

Solid drawing material

Set Up Date June 23, 2005

Revision July 5, 2013

Safety Data Sheet

Reference number WM-F-02-E

1. PRODUCT & COMPANY IDENTIFICATION

• WRITING INSTRUMENT NAME	Weathering Master For Natural Metal Body Colours: LIGHT GUN METAL, COPPER, TITAN
• NAME OF MANUFACTURER/SUPPLIER	PILOT CORPORATION
• ADDRESS	1-4-3, Nishiyawata, Hiratsuka, Kanagawa 254-8585, Japan
• SECTION	SHONAN KAIHATU CENTER
• PERSON IN CHARGE	Hiroyuki Mizuishi
• TELEPHONE NUMBER	0463-35-8000
• FAX NUMBER	0463-35-7917
• URGENT CONTACT	0463-35-8030

2. HAZARD IDENTIFICATION

【GHS LABEL】



【CAUTION WORD】

**DANGER**

【GHS CLASSIFICATION】

PHYSICAL HAZARDS

COLOUR : 3 colours

SUBSTANCES OR MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES

Categories 2 or 3 : In contact with water, releases flammable gases

HEALTH HAZARDS

COLOUR : LIGHT GUN METAL

SKIN CORROSION/IRRITATION Category 3 : Causes mild skin irritation

SERIOUS EYE DAMAGE /EYE IRRITATION Category 2

: Causes serious eye irritation or causes eye irritation

CARCINOGENICITY Category 2 : Suspected of causing cancer

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE Category 2

: May cause damage to organ (central nerves).

May cause respiratory irritation, sleepiness and dizziness.

SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE Category 1

: Causes damage to organ(lungs) and may cause damage to

organs(central nerves, nerves, liver and testis) through prolonged or repeated exposure.

COLOUR : COPPER

SKIN CORROSION/IRRITATION Category 3 : Causes mild skin irritation

SERIOUS EYE DAMAGE /EYE IRRITATION Category 2

: Causes serious eye irritation or causes eye irritation

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE Category 2

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May cause respiratory irritation, sleepiness and dizziness.

SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE Category 1

: Causes damage to organ(lungs) and may cause damage to organs (central nerves, nerves, liver and testis)

COLOUR : TITAN

SKIN CORROSION/IRRITATION Category 3 : Causes mild skin irritation

SERIOUS EYE DAMAGE /EYE IRRITATION Category 2

: Causes serious eye irritation or causes eye irritation

CARCINOGENICITY Category 2 : Suspected of causing cancer

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE Category 2

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SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE Category 1

: Causes damage to organ(lungs) and may cause damage to organs(central nerves, nerves, liver and testis) through prolonged or repeated exposure.

ENVIRONMENTAL HAZARDS

COLOUR : LIGHT GUN METAL

HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE) Category 2

: Toxic to aquatic life

HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC) Category 2

: Toxic to aquatic life with long lasting effects

COLOUR : COPPER

HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE) Category 2

: Toxic to aquatic life

HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC) Category 2

: Toxic to aquatic life with long lasting effects

COLOUR : TITAN

HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE) Category 2

: Toxic to aquatic life

HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC) Category 2

: Toxic to aquatic life with long lasting effects

**【OTHER HAZARDS】**

PHYSICAL HAZARDS

COLOUR : THREE COLOURS

If heats above 150°C, may release small amounts of formaldehyde.

Containing inflammable liquids, may catch fire at high temperature and with heat source, naked flame and spark.

HEALTH HAZARDS

COLOUR : THREE COLOURS

If swallows or inhale, may cause hazardousness.

If breaths in dusts for long time, may cause pneumoconiosis.

If on mucous membrane and skin, may cause irritation.

Coming into respiratory tract, may endanger his/her life.

Contacting and breathing in, may cause hazardousness.

PRECAUTIONARY STATEMENTS

**【SAFETY MEASURE】**

Obtain special introductions before use.

Do not handle until all safety precautions have been read and understood.

