

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PM-122 Black [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011111A Rev. 2.5.04.02

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
Carbon Black	1333-86-4	Registered	2156099	10- 30
Resins	Registered	Registered	Polymer	10- 30
Ethylene glycol	107-21-1	Registered	2034733	< 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 6.0g]

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.

Move container from fire area if it can be done without risk.

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.)

Incompatible products : (Information of components.)

oxidizing materials, halogens

Carbon Black

oxidizing materials

Resin

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	3.5mg/m ³	Carbon Black
ACGIH	3.5mg/m ³ (total dust) TWA 100mg/m ³ ceiling (particulate)(aerosol)	Carbon Black Ethylene glycol
EC	3.5mg/m ³ 52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Carbon Black Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Low viscous liquid.
Colour	: Black.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.07±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 77-80%

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, halogens	Carbon Black
oxidizing materials	Resin
oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of sulfur.	Carbon Black
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>10000mg/kg-Rat >=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Carbon Black Resin Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	>3000mg/kg-Rabbit 9530uL/kg-Rabbit	Carbon Black Ethylene glycol

Local effects	Irritant;inhalation, skin Irritant;inhalation, skin, eye	Carbon Black Ethylene glycol
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Chronic toxicity and long term toxicity

Respiratory disorders. The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).		Carbon Black Ethylene glycol
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Signs and Symptos of overexposure and aggravated by exposure

Inhalation	irritation headache,nausea irritation,cough	Carbon Black Resin Ethylene glycol
Skin contact	irritation irritation,dry	Carbon Black / Resin Ethylene glycol
Eye contact	mechanical irritation, discoloration of lids irritation irritation,redness	Carbon Black Resin Ethylene glycol
Ingestion	digestive discomfort nausea,vomiting	Resin Ethylene glycol

Specific effects	IARC Group 2B	Carbon Black
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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 : 960820

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Carbon Black / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22 : Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Carbon Black / Ethylene glycol

Hazard and safety information

Products are manufactured in accordance with European regulation EN71 part 3

Products are manufactured in accordance with ELV directive of EU.

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 : (February 20, 2006). 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: PM-122 Blue [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011112A 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
Coloring agent	Registered	Registered	Registered	10- 30
Resins	Registered	Registered	Polymer	10- 30
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.9g]

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.

Move container from fire area if it can be done without risk.

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

Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	5mg/m3(Respirable fraction), 15mg/m3(Total dust) [Nuisance Dust]	Coloring agent
ACGIH	10mg/m3(Nuisance particulate) 100mg/m3 ceiling (particulate)(aerosol)	Coloring agent Ethylene glycol
EC	52mg/m3(20ppm) TWA, 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.
Colour	: Blue.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
	[Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.05±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 77-80%

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	Coloring agent / Resin
oxidizing materials, bases, acids,	Ethylene glycol
reducing agents, metals	
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of nitrogen.	Coloring agent
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity		
Ingestion LD50	>5000mg/kg-Rat >=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Resin Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
Chronic toxicity and long term toxicity		
	The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PM-122 Red [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011113A Rev. 2.5.04.02

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
Coloring agent	Registered	Registered	Registered	10- 30
Resins	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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

Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	Not available.	
ACGIH	100mg/m ³ ceiling (particulate)(aerosol)	Ethylene glycol
EC	52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Ethylene glycol
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Low viscous liquid.
Colour	: Red.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.04±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 80-83%

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	Coloring agent / Resin
oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of nitrogen.	Coloring agent
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol

Local effects Irritant;inhalation, skin, eye Ethylene glycol

Chronic toxicity and long term toxicity

The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus). Ethylene glycol

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation headache,nausea irritation,cough	Coloring agent Resin Ethylene glycol
Skin contact	redness,swelling irritation irritation,dry	Coloring agent Resin Ethylene glycol
Eye contact	irritation irritation,redness	Resin Ethylene glycol
Ingestion	nausea,vomiting digestive discomfort	Coloring agent / Ethylene glycol Resin
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 : 960820

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Ethylene glycol

Hazard and safety information

Products are manufactured in accordance with European regulation EN71 part 3

Products are manufactured in accordance with ELV directive of EU.

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 : (February 20, 2006). 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: PM-122 Green [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011114A Rev. 2.5.04.02

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
Coloring agents	Registered	Registered	Registered	< 10
Resins	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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

Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	5mg/m3(Respirable flaction), 15mg/m3(Total dust) [Nuisance Dust]	Coloring agent
ACGIH	10mg/m3(Nuisance particulate) 100mg/m3 ceiling (particulate)(aerosol)	Coloring agent Ethylene glycol
EC	52mg/m3(20ppm) TWA, 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.
Colour	: Green.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
	[Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.04±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 80-83%

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	Coloring agent / Resin
oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of nitrogen, acid halides, halogenated compounds.	Coloring agent
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity		
Ingestion LD50	>5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
Chronic toxicity and long term toxicity		
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).		Ethylene glycol

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PM-122 Brown [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011115A Rev. 2.5.04.02

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
Coloring agents	Registered	Registered	Registered	< 10
Carbon Black	1333-86-4	Registered	2156099	< 10
Resins	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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

Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials, halogens

Carbon Black

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	3.5mg/m ³	Carbon Black
ACGIH	100mg/m ³ ceiling (particulate)(aerosol) 3.5mg/m ³ (total dust) TWA	Ethylene glycol Carbon Black
EC	52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin) 3.5mg/m ³	Ethylene glycol Carbon Black
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form : Low viscous liquid.
 Colour : Brown.
 Odour : None odour.
 pH : 8.8±0.7
 Boiling point : Not available. [Water/ 100 C]
 Melting point : < -5 C
 Flash point : Not applicable. [Ethylene glycol/ 111 C(CC)]
 Autoignition temperature : Not applicable. [Ethylene glycol/ 398 C]
 Explosion limits : Not applicable.
 [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
 Density : 1.04±0.03 / 25 C
 Vapour density (air=1) : Not available. [Ethylene glycol/ 2.1]
 Solubility in water : Soluble.
 Evaporation rate : Not available.
 Volatile : 81-84%

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 : Coloring agent / Resin
 oxidizing materials, bases, acids, : Ethylene glycol
 reducing agents, metals
 oxidizing materials, halogens : Carbon Black
 Hazardous decomposition products : (Information of components.)
 oxides of carbon, water : common decomposition products
 oxides of nitrogen, acid halides, : Coloring agent
 halogenated compounds.
 miscellaneous decomposition products. : Resin
 oxides of sulfur. : Carbon Black

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat >10000mg/kg-Rat	Coloring agent Ethylene glycol Carbon Black
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit >3000mg/kg-Rabbit	Ethylene glycol Carbon Black

Local effects	Irritant;inhalation, skin, eye Irritant;inhalation, skin	Ethylene glycol Carbon Black
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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). Respiratory disorders.	Ethylene glycol Carbon Black
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Signs and Symptos of overexposure and aggravated by exposure

Inhalation	irritation headache,nausea irritation,cough	Coloring agent / Carbon Black Resin Ethylene glycol
Skin contact	redness,swelling irritation irritation,dry	Coloring agent Resin / Carbon Black Ethylene glycol
Eye contact	irritation irritation,redness mechanical irritation, discoloration of lids	Resin Ethylene glycol Carbon Black
Ingestion	nausea,vomiting digestive discomfort	Coloring agent / Ethylene glycol Resin

Specific effects	IARC Group 2B	Carbon Black
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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 : 960820

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Ethylene glycol / Carbon Black

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Ethylene glycol / Carbon Black

Hazard and safety information

Products are manufactured in accordance with European regulation EN71 part 3

Products are manufactured in accordance with ELV directive of EU.

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 : (February 20, 2006). 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: PM-122 Yellow [PROCKEY]

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
 Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
 Revision Date : February 20, 2006
 File No. : 011116A Rev. 2.5.04.02

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
Coloring agents	Registered	Registered	Registered	< 10
Resins	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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 : Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals : Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	Not available.	
ACGIH	100mg/m ³ ceiling (particulate)(aerosol)	Ethylene glycol
EC	52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Ethylene glycol
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Low viscous liquid.
Colour	: Yellow.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.04±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
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.)
oxidizing materials	Coloring agent / Resin
oxidizing materials, bases, acids,	Ethylene glycol
reducing agents, metals	
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of nitrogen, acid halides.	Coloring agent
halogenated compounds.	
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity		
Ingestion LD50	>5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
Chronic toxicity and long term toxicity		
	The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PM-122 Violet [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011117A Rev. 2.5.04.02

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
Resins	Registered	Registered	Polymer	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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

Resin / Coloring agent

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	Not available.	
ACGIH	100mg/m ³ ceiling (particulate)(aerosol)	Ethylene glycol
EC	52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Ethylene glycol
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Low viscous liquid.
Colour	: Violet.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.04±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 78-81%

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	Resin / Coloring agent
oxidizing materials, bases, acids,	Ethylene glycol
reducing agents, metals	
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
miscellaneous decomposition products.	Resin / Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity		
Ingestion LD50	>=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
Chronic toxicity and long term toxicity		
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).		Ethylene glycol

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PM-122 Orange [PROCKEY]

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
Telex number : 2422337 MBPENC J.

Creation Date : July 2, 2001
Revision Date : February 20, 2006
File No. : 011118A Rev. 2.5.04.02

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
Coloring agents	Registered	Registered	Registered	< 10
Resins	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 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 5.8g]

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.

Move container from fire area if it can be done without risk.

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 : Coloring agent / Resin

oxidizing materials, bases, acids, reducing agents, metals : Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	Not available.	
ACGIH	100mg/m ³ ceiling (particulate)(aerosol)	Ethylene glycol
EC	52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Ethylene glycol
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Low viscous liquid.
Colour	: Orange.
Odour	: None odour.
pH	: 8.8±0.7
Boiling point	: Not available. [Water/ 100 C]
Melting point	: < -5 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.04±0.03 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
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.)
oxidizing materials	Coloring agent / Resin
oxidizing materials, bases, acids,	Ethylene glycol
reducing agents, metals	
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of nitrogen, acid halides,	Coloring agent
halogenated compounds.	
miscellaneous decomposition products.	Resin

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity		
Ingestion LD50	>=5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat	Coloring agent Ethylene glycol
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol

Local effects Irritant;inhalation, skin, eye Ethylene glycol

Chronic toxicity and long term toxicity

The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus). Ethylene glycol

