer	< 10
Carbon Black	1333-86-4	Registered	2156099	< 10
Additive	Registered	Registered	Polymer	< 10

Other parts : Other parts are excluded from 'chemical substances'.

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Information of components.

<Carbon Black>

MAJOR HEALTH HAZARDS: suspect cancer hazard (in animals)

PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.75g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of children.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, 1,2-Propanediol

metal salts, oxidizing materials, reducing agents

acids, bases, oxidizing materials, metal oxides, peroxides, Glycerine

reducing agents Resin

strong acids, alkalies, oxidizers, oxidizing materials Carbon Black

oxidizing materials, halogens Additive

strong oxidizers

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	5mg/m ³ TWA(respirable dust fraction), 15mg/m ³ TWA (total dust) 3.5mg/m ³	Glycerine Carbon Black
ACGIH	10mg/m ³ TWA 3.5mg/m ³ (total dust) TWA	Glycerine Carbon Black
EC	3.5mg/m ³	Carbon Black
UK	150ppm(474mg/m ³) TWA(total(vapor and particulates)), 10mg/m ³ TWA(particulates)	1,2-Propanediol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Low viscous liquid.
Color	: Black.
Odor	: None odor.
pH	: 8.4±0.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [1,2-Propanediol/ 99 C]
Autoignition temperature	: Not applicable. [Glycerine/ 370 C]
Explosion limits	: Not applicable. [Lower flammable limit / 2.6% , Upper flammable limit / 12.5% <1,2-Propanediol>]
Density	: about 1.1 / 25 C
Vapor density (air=1)	: Not available. [1,2-Propanediol/ 2.60-2.62]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 82-85%

10. STABILITY AND REACTIVITY

Stability : Stability.

Hazardous reactions : Will not occur.

Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition.
Avoid contact with incompatible materials.

Materials to avoid : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, metal salts, oxidizing materials, reducing agents	1,2-Propanediol
acids, bases, oxidizing materials, metal oxides, peroxides, reducing agents	Glycerine
strong acids, alkalies, oxidizers, oxidizing materials	Resin
oxidizing materials, halogens	Carbon Black
strong oxidizers	Additive

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
corrosive acrolein.	Glycerine / Additive
oxides of nitrogen.	Resin

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Glycerine / Carbon Black

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List
1%over : 1,2-Propanediol / Carbon Black

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products at the data : (September 30, 2011). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken, when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UB-155 Blue [uni-ball micro deluxe]

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

Creation Date : April 19, 2001
Revision Date : September 30, 2011
File No. : 066102A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature:

Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Glycerine	56-81-5	Registered	2002895	< 10
Coloring agent	Registered	Registered	Registered	< 10
Resin	Registered	Registered	Polymer	< 10
Additive	Registered	Registered	Polymer	< 10

Other parts : Other parts are excluded from 'chemical substances'.

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.75g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of children.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, 1,2-Propanediol

metal salts, oxidizing materials, reducing agents

acids, bases, oxidizing materials, metal oxides, peroxides, Glycerine

reducing agents

oxidizing materials Coloring agent / Resin

strong oxidizers Additive

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	5mg/m3 TWA(respirable dust fraction), 15mg/m3 TWA (total dust)	Glycerine
	5mg/m3(Respirable fraction), 15mg/m3(Total dust) [Nuisance Dust]	Coloring agent
ACGIH	10mg/m3 TWA 10mg/m3(Nuisance particulate)	Glycerine Coloring agent
EC	Not available.	
UK	150ppm(474mg/m3) TWA(total(vapor and particulates)), 10mg/m3 TWA(particulates)	1,2-Propanediol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Low viscous liquid.
Color	: Blue.
Odor	: None odor.
pH	: 8.2±0.3
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [1,2-Propanediol/ 99 C]
Autoignition temperature	: Not applicable. [Glycerine/ 370 C]
Explosion limits	: Not applicable. [Lower flammable limit / 2.6% , Upper flammable limit / 12.5% <1,2-Propanediol>]
Density	: about 1.1 / 25 C
Vapor density (air=1)	: Not available. [1,2-Propanediol/ 2.60-2.62]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 83-86%

10. STABILITY AND REACTIVITY

Stability : Stability.

Hazardous reactions : Will not occur.

Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition.
Avoid contact with incompatible materials.

