## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K Black [Chalk marker]	
Manufacture's name Address Telephone number	<ul> <li>MITSUBISHI PENCIL CO.,LTD.</li> <li>5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN</li> <li>03-3458-6281 Telefax number : 03-3450-0363</li> </ul>	
Creation Date Revision Date	: September 20, 2013	
File No.	:010444A Rev.2.5.01.01	

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

: -

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture : Mixture

Chemical nature:	Component pa	arts : 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
Additives	Registered	Registered	Registered	<10
Resin	Registered	Registered	Registered	<10
Ethylene glycol	107-21-1	Registered	2034733	<10

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

## 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 15.0g]

#### -PWE-8K\_Black-

# 5. FIRE-FIGHTING MEASURES

Fire and explosior	-
Extinguishing me	dia:
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.

mananing	
Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	· Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

Control paramet	ers (Information of components.)	
OSHA	3.5mg/m3 TWA 5 mg/m3 TWA (respirable dust fraction),	Carbon Black Additive
	15 mg/m3 TWA (total dust)	
ACGIH	3.5mg/m3 TWA ceiling 100mg/m3 (particulate)(aerosol) 3 mg/m3 TWA (respirable particulate) 10 mg/m3 TWA (inhalable particulate)	Carbon Black Ethylene glycol Additive
EC	3.5mg/m3 TWA 52mg/m3(20ppm) TWA(skin) 104mg/m3(40ppm) STEL(skin)	Carbon Black Ethylene glycol

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Black.
Odor	: None odor.
pH	÷ about 8.3
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	imit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.1 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	<sup>:</sup> Soluble.
Evaporation rate	: Not available.
Volatile	: 81-84%

Stability Hazardous reactions		Stability. Will not occur.
Conditions to avoid		Avoid heat, flames, sparks and other sources of ignition.
		Avoid contact with incompatible materials.
Materials to avoid : No		: Not available.
Hazardous decomposition products		n products 🤃 Not available.

# 11.TOXICOLOGICAL INFORMATION

#### (Information of components)

Acute toxicity

Ingestion LD50	>10000mg/kg-Rat	Carbon Black
	>10000mg/kg-Rat	Additive
	1650mg/kg-Cat、4700mg/kg-Rat	Ethylene glycol
Inhalation LC50	>2.8mg/L(1H)-Rat	Additive
Skin LD50	>3000mg/kg-Rabbit	Carbon Black
	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin	Carbon Black
	Irritant;inhalation, skin, eye	Ethylene glycol
Chronic toxicity and lo	ong term toxicity	
· ·		Carbon Black
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).		Ethylene glycol
Irritant;inhalation, skin, eye Chronic toxicity and long term toxicity Lungs may be affected by repeated or prolonged exposure at very high concentrations. The substance may have effects on the central nervous		Carbon Black

#### Signs and Symptoms of overexposure and aggravated by exposure

0 1	1 00	
Inhalation	irritation	Carbon Black / Additive
	irritation,cough	Ethylene glycol
Skin contact	irritation	Carbon Black / Additive
	irritation,dry	Ethylene glycol
Eye contact	mechanical irritation,	Carbon Black
·	discoloration of lids	
	irritation, redness	Ethylene glycol
	irritation	Additive
Ingestion	rash,vomiting	Additive
	nausea,vomiting	Ethylene glycol
Specific effects	IARC Group 2B	Carbon Black

## 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)	: Carbon Black / Ethylene glycol
EU labeling	: Not restricted.
CANADA Hazardous Products Act - In 1%over	gredient Disclosure List Carbon Black / Ethylene glycol
Hazard and safety information Products are manufactured in accordance w	ith ISO 8124-3 " Safety of Toys - Part 3"
16. OTHER INFORMATION	

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K White [Chalk marker]
Manufacture's name Address Telephone number	<ul> <li>MITSUBISHI PENCIL CO.,LTD.</li> <li>5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN</li> <li>03-3458-6281 Telefax number : 03-3450-0363</li> </ul>
Creation Date Revision Date File No.	: October 25, 2011 : September 20, 2013 : 010427A Rev.2.6.02.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture : Mixture

Chemical nature:	Component pa	arts : Ink		
Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Titanium dioxide	13463-67-7	Registered	2366755	10-30
Silica (amorphous)	Registered	Registered	Registered	<10
Additives	Registered	Registered	Registered	<10
Ethyl alcohol	64-17-5	Registered	2005786	<10
Ethylene glycol	107-21-1	Registered	2034733	<10
Resin	Registered	Registered	Polymer	<10
2-Propanol	67-63-0	Registered	2006617	<10

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

#### 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 17.0g]

### 5. FIRE-FIGHTING MEASURES

Fire and explosion measures: Slight fire hazard.Extinguishing media:: regular dry chemical, carbon dioxide, water, regular foam.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.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

Control paramet	ers (Information of components.)	
OSHA	15mg/m3 TWA (Total dust) Titanium dioxide	
	20mppcf TWA (<1% crystalline silica)	Silica (amorphous)
	(80mg/m3 divided by % SiO2)	
	1000ppm(1900mg/m3) TWA	Ethyl alcohol
	400 ppm TWA, 500ppm STEL	2-Propanol
ACGIH	10mg/m3 TWA	Titanium dioxide
	10mg/m3 TWA(inhalable fraction)	Silica (amorphous)
	3mg/m3 TWA(respirable fraction)	
	(no asbestos and <1% crystalline silica)	
	1000ppm STEL	Ethyl alcohol
	ceiling 100mg/m3 (particulate)(aerosol) Ethylene glycol	
	200ppm TWA, 400ppm STEL 2-Propanol	
$\mathbf{EC}$	6mg/m3	Titanium dioxide
	1000ppm	Ethyl alcohol
	52mg/m3(20ppm) TWA(skin) Ethylene glycol	
	104mg/m3(40ppm) STEL(skin)	

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

[ ]: Information of components.

Physical state	: Liquid.
Color	: White.
Odor	: None odor.
pH	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethyl alcohol/ 12.2 C(CC)]
Autoignition temperature	: Not applicable. [Ethyl alcohol/ 363 C]
Explosion limits	: Not applicable.
[ Lower flammable l	imit / 3.28% , Upper flammable limit / 19.0% <ethyl alcohol=""> ]</ethyl>
Density	: about 1.3 / 25 C
Vapor density (air=1)	: Not available. [Ethyl alcohol/ 1.59]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 65-68%

Stability	: Stability.	
Hazardous reactions	: Will not occur	
Conditions to avoid	: Avoid heat, fla	ames, sparks and other sources of ignition.
	Avoid contact	with incompatible materials.
Materials to avoid		: Not available.
Hazardous decomposi	tion products	: Not available.

# 11.TOXICOLOGICAL INFORMATION

#### (Information of components)

Acute toxicity

110000000000000000000000000000000000000		
Ingestion LD50	>24000mg/kg-Rat	Titanium dioxide
	15900mg/kg-Rat	Additive
	3160mg/kg-Rat	Silica (amorphous)
	3450mg/kg-Mouse	Ethyl alcohol
	1650mg/kg-Cat、4700mg/kg-Rat	Ethylene glycol
	3600mg/kg-Mouse	2-Propanol
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
	20000ppm-10H-Rat	Ethyl alcohol
	11100ppm-4H-Mouse	2-Propanol
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
	12800mg/kg-Rabbit	2-Propanol
Local effects	Irritant;inhalation, skin, eye	Ethyl alcohol / Ethylene glycol
	Irritant;inhalation, eye	2-Propanol
Chronic toxicity and	l long term toxicity	
•	skin. The substance may have effects on	Ethyl alcohol
_	v tract and central nervous system,	
resulting in irritation	n, headache, fatigue and lack of	
concentration.		
The substance may h	ave effects on the central nervous	Ethylene glycol
system, resulting in abnormal eye movements (nystagmus).		
The liquid defats the	skin.	2-Propanol
Signs and Symptom	s of overexposure and aggravated	by exposure
Inhalation	irritation,cough	Titanium dioxide / Silica (amorphous) /

matation	mination,eough	intallium dioxide / Billed (alloi phous) /
		Ethyl alcohol / Ethylene glycol
	irritation	Additive
	irritation, nausea	2-Propanol
Skin contact	irritation,dry	Silica (amorphous) / Ethyl alcohol /
		Ethylene glycol
	irritation	Additive
	irritation, absorption	2-Propanol
Eye contact	irritation, redness	Titanium dioxide / Silica (amorphous) /
		Ethyl alcohol / Ethylene glycol
	irritation	Additive
	irritation,pain	2-Propanol
Ingestion	physiologically inert,	Titanium dioxide
	intestinal obstruction	
	fever, vomiting	Additive
	rash,vomiting	Ethyl alcohol
	nausea,vomiting	Ethylene glycol
	nausea,stomach pain	2-Propanol
Specific effects	IARC Group 2B	Titanium dioxide
	IARC Group 3	Silica (amorphous) / 2-Propanol

## 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) : Titanium dioxide / Ethyl alcohol / Ethylene glycol / 2-Propanol EU labeling : Not restricted. CANADA Hazardous Products Act - Ingredient Disclosure List 1%over Silica (amorphous) / Ethylene glycol / 2-Propanol 0.1%over Ethyl alcohol

Hazard and safety information

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

#### **16. OTHER INFORMATION**

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K Red [ Chalk marker ]
Address	: MITSUBISHI PENCIL CO.,LTD. : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN : 03-3458-6281 Telefax number : 03-3450-0363

Creation Date	: October 25,	2011
<b>Revision</b> Date	: September 2	20, 2013
File No.	:010428A	Rev.2.6.02.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

: -

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture : Mixture

Chemical nature:	Component pa	arts : Ink		
Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Ethyl alcohol	64-17-5	Registered	2005786	< 10
Coloring agent	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Registered	< 10
Resins	Registered	Registered	Registered	< 10

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

#### 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  $15.5 \rm g]$ 

## 5. FIRE-FIGHTING MEASURES

Fire and explosion measures: Slight fire hazard.Extinguishing media:SuitableLarge fires: regular dry chemical, carbon dioxide, water, regular foam.: 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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

#### Control parameters (Information of components.)

15mg/m3 TWA (Total dust)	Titanium dioxide
1000ppm(1900mg/m3) TWA	Ethyl alcohol
20mppcf TWA (<1% crystalline silica)	Silica (amorphous)
(80mg/m3 divided by % SiO2)	-
10mg/m3 TWA	Titanium dioxide
ceiling 100mg/m3 (particulate)(aerosol)	Ethylene glycol
1000ppm STEL	Ethyl alcohol
10mg/m3 TWA(inhalable fraction)	Silica (amorphous)
3mg/m3 TWA(respirable fraction)	
(no asbestos and <1% crystalline silica)	
6mg/m3	Titanium dioxide
52mg/m3(20ppm) EC TWA(skin),	Ethylene glycol
104mg/m3(40ppm) EC STEL(skin)	
1000ppm	Ethyl alcohol
	1000ppm(1900mg/m3) TWA 20mppcf TWA (<1% crystalline silica) (80mg/m3 divided by % SiO2) 10mg/m3 TWA ceiling 100mg/m3 (particulate)(aerosol) 1000ppm STEL 10mg/m3 TWA(inhalable fraction) 3mg/m3 TWA(respirable fraction) (no asbestos and <1% crystalline silica) 6mg/m3 52mg/m3(20ppm) EC TWA(skin), 104mg/m3(40ppm) EC STEL(skin)

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
	-
Color	Red.
Odor	: None odor.
pH	: about 8.3
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	mit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
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	: 76-79%

Stability	: Stability.	
Hazardous reactions	: Will not occur	
Conditions to avoid	: Avoid heat, fla	ames, sparks and other sources of ignition.
	Avoid contact	with incompatible materials.
Materials to avoid		: Not available.
Hazardous decomposi	tion products	: Not available.

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# 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

concentration.

Ingestion LD50	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3450mg/kg-Mouse	Ethyl alcohol
	3160mg/kg-Rat	Silica (amorphous)
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
	20000ppm-10H-Rat	Ethyl alcohol
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects Irritant;inhalation, skin, eye		Ethylene glycol / Ethyl alcohol
Chronic toxicity and long term toxicity		
The substance may have effects on the central nervous Ethylene glycol system, resulting in abnormal eye movements (nystagmus).		
The liquid defats the skin. The substance may have effects on the upper respiratory tract and central nervous system,		Ethyl alcohol

Signs and Symptoms of overexposure and aggravated by exposure

resulting in irritation, headache, fatigue and lack of

Inhalation	irritation,cough	Titanium dioxide /
		Ethylene glycol / Ethyl alcohol /
		Silica (amorphous)
	irritation	Coloring agent
	headache,nausea	Resin
Skin contact	redness,swelling of skin	Coloring agent
	irritation	Resin
	irritation,dry	Ethylene glycol / Ethyl alcohol /
		Silica (amorphous)
Eye contact	irritation	Resin
	irritation, redness	Titanium dioxide / Ethylene glycol /
		Ethyl alcohol / Silica (amorphous)
Ingestion	physiologically inert,	Titanium dioxide
-	intestinal obstruction	
	nausea,vomiting	Coloring agent
	digestive discomfort	Resin
	nausea,vomiting	Ethylene glycol
	rash,vomiting	Ethyl alcohol
Specific effects	IARC Group 3	Silica (amorphous)
_	IARC Group 2B	Titanium dioxide

# 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)	: Titanium dioxide / Ethylene glycol / Ethyl alcohol		
EU labeling	: Not restricted.		
CANADA Hazardous Products Act - In	gredient Disclosure List		
1%over	Ethylene glycol / Silica (amorphous)		
0.1%over	Ethyl alcohol		
Hazard and safety information			

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

#### 16. OTHER INFORMATION

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K L	ight blue [ Chalk marker ]	
Manufacture's name Address Telephone number	: 5-23-37, HIG	ASHIOHI, SHINAGAWA, TOKYO, JAPAN	

Creation Date	Contraction : October 23	5, 2011
<b>Revision</b> Date	: September	20, 2013
File No.	:010429A	Rev.2.6.02.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture : Mixture

Chemical nature:	Component pa	arts : Ink		
Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Titanium dioxide	13463-67-7	Registered	2366755	10-30
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Ethyl alcohol	64-17-5	Registered	2005786	< 10
Additives	Registered	Registered	Registered	< 10
Resins	Registered	Registered	Registered	< 10
Coloring agent	Registered	Registered	Registered	< 1

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

#### 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 16.6g]

## 5. FIRE-FIGHTING MEASURES

Fire and explosion Extinguishing med	
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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering mea	sures : Not required.	
Control paramet	ers (Information of components.)	
OSHA	15mg/m3 TWA (Total dust)	Titanium dioxide
	20mppcf TWA (<1% crystalline silica) (80mg/m3 divided by % SiO2)	Silica (amorphous)
	1000ppm(1900mg/m3) TWA	Ethyl alcohol
	5mg/m3(Respirable fraction), 15mg/m3(Total dust) [Nuisance Dust]	Coloring agent
ACGIH	10mg/m3 TWA	Titanium dioxide
	ceiling 100mg/m3 (particulate)(aerosol)	Ethylene glycol
	10mg/m3 TWA(inhalable fraction)	Silica (amorphous)
	3mg/m3 TWA(respirable fraction) (no asbestos and <1% crystalline silica)	
	1000ppm STEL	Ethyl alcohol
	10mg/m3 TWA	Coloring agent
$\mathbf{EC}$	6mg/m3	Titanium dioxide
	52mg/m3(20ppm) EC TWA(skin)	Ethylene glycol
	104mg/m3(40ppm) EC STEL(skin)	
	1000ppm	Ethyl alcohol
Personal protecti	ve equipment : Not required	

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Light blue.
Odor	: None odor.
pH	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	imit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.2 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 70-73%

Stability	: Stability.		
Hazardous reactions	: Will not occur		
Conditions to avoid	: Avoid heat, fla	ames, sparks and other sources of ignition.	
	Avoid contact with incompatible materials.		
Materials to avoid : Not available.			
Hazardous decomposition products		: Not available.	

# 11.TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat	Silica (amorphous)
	3450mg/kg-Mouse	Ethyl alcohol
	>5000mg/kg-Rat	Coloring agent
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
	20000ppm-10H-Rat	Ethyl alcohol
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects Irritant;inhalation, skin, eye		Ethylene glycol / Ethyl alcohol
Chronic toxicity and lo	ong term toxicity	
The substance may have system, resulting in abn	Ethylene glycol	
The liquid defats the skin. The substance may have effects on the upper respiratory tract and central nervous system, resulting in irritation, headache, fatigue and lack of concentration.		Ethyl alcohol

#### Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,cough	Titanium dioxide / Ethylene glycol / Silica (amorphous) / Ethyl alcohol
	irritation	Coloring agent
Skin contact	irritation,dry	Ethylene glycol /
		Silica (amorphous) / Ethyl alcohol
Eye contact	irritation, redness	Titanium dioxide / Ethylene glycol /
U U		Silica (amorphous) / Ethyl alcohol
	irritation	Coloring agent
Ingestion	physiologically inert,	Titanium dioxide
0	intestinal obstruction	
	nausea,vomiting	Ethylene glycol
	fever,gastrointestinal	Additive
	disturbances	
	rash,vomiting	Ethyl alcohol
	gastric disturbances	Coloring agent
Specific effects	IARC Group 2B	Titanium dioxide
_	IARC Group 3	Silica (amorphous)

## 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)	: Titanium dioxide / Ethylene glycol / Ethyl alcohol
EU labeling	: Not restricted.
CANADA Hazardous Products Act - In 1%over 0.1%over	gredient Disclosure List Ethylene glycol / Silica (amorphous) Ethyl alcohol
Hazard and safety information Products are manufactured in accordance wi	ith ISO 8124-3 " Safety of Toys - Part 3"

# 16. OTHER INFORMATION

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K	Violet	[ Chalk marker ]	
Manufacture's name Address Telephone number	:5-23-37, H	IGASHIOHI	CO.,LTD. , SHINAGAWA, TOKYO, JAP Telefax number : 03-3450-0	

Creation Date	$\therefore$ October 25,	2011
<b>Revision</b> Date	: September 2	20, 2013
File No.	:010430A	Rev.2.6.01.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

: -

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture : Mixture

Chemical nature:

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Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Resins	Registered	Registered	Registered	10-30
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Additives	Registered	Registered	Registered	< 10
Coloring agents	Registered	Registered	Registered	< 10
Polyoxyethylene nonylphenyl ether	9016-45-9	Registered	Registered	< 1

: Ink

Component parts

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

#### 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 15.2g]

# 5. FIRE-FIGHTING MEASURES

 $\label{eq:stars} Fire \ and \ explosion \ measures \qquad \vdots \ Slight \ fire \ hazard.$ 

#### Extinguishing media:

Suitable<br/>Large fires: regular dry chemical, carbon dioxide, water, regular foam.: Use regular foam or flood with fine water spray.: The Products is no flammable.<br/>Use extinguishing agents appropriate for surrounding fire.<br/>Avoid inhalation of material or combustion by-products.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

## Control parameters (Information of components.)

OSHA	15mg/m3 TWA (Total dust) 20mppcf TWA (<1% crystalline silica) (80mg/m3 divided by % SiO2)	Titanium dioxide Silica (amorphous)
ACGIH	10mg/m3 TWA ceiling 100mg/m3 (particulate)(aerosol) 10mg/m3 TWA(inhalable fraction) 3mg/m3 TWA(respirable fraction) (no asbestos and <1% crystalline silica)	Titanium dioxide Ethylene glycol Silica (amorphous)
	10mg/m3 TWA	Coloring agent
$\mathbf{EC}$	6mg/m3	Titanium dioxide
	52mg/m3(20ppm) EC TWA(skin), 104mg/m3(40ppm) EC STEL(skin)	Ethylene glycol

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Violet.
Odor	: None odor.
pH	: about 8.3
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	mit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
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	: 68-71%

Stability Hazardous reactions Conditions to avoid	· · · · ·	r. ames, sparks and other sources of ignition. with incompatible materials.
Materials to avoid		Not available.
Hazardous decomposition products		: Not available.

## 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

Ingestion LD50	1000mg/kg-Mouse	Resin
	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat	Silica (amorphous)
	2950mg/kg-Mouse	Coloring agent
	1310mg/kg-Rat	Polyoxyethylene nonylphenyl ether
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
	Irritant;eye	Polyoxyethylene nonylphenyl ether
01		

#### Chronic toxicity and long term toxicity

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

#### Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,cough	Resin / Titanium dioxide /
		Ethylene glycol / Silica (amorphous)
	irritation	Coloring agent /
		Polyoxyethylene nonylphenyl ether
Skin contact	mechanical abrasion, irritation	Resin
	irritation	Polyoxyethylene nonylphenyl ether
	irritation,dry	Ethylene glycol / Silica (amorphous)
	burns,corrosive	Coloring agent
Eye contact	irritation	Resin
	irritation, redness	Titanium dioxide / Ethylene glycol /
		Silica (amorphous)
	irritation,eye damage	Polyoxyethylene nonylphenyl ether
Ingestion	physiologically inert,	Titanium dioxide
	intestinal obstruction	
	nausea,vomiting	Ethylene glycol / Coloring agent
	digestive disorders, diarrhea	Polyoxyethylene nonylphenyl ether
Specific effects	IARC Group 3	Resin / Silica (amorphous)
	IARC Group 2B	Titanium dioxide

## 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)	: Titanium dioxide / Ethylene glycol
EU labeling	: Not restricted.
CANADA Hazardous Products Act - In 1%over	gredient Disclosure List Ethylene glycol / Silica (amorphous)
Hazard and safety information Products are manufactured in accordance with	ith ISO 8124-3 " Safety of Toys - Part 3"

## 16. OTHER INFORMATION

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K	Fluorescent yellow	[ Chalk marker ]
Manufacture's name Address Telephone number	:5-23-37, H	HI PENCIL CO.,LTD. IGASHIOHI, SHINAGAW 31 Telefax numb	A, TOKYO, JAPAN er :03-3450-0363
		2011	

Creation Date	: October 25,	2011
<b>Revision</b> Date	: September 2	20, 2013
File No.	:010431A	Rev.2.6.01.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

: Not available. Other hazards

: -

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

The chemical product is a substance or a mixture : Mixture

Chemical nature:

Chemical nature:	Component pa	arts : Ink		
Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Resins	Registered	Registered	Registered	10- 30
Additives	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Coloring agent	Registered	Registered	Registered	< 10
Polyoxyethylene nonylphenyl ether	9016-45-9	Registered	Registered	< 1

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

#### 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 12.4g]

## 5. FIRE-FIGHTING MEASURES

#### Extinguishing media:

Suitable<br/>Large fires: regular dry chemical, carbon dioxide, water, regular foam.: Use regular foam or flood with fine water spray.: The Products is no flammable.<br/>Use extinguishing agents appropriate for surrounding fire.<br/>Avoid inhalation of material or combustion by-products.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

OSHA	15mg/m3 TWA (Total dust) 20mppcf TWA (<1% crystalline silica) (80mg/m3 divided by % SiO2)	Titanium dioxide Silica (amorphous)
ACGIH	10mg/m3 TWA ceiling 100mg/m3 (particulate)(aerosol) 10mg/m3 TWA(inhalable fraction) 3mg/m3 TWA(respirable fraction) (no asbestos and <1% crystalline silica)	Titanium dioxide Ethylene glycol Silica (amorphous)
EC	6mg/m3 52mg/m3(20ppm) EC TWA(skin), 104mg/m3(40ppm) EC STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Fluorescent yellow.
Odor	: None odor.
pH	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	mit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.2 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 55-58%

Stability Hazardous reactions Conditions to avoid	:	Stability. Will not occur. Avoid heat, flames, sparks and other sources of ignition.
		Avoid contact with incompatible materials.
Materials to avoid		: Not available.
Hazardous decomposition products		n products 🤃 Not available.

## 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

Ingestion LD50	1000mg/kg-Mouse	Resin
	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat	Silica (amorphous)
	550mg/kg-Rat	Coloring agent
	1310mg/kg-Rat	Polyoxyethylene nonylphenyl ether
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
	Irritant;eye	Polyoxyethylene nonylphenyl ether
Chronic toxicity and lo	ng torm toxicity	

Ethylene glycol

## Chronic toxicity and long term toxicity

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

#### Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,cough	Resin / Titanium dioxide /
		Ethylene glycol / Silica (amorphous)
	irritation	Polyoxyethylene nonylphenyl ether
Skin contact	mechanical abrasion, irritation	Resin
	irritation	Polyoxyethylene nonylphenyl ether
	irritation,dry	Ethylene glycol / Silica (amorphous)
Eye contact	irritation	Resin
	irritation, redness	Titanium dioxide / Ethylene glycol /
		Silica (amorphous)
	irritation,eye damage	Polyoxyethylene nonylphenyl ether
Ingestion	physiologically inert,	Titanium dioxide
	intestinal obstruction	
	nausea,vomiting	Ethylene glycol
	digestive disorders, diarrhea	Polyoxyethylene nonylphenyl ether
Specific effects	IARC Group 3	Resin / Silica (amorphous)
	IARC Group 2B	Titanium dioxide

## 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)	: Titanium dioxide / Ethylene glycol
EU labeling	: Not restricted.
CANADA Hazardous Products Act - In 1%over	gredient Disclosure List Ethylene glycol / Silica (amorphous)
Hazard and safety information Products are manufactured in accordance with	ith ISO 8124-3 " Safety of Toys - Part 3"

## 16. OTHER INFORMATION

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K	Fluorescent orange	[ Chalk marker ]
Manufacture's name Address Telephone number	:5-23-37, H	HI PENCIL CO.,LTD. IGASHIOHI, SHINAGAW. 81 Telefax numbe	A, TOKYO, JAPAN er :03-3450-0363
		0011	

Creation Date	October 23	5, 2011
<b>Revision</b> Date	: September	20, 2013
File No.	:010432A	Rev.2.6.01.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

: -

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture in the Mixture is the substance of a mixture is mixture is the substance of a

Chemical nature:

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Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Resins	Registered	Registered	Registered	10-30
Additives	Registered	Registered	Registered	10-30
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Coloring agents	Registered	Registered	Registered	< 10
Polyoxyethylene nonylphenyl ether	9016-45-9	Registered	Registered	< 1

: Ink

Component parts

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

## 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 12.4g]

## 5. FIRE-FIGHTING MEASURES

#### Extinguishing media:

Suitable<br/>Large fires: regular dry chemical, carbon dioxide, water, regular foam.: Use regular foam or flood with fine water spray.: The Products is no flammable.<br/>Use extinguishing agents appropriate for surrounding fire.<br/>Avoid inhalation of material or combustion by-products.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

OSHA	15mg/m3 TWA (Total dust) 20mppcf TWA (<1% crystalline silica) (80mg/m3 divided by % SiO2)	Titanium dioxide Silica (amorphous)
ACGIH	10mg/m3 TWA ceiling 100mg/m3 (particulate)(aerosol) 10mg/m3 TWA(inhalable fraction) 3mg/m3 TWA(respirable fraction) (no asbestos and <1% crystalline silica)	Titanium dioxide Ethylene glycol Silica (amorphous)
EC	6mg/m3 52mg/m3(20ppm) EC TWA(skin), 104mg/m3(40ppm) EC STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Fluorescent orange.
Odor	: None odor.
pH	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	mit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.2 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 55-58%

Stability Hazardous reactions Conditions to avoid	: Avoid heat,	Stability. Will not occur. Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.	
Materials to avoid Hazardous decompos		<ul> <li>Not available.</li> <li>Not available.</li> </ul>	

## 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

Ingestion LD50	1000mg/kg-Mouse	Resin
-	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat Silica (amorphous)	
	2950mg/kg-Mouse	Coloring agent
	550mg/kg-Rat	
	1310mg/kg-Rat	Polyoxyethylene nonylphenyl ether
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
	Irritant;eye	Polyoxyethylene nonylphenyl ether

#### 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,cough	Resin / Titanium dioxide /
		Ethylene glycol / Silica (amorphous)
	irritation	Polyoxyethylene nonylphenyl ether
Skin contact	mechanical abrasion, irritation	Resin
	irritation	Polyoxyethylene nonylphenyl ether
	burns,corrosive	Coloring agent
	irritation,dry	Ethylene glycol / Silica (amorphous)
Eye contact	irritation	Resin
	irritation, redness	Titanium dioxide / Ethylene glycol /
		Silica (amorphous)
	irritation,eye damage	Polyoxyethylene nonylphenyl ether
Ingestion	physiologically inert,	Titanium dioxide
	intestinal obstruction	
	nausea,vomiting	Ethylene glycol / Coloring agent
	digestive disorders, diarrhea	Polyoxyethylene nonylphenyl ether
Specific effects	IARC Group 3	Resin / Silica (amorphous)
	IARC Group 2B	Titanium dioxide

## 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)	: Titanium dioxide / Ethylene glycol
EU labeling	: Not restricted.
CANADA Hazardous Products Act - In 1%over	gredient Disclosure List Ethylene glycol / Silica (amorphous)
Hazard and safety information Products are manufactured in accordance w	ith ISO 8124-3 " Safety of Toys - Part 3"

## 16. OTHER INFORMATION

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K	Fluoresc	ent green	[ Chalk marker ]
Manufacture's name Address Telephone number	:5-23-37, H	IGASHIOHI	, SHINAGAV	VA, TOKYO, JAPAN ber :03-3450-0363
		0011		

Creation Date	: October 25,	2011
Revision Date	: September 2	20, 2013
File No.	:010433A	Rev.2.6.01.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

: Not available. Other hazards

: -

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

The chemical product is a substance or a mixture : Mixture

Chemical nature:

Chemical nature:	Component pa	arts : Ink		
Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Resins	Registered	Registered	Registered	10- 30
Additives	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Coloring agents	Registered	Registered	Registered	< 10
Polyoxyethylene nonylphenyl ether	9016-45-9	Registered	Registered	< 1

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

#### 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 12.4g]

## 5. FIRE-FIGHTING MEASURES

#### Extinguishing media:

Suitable<br/>Large fires: regular dry chemical, carbon dioxide, water, regular foam.: Use regular foam or flood with fine water spray.: The Products is no flammable.<br/>Use extinguishing agents appropriate for surrounding fire.<br/>Avoid inhalation of material or combustion by-products.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	: 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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

Cont	rol paramete	rs (Information of components.)	
	OSHA	15mg/m3 TWA (Total dust) 20mppcf TWA (<1% crystalline silica)	Titanium dioxide
		Silica (amorphous)	
		Coloring agent	
	ACGIH	Titanium dioxide Ethylene glycol Silica (amorphous)	
		10mg/m3 TWA	Coloring agent
	EC 6mg/m3		Titanium dioxide
		Ethylene glycol	
		104mg/m3(40ppm) EC STEL(skin)	

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Fluorescent green.
Odor	: None odor.
pH	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable l	imit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.2 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 56-59%

Stability	: Stability.	
Hazardous reactions	: Will not occur	
Conditions to avoid	: Avoid heat, fla	ames, sparks and other sources of ignition.
	Avoid contact	with incompatible materials.
Materials to avoid		: Not available.
Hazardous decomposi	tion products	: Not available.

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# 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

Ingestion LD50	1000mg/kg-Mouse	Resin
	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat	Silica (amorphous)
	550mg/kg-Rat	Coloring agent
	>5000mg/kg-Rat	
	1310mg/kg-Rat	Polyoxyethylene nonylphenyl ether
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
	Irritant;eye	Polyoxyethylene nonylphenyl ether

#### 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,cough	Titanium dioxide / Resin /
		Ethylene glycol / Silica (amorphous)
	irritation	Coloring agent /
		Polyoxyethylene nonylphenyl ether
Skin contact	mechanical abrasion, irritation	Resin
	irritation	Polyoxyethylene nonylphenyl ether
	irritation,dry	Ethylene glycol / Silica (amorphous)
Eye contact	irritation	Resin / Coloring agent
	irritation, redness	Titanium dioxide / Ethylene glycol /
		Silica (amorphous)
	irritation,eye damage	Polyoxyethylene nonylphenyl ether
Ingestion	physiologically inert,	Titanium dioxide
	intestinal obstruction	
	digestive discomfort	Resin
	nausea,vomiting	Ethylene glycol
	gastric disturbances	Coloring agent
	digestive disorders, diarrhea	Polyoxyethylene nonylphenyl ether
Specific effects	IARC Group 3	Resin / Silica (amorphous)
	IARC Group 2B	Titanium dioxide

# 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)	: Titanium dioxide / Ethylene glycol			
EU labeling	: Not restricted.			
CANADA Hazardous Products Act - Ing 1%over	gredient Disclosure List Ethylene glycol / Silica (amorphous)			
Hazard and safety information Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"				

## 16. OTHER INFORMATION

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	PWE-8K	Fluorescent pink	[Chalk marker]
Manufacture's name Address Telephone number	:5-23-37, H	HI PENCIL CO.,LTD. IGASHIOHI, SHINAGAW 81 Telefax numb	VA, TOKYO, JAPAN eer : 03-3450-0363
Onesting Data		0011	

Creation Date	: October 25,	, 2011
<b>Revision</b> Date	: September 2	20, 2013
File No.	:010434A	Rev.2.6.01.02

#### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements

Other hazards : Not available.

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# 3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a mixture in the Mixture is the substance of a mixture is mixture is the substance of a

Chemical nature:

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50-80
Resins	Registered	Registered	Registered	10-30
Additives	Registered	Registered	Registered	10-30
Titanium dioxide	13463-67-7	Registered	2366755	< 10
Silica (amorphous)	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Polyoxyethylene nonylphenyl ether	9016-45-9	Registered	Registered	< 1
Coloring agent	Registered	Registered	Registered	< 1

: Ink

Component parts

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

## 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 12.5g]

## 5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

#### Extinguishing media:

Suitable<br/>Large fires: regular dry chemical, carbon dioxide, water, regular foam.: Use regular foam or flood with fine water spray.: The Products is no flammable.<br/>Use extinguishing agents appropriate for surrounding fire.<br/>Avoid inhalation of material or combustion by-products.<br/>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.

Technical measures	: Don't swallow ink.
	: Recap after use.
	: Keep out of the reach of infants.
	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	: Not available.
Packaging materials	: Not applicable.

Engineering measures : Not required.

## Control parameters (Information of components.)

OSHA	15mg/m3 TWA (Total dust) 20mppcf TWA (<1% crystalline silica)	Titanium dioxide Silica (amorphous)
	(80mg/m3 divided by % SiO2)	
ACGIH	10mg/m3 TWA	Titanium dioxide
	ceiling 100mg/m3 (particulate)(aerosol)	Ethylene glycol
	10mg/m3 TWA(inhalable fraction)	Silica (amorphous)
	3mg/m3 TWA(respirable fraction)	
	(no asbestos and <1% crystalline silica)	
	10mg/m3 TWA	Coloring agent
$\mathbf{EC}$	6mg/m3	Titanium dioxide
	52mg/m3(20ppm) EC TWA(skin),	Ethylene glycol
	104mg/m3(40ppm) EC STEL(skin)	

Personal protective equipment : Not required.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### [ ]: Information of components.

Physical state	: Liquid.
Color	: Fluorescent pink.
Odor	: None odor.
pН	: about 8.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Ethylene glycol/ 398 C]
Explosion limits	: Not applicable.
[ Lower flammable li	mit / 3.2% , Upper flammable limit / 15.3% <ethylene glycol=""> ]</ethylene>
Density	: about 1.2 / 25 C
Vapor density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 55-58%

Stability Hazardous reactions Conditions to avoid	· · · · ·	r. ames, sparks and other sources of ignition. with incompatible materials.
Materials to avoid		Not available.
Hazardous decomposition products		: Not available.

## 11.TOXICOLOGICAL INFORMATION

(Information of components)

#### Acute toxicity

Ingestion LD50	1000mg/kg-Mouse	Resin
_	>24000mg/kg-Rat	Titanium dioxide
	4700mg/kg-Rat	Ethylene glycol
	3160mg/kg-Rat	Silica (amorphous)
	$\geq$ 5000mg/kg-Rat	Coloring agent
	1310mg/kg-Rat	Polyoxyethylene nonylphenyl ether
Inhalation LC50	6820mg/m3-4H-Rat	Titanium dioxide
Skin LD50	9530uL/kg-Rabbit	Ethylene glycol
Local effects	Irritant;inhalation, skin, eye	Ethylene glycol
	Irritant;eye	Polyoxyethylene nonylphenyl ether
Characterisites and la	n a torra torrigitar	

#### Chronic toxicity and long term toxicity

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

#### Signs and Symptoms of overexposure and aggravated by exposure

irritation,cough	Resin / Titanium dioxide /
	Ethylene glycol / Silica (amorphous)
irritation	Coloring agent /
	Polyoxyethylene nonylphenyl ether
mechanical abrasion, irritation	Resin
irritation	Polyoxyethylene nonylphenyl ether
irritation,dry	Ethylene glycol / Silica (amorphous)
irritation	Resin
irritation,redness	Titanium dioxide / Ethylene glycol /
	Silica (amorphous)
irritation,eye damage	Polyoxyethylene nonylphenyl ether
physiologically inert,	Titanium dioxide
intestinal obstruction	
nausea,vomiting	Ethylene glycol
digestive disorders, diarrhea	Polyoxyethylene nonylphenyl ether
IARC Group 3	Resin / Silica (amorphous)
	mechanical abrasion,irritation irritation irritation,dry irritation,redness irritation,redness irritation,eye damage physiologically inert, intestinal obstruction nausea,vomiting digestive disorders,diarrhea

## 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)	: Titanium dioxide / Ethylene glycol			
EU labeling	: Not restricted.			
CANADA Hazardous Products Act - In 1%over	Hazardous Products Act - Ingredient Disclosure List Ethylene glycol / Silica (amorphous)			
Hazard and safety information Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"				

## 16. OTHER INFORMATION