Do not eat, drink or smoke when using this product.

Use personal protective equipment as required.

Wear protective gloves.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash hands thoroughly after handling.

Avoid release to the environment.

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

Protect from moisture.

**【STORAGE】**

Store in a well-ventilated and a dry place. Store in a closed container.

Protect from sunlight. Keep cool under 50°C and do not expose to temperatures exceeding 50°C.

Keep away from heat source and fire.

**【RESPONSE】**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

IF SWALLOWED: Rinse mouth and get medical advice/attention. Do NOT induce vomiting.

IF exposed or may be exposed: Get medical advice/attention.

## 3. COMPOSITION/information on ingredients

A single substance or Mixture : Mixture

UNIT (WEIGHT%)

SUBSTANCE	CAS No	MITI No	LIGHT GUNMETAL	COPPER	TITAN
Pigment Yellow 93	5580-57-4	5-3172	—	1. 2	1. 6
Pigment Brown 23	35869-64-8	5-3324	—	3. 8	1. 0
Carbon black	133-86-4	5-3328	0. 8	—	0. 5
Aliminum	7429-90-5	—	1 3. 7	1 5. 9	1 6. 1
Fatty acid	REGISTERD	REGISTERD	0. 8	1. 0	1. 0
Diethyl ethanolamine	100-37-8	2-297	0. 2	0. 2	0. 2
Mineral Spirit	64742-74-8	9-1700	4. 7	5. 5	5. 8
1,3,5- Trimethyl benzene	108-67-8	3-7	0. 3	0. 3	0. 3
1,2,4- Trimethyl benzene	95-63-6	3-7 3-3427	0. 8	1. 0	1. 0
Xylene	1330-20-7	3-3	0. 0	0. 0	0. 0
Cumene	98-82-8	3-22	0. 0	0. 0	0. 0
Nonane	111-84-2	2-9	0. 2	0. 2	0. 2
Ethyl Benzene	100-41-4	3-28 3-60	0. 0	0. 0	0. 0
Polyoxyethylene lauryl ether	9002-92-0	7-97	1. 3	1. 5	1. 6
Propylene glycol monomethyl ether	107-98-2	2-404	0. 8	1. 0	1. 0
Stearic acid	1957-11-4	2-608	1 5. 9	1 9. 0	1 9. 2
Talc	14807-96-6	—	5 2. 1	4 4. 5	4 4. 9
Silicone	REGISTERD	REGISTERD	4. 4	3. 2	3. 2
Polyethylene glycol	25322-68-3	7-129	4. 4	3. 2	3. 2
polyvinyl butyral resin	63148-65-2	6-708	0. 9	—	0. 7

※Max content.

#### 4. FIRST-AID MEASURES

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If breaths in : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention.

If on skin : Wash with plenty of soap and water. If irritation occurs, get medical advice/attention.

If in eye : Measuring according to【RESPONSE】in「PRECAUTIONARY STATEMENTS」.

If swallows : Measuring according to【RESPONSE】in「PRECAUTIONARY STATEMENTS」.

#### 5. FIRE-FIGHTING MEASURE

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How to extinguish : Use digestive.

Suitable extinguishing media : Powder, carbon dioxide, dry sand, cloth made of glass fiber.

Unsuitable extinguishing media : Water and digestive with water and halogen

Hazards in firing : No knowledge.

Way of extinguishment (specific way) : Similar to standard case of fire

Protective equipment : Wear protective equipment (fireproof clothes and mask) : similar to standard case of fire

Others : In case of fire, may generate irritative, poisonous and corrosive gases. And digestive may cause contamination.

#### 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures.

Use glove tolerable against organic solvents, safety glasses, protective clothes and mask tolerable against organic solvents.

Avoid breathing and contacting to eyes, skin and mucous membrane.

Environmental precautions

Do not release to environment. take care not to eject to river system and not to affect environment.

Methods and materials for containment and cleaning up

Use personal protective equipment as required and prevent leak.

Collect with metal scoop ,not causing fire, or broom ,not accumulate static electricity, made of natural fiber. (do not raise dust)

Take the collection in metal container.

#### 7. HANDLING AND STORAGE

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Handling: Use protective equipment noted in 「6. ACCIDENTAL RELEASE MEASURES」 .

If not use, do not touch leak and ink directly. And avoid breathing organic vapor.

Using outdoors and at well- ventilated place.

Precautions for explosion and flame :

If organic solvents in mineral spirits evaporate, vapor spreads on the ground and stagnate on lower and airtight place .

If aluminum powder stagnates in air, may cause dust explosion.

Precautions : Keep away from the heat source, fire, high temperature.

Do not contact with water.

Storage : Put into an attached container and seal. Keep away from heat source, fire, high temperature and direct ray.

Store in a well- ventilated and a dry place under 50°C.

SAFETY CONTAINER : Attached container

8 . EXPOSURE CONTROLS/PERSONAL PROTECTION

SUBSTANCE	standard control concentration (Ministry of Health, Labour and Welfare)	permissible concentration (Japan Assoc. of Industrial Health)	ACGIH/TWA
Carbon black	2.9mg/m3	4.0mg/m3 (total dust)	3.5mg/m3 (2002)
Pigment Brown 23		8.0mg/m3 (dust class3)	10mg/m3 (2002)
Diethyl ethanolamine			2ppm (skin)
Aluminum		0.5mg/m3 (inhalation) 2mg/m3 (total dust)	10mg/m3 (2000)
Propyleneglycol monometylether			100ppm (2005)
Mineral spirit		100ppm	525mg/m3
Glycerol			10mg/m3
Talc		2mg/m3	2mg/m3 (1983)

Equipment : desirable to use device for exhausting gases

Safety equipment : desirable to use equipment noted in 「6 . ACCIDENTAL RELEASE MEASURES」

9 . PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

FORM solid (cuboid)

COLOUR LIGHT GUN METAL : metallic gray COPPER : copper

TITAN : light gold

ODOUR slightly smell

pH No data

MELTING POINT: Nothing

INITIAL BOILING POINT AND BOILING RANGE: No data

FLASH POINT: No data

UPPER/LOWER FLAMMABILITY or EXPLOSIVE LIMITS : No data

VAPOUR PRESSURE: No data

VAPOUR DENSITY: No data

RELATIVE DENSITY: No data

Solubility: distributes in water

PARTITION COEFFICIENT: n-octanol/water: No data

AUTO IGNITION TEMPERATURE: No data

DECOMPOSITION TEMPERATURE: No data

1 0 . STABILITY AND REACTIVITY

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FLAMMABILITY : No data

IGNITION (spontaneous combustion and react with water) : Not applicable

OXIDIZIBILITY : Not applicable

SELF REACTION AND EXPLOSION : No data

DUST EXPLOSION : No data

STABILITY AND REACTIVITY : Considered as stable in normal using.

~below 3 colours ~

Contacting with water, acid, alkali, oxidizing agent, halide and metal oxide may release flammable and explosive gas

Vapor of organic solvent may generates at high temperature.

High temperature, spark, flame may cause catching fire.

UNSUITABLE CONDITION : High temperature (above 50°C)

AVOID CONTACTING WITH : water, acid, alkali, oxidizing agent, halide and metal oxide

OTHERS : Nothing

1 1 . TOXICOLOGICAL INFORMATION

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ACUTE TOXICITY(ORAL) : No knowledge

(PERCUTANEOUS) : No knowledge

(INHALATION) : gases : No knowledge

: vapor : No knowledge

: dust and mist: No knowledge

SKIN CORROSION/IRRITATION : No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 1 Diethyl ethanolamine (0.2%)

Category 2 Mineral spirit (4.7%)

Polyoxyethylene laurylether (1.3%)

Classified as Category 3 (Causes mild skin irritation)

COLOUR : COPPER

Category 1 Diethyl ethanolamine (0.2%)

Category 2 Mineral spirit (5.5%)

Polyoxyethylene laurylether (1.5%)

Classified as Category 3 (Causes mild skin irritation)

COLOUR : TITAN

Category 1 Diethyl ethanolamine (0.2%)

Category 2 Mineral spirit (5.8%)

Polyoxyethylene laurylether (1.6%)

Classified as Category 3 (Causes mild skin irritation)

SERIOUS EYE DAMAGE /EYE IRRITATION : No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 1 Diethyl ethanolamine (0.2%)

Polyoxyethylene laurylether (1.3%)

Category 2 B Polyethylene glycol (4.4%)

Propyleneglycol monomethylether (0.8%)

Stearic acid (15.9%)

Classified as Category 2 (Causes serious eye irritation or Causes eye irritation) .

COLOUR : COPPER

Category 1 Diethyl ethanolamine (0.2%)

Polyoxyethylene laurylether (1.5%)

Category 2 B Polyethylene glycol (3.2%)

Propyleneglycol monomethylether (1.0%)

Stearic acid (19.0%)

Classified as Category 2 (Causes serious eye irritation or Causes eye irritation) .

COLOUR : TITAN

Category 1 Diethyl ethanolamine (0.2%)



Polyoxyethylene laurylether (1.6%)

Category 2 B Polyethylene glycol (3.2%)

Propyleneglycol monomethylether (1.0%)

Stearic acid (19.2%)

Classified as Category 2 (Causes serious eye irritation or Causes eye irritation) .

RESPIRATORY OR SKIN SENSITIZATION : No knowledge

GERM CELL MUTAGENICITY : No knowledge

CARCINOGENICITY ; No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 2 Carbon black (0.8%)

Carbon black is classified as Category 2. (IARC)

SUSU is classified as Category 2.

COLOUR : TITAN

Category 2 Carbon black (0.5%)

Classified as Category 2.

REPRODUCTIVE TOXICITY : No knowledge

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No knowledge

◆ G H S classification

COLOUR : SILVER

Category 1 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 3 (Respiratory irritation, anesthetic action)

Diethyl ethanolamine (0.2%)

Mineral spirit (4.7%)

Category 3 (anesthetic action)

Propyleneglycol monomethylether (0.8%)

Classified as Category 3 (May cause respiratory irritation or may cause drowsiness or dizziness)

COLOUR : COPPER

Category 1 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 3 (Respiratory irritation, anesthetic action)

Diethyl ethanolamine (0.2%)

Mineral spirit (5.5%)

Category 3 (anesthetic action)

Propyleneglycol monomethylether (1.0%)

Classified as Category 3 (May cause respiratory irritation or

may cause drowsiness or dizziness)

COLOUR : TITAN

Category 1 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 3 (Respiratory irritation, anesthetic action)

Diethyl ethanolamine (0.2%)

Mineral spirit (5.8%)

Category 3 (anesthetic action)

Propyleneglycol monomethylether (1.0%)

Classified as Category 3 (May cause respiratory irritation or may cause drowsiness or dizziness)

SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 1 (Lungs) : Aluminum (13.7%) , Carbon black (0.8%)

Category 2 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 2 (Nerves) : Aluminum (13.7%)

Category 2 (River • testis) : Mineral spirit (4.7%)

Classified as Category 1

Causes damage to organs (lungs) through prolonged or repeated exposure.

May causes damage to organs (central nerves, nerves, river, testis) through prolonged or repeated exposure.

COLOUR : COPPER

Category 1 (Lungs) : Aluminum (15.9%)

Category 2 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 2 (Nerves) : Aluminum (15.9%)

Category 2 (River • testis) : Mineral spirit (5.5%)

Classified as Category 1

Causes damage to organs (lungs) through prolonged or repeated exposure.

May causes damage to organs (central nerves, nerves, river, testis) through prolonged or repeated exposure.

COLOUR : TITAN

Category 1 (Lungs) : Aluminum (16.1%) , Carbon black (0.5%)

Category 2 (Central nerves) : Diethyl ethanolamine (0.2%)

Category 2 (Nerves) : Aluminum (16.1%)

Category 2 (River • testis) : Mineral spirit (5.8%)

Classified as Category 1

Causes damage to organs (lungs) through prolonged or repeated exposure.

May causes damage to organs (central nerves, nerves, liver, testis) through prolonged or repeated exposure.

ASPIRATION HAZARD : No knowledge

◆ G H S classification

COLOUR : 3colours

Mineral spirit : Category 1

GUN METAL and SILVER is not classified as Category but if swallows and mixture break into respiratory, may cause threat to life.

Others : Information of Mineral spirit and Propyleneglycol monomethylether

If inhales high concentration vapor and mist, may cause respiratory and nerves irritation, and may cause headache and dizziness.

If inhales, may cause skin and eye inflammation.

If contacts with liquid for long time or repeatedly, may cause degreasing, dryness and crack of skin, and may cause dermatitis.

If extremely inhales mist for long time, may cause chronic inflammation, and may cause pulmonary fibrosis.

Mineral Sprit contains Benzene less than 0.1%, and so is not classified as carcinogenic substance in EU law.

(Registration, Evaluation, Authorization and Restriction of Chemicals : REACH law)

## 1 2 . ECOLOGICAL INFORMATION

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HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE) : No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 1 Mineral Spirit (4.7%)

Polyoxyethylene laurylether (1.2%)

Category2 Stearic acid (15.9%)

Category3 Diethyl ethanolamine (0.2%)

Classified as Category 2 (Toxic to aquatic life)

COLOUR : COPPER

- Category 1 Mineral Spirit (5.5%)
- Polyoxyethylene laurylether (1.5%)

Category3 Diethyl ethanolamine (0.2%)

Classified as Category 2 (Toxic to aquatic life)

COLOUR : TITAN

- Category 1 Mineral Spirit (5.8%)
- Polyoxyethylene laurylether (1.6%)

Category2 Stearic acid (19.2%)

Category3 Diethyl ethanolamine (0.2%)

Classified as Category 2 (Toxic to aquatic life)

HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC) : No knowledge

◆ G H S classification

COLOUR : LIGHT GUN METAL

Category 1 Mineral Spirit (4.7%)

Category 4 Aluminum (13.7%)

Classified as Category 2 (Toxic to aquatic life with long lasting effects)

COLOUR : COPPER

Category 1 Mineral Spirit (5.5%)

Category 4 Aluminum (15.9%)

Classified as Category 2 (Toxic to aquatic life with long lasting effects)

COLOUR : TITAN

Category 1 Mineral Spirit (5.8%)

Category 4 Aluminum (16.1%)

Classified as Category 2 (Toxic to aquatic life with long lasting effects)

BIOACCUMULATIVE POTENTIAL : No knowledge

PERSISTENCE AND DEGRADABILITY : No knowledge

MOBILITY IN SOIL : No knowledge

1 3 . DISPOSAL CONSIDERATIONS \_\_\_\_\_

Request processes for the regular industrial waste treatment company.

Do not release to rivers and drain.

1 4 . TRANSPORT INFORMATION \_\_\_\_\_

UN NUMBER : 1325

PACKING GROUP : Class 4.1 (FLAMMABLE SOLID, ORGANIC, N. O. S )

SPECIAL PRECAUTIONS WHICH A USER NEEDS TO BE AWARE OF, OR NEEDS TO COMPLY WITH, IN CONNECTION WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THEIR PREMISES : In transporting, make sure of no leak from pack and prescribed Indication.

Load so as not to fall, fall down, and damage.

Make sure to prevent collapsing load.

Keep away from water, moisture, sunlight, the heat source, high Temperature and fire, transport under 50°C.

1 5 . REGULATORY INFORMATION

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Industrial safety and Health Law : Article