Materials to avoid : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, metal salts, oxidizing materials, reducing agents	1,2-Propanediol
acids, bases, oxidizing materials, metal oxides, peroxides, reducing agents	Glycerine
oxidizing materials	Coloring agent / Resin
strong oxidizers	Additive

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
corrosive acrolein.	Glycerine / Additive
oxides of nitrogen.	Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat 4090mg/kg-Mouse >=5000mg/kg-Rat	1,2-Propanediol Glycerine Coloring agent
Inhalation LC50	>570mg/m ³ 1H-Rat	Glycerine
Skin LD50	20800mg/kg-Rabbit >10000mg/kg-Rabbit	1,2-Propanediol Glycerine

Local effects dehydration Additive

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization. 1,2-Propanediol

Signs and Symptos of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,difficulty breathing irritation	1,2-Propanediol Glycerine Coloring agent / Resin
Skin contact	irritation,allergic reaction irritation,redness irritation sensitization	1,2-Propanediol Glycerine Resin Additive
Eye contact	irritation,pain tearing,stinging irritation	1,2-Propanediol Glycerine Coloring agent / Resin
Ingestion	allergic reaction,vomiting nausea,vomiting gastric disturbances	1,2-Propanediol Glycerine Coloring agent

Specific effects Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.

Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Glycerine

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List
1%over : 1,2-Propanediol

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (September 30, 2011). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UB-155 Red [uni-ball micro deluxe]

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

Creation Date : April 19, 2001
Revision Date : September 30, 2011
File No. : 066103A Rev. 2.5.02.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Glycerine	56-81-5	Registered	2002895	< 10
Coloring agent	Registered	Registered	Registered	< 10
Resin	Registered	Registered	Polymer	< 10
Additive	Registered	Registered	Polymer	< 10

Other parts : Other parts are excluded from 'chemical substances'.

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.75g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of children.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, 1,2-Propanediol

metal salts, oxidizing materials, reducing agents

acids, bases, oxidizing materials, metal oxides, peroxides, Glycerine

reducing agents

oxidizing materials Coloring agent / Resin

strong oxidizers Additive

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	5mg/m ³ TWA(respirable dust fraction), 15mg/m ³ TWA (total dust)	Glycerine
ACGIH	10mg/m ³ TWA	Glycerine
EC	Not available.	
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent
UK	150ppm(474mg/m ³) TWA(total(vapor and particulates)), 10mg/m ³ TWA(particulates)	1,2-Propanediol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form : Low viscous liquid.
 Color : Red.
 Odor : None odor.
 pH : about 8.2
 Boiling point : Not available. [Water/ 100 C]
 Melting point : <-10 C
 Flash point : Not applicable. [1,2-Propanediol/ 99 C]
 Autoignition temperature : Not applicable. [Glycerine/ 370 C]
 Explosion limits : Not applicable.
 [Lower flammable limit / 2.6% , Upper flammable limit / 12.5% <1,2-Propanediol>]
 Density : about 1.1 / 25 C
 Vapor density (air=1) : Not available. [1,2-Propanediol/ 2.60-2.62]
 Solubility in water : Soluble.
 Evaporation rate : Not available.
 Volatile : 84-87%

10. STABILITY AND REACTIVITY

Stability : Stability.

Hazardous reactions : Will not occur.

Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition.
Avoid contact with incompatible materials.

Materials to avoid : (Information of components.)

acids, bases, combustible materials, halo carbons, metals, metal salts, oxidizing materials, reducing agents	1,2-Propanediol
acids, bases, oxidizing materials, metal oxides, peroxides, reducing agents	Glycerine
oxidizing materials	Coloring agent / Resin
strong oxidizers	Additive

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
corrosive acrolein.	Glycerine / Additive
oxides of nitrogen.	Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat 4090mg/kg-Mouse >=5000mg/kg-Rat	1,2-Propanediol Glycerine Coloring agent
Inhalation LC50	>570mg/m ³ 1H-Rat	Glycerine
Skin LD50	20800mg/kg-Rabbit >10000mg/kg-Rabbit	1,2-Propanediol Glycerine

Local effects dehydration Additive

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization. 1,2-Propanediol

Signs and Symptos of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,difficulty breathing irritation	1,2-Propanediol Glycerine Coloring agent / Resin
Skin contact	irritation,allergic reaction irritation,redness redness, swelling irritation sensitization	1,2-Propanediol Glycerine Coloring agent Resin Additive
Eye contact	irritation,pain tearing,stinging irritation	1,2-Propanediol Glycerine Resin
Ingestion	allergic reaction,vomiting nausea,vomiting	1,2-Propanediol Glycerine / Coloring agent

Specific effects Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.

Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Glycerine

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (September 30, 2011). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UB-155 Green [uni-ball micro deluxe]

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

Creation Date : April 19, 2001
Revision Date : June 11, 2012
File No. : 066104A Rev. 2.5.03.02

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature:

Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
Ethylene glycol	107-21-1	Registered	2034733	10- 30
Coloring agents	Registered	Registered	Registered	< 10
Resin	Registered	Registered	Registered	< 10
1,2-Propanediol	57-55-6	Registered	2003380	< 10
Additive	Registered	Registered	Polymer	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10

Other parts : Other parts are excluded from 'chemical substances'.

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Information of components.

<Ethylene glycol>

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, nerve damage, kidney damage

<Triethanolamine>

MAJOR HEALTH HAZARDS: skin irritation, eye irritation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: kidney disorders, liver disorders

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 2.0g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of children.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : (Information of components.)
 oxidizing materials, bases, acids, reducing agents, metals
 oxidizing materials
 acids, bases, combustible materials, halo carbons, metals,
 metal salts, oxidizing materials, reducing agents
 acids, metals, oxidizing materials
 Packaging materials : Not applicable.

Ethylene glycol
 Coloring agent / Additive
 1,2-Propanediol
 Triethanolamine

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3 PEL (Nuisance Dust)	Coloring agent
ACGIH	ceiling 100mg/m3 (particulate)(aerosol) 10mg/m3 TWA(Nuisance dust) 5mg/m3 TWA	Ethylene glycol Coloring agent Triethanolamine
EC	52mg/m3(20ppm) TWA(skin), 104mg/m3(40ppm) STEL(skin)	Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form : Low viscous liquid.
 Color : Green.
 Odor : None odor.
 pH : about 8.3
 Boiling point : Not available. [Water/ 100 C]
 Melting point : <-10 C
 Flash point : Not available. [Ethylene glycol/ 111 C]
 Autoignition temperature : Not available. [Ethylene glycol/ 398 C]
 Explosion limits : Not applicable.
 Density : about 1.1 / 25 C
 Vapor density (air=1) : Not available. [Ethylene glycol/ 2.1]
 Solubility in water : Soluble.
 Evaporation rate : Not available.
 Volatile : 86-89%

10. STABILITY AND REACTIVITY

Stability : Stability.
 Hazardous reactions : Will not occur.
 Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition.
 Avoid contact with incompatible materials.

Materials to avoid : (Information of components.)

oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol
oxidizing materials	Coloring agent / Additive
acids, bases, combustible materials, halo carbons, metals,	1,2-Propanediol
metal salts, oxidizing materials, reducing agents	
acids, metals, oxidizing materials	Triethanolamine

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of nitrogen, carbon, halogenated compounds.	Coloring agent
oxides of nitrogen	Triethanolamine

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	1650mg/kg-Cat, 4700mg/kg-Rat >5000mg/kg-Rat 20000mg/kg-Rat 6600mg/kg-Rabbit 2200mg/kg-Rabbit, 5846mg/kg-Mouse	Ethylene glycol Coloring agent 1,2-Propanediol Additive Triethanolamine
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit 20800mg/kg-Rabbit >16mL/kg-Rat	Ethylene glycol 1,2-Propanediol Triethanolamine

Local effects	Irritant: inhalation, skin, eye Irritant: skin, eye	Ethylene glycol Triethanolamine
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Chronic toxicity and long term toxicity

The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol
Repeated or prolonged contact may cause skin sensitization.	1,2-Propanediol, Triethanolamine

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation, cough irritation nausea, headache sore throat, difficulty breathing	Ethylene glycol Coloring agent 1,2-Propanediol Triethanolamine
Skin contact	irritation, dry irritation irritation, allergic reaction irritation, redness	Ethylene glycol Coloring agent 1,2-Propanediol Triethanolamine
Eye contact	irritation, redness irritation irritation, pain irritation, corneal swelling	Ethylene glycol Coloring agent 1,2-Propanediol Triethanolamine
Ingestion	nausea, vomiting vomiting, diarrhea allergic reaction, vomiting burns, gastrointestinal irritation	Ethylene glycol Coloring agent 1,2-Propanediol Triethanolamine

Specific effects	IARC Group 3	Triethanolamine
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12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Ethylene glycol / Triethanolamine

EU labeling

25%≤Xn;R22 : Ethylene glycol

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Ethylene glycol / 1,2-Propanediol / Triethanolamine

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (June 11, 2012). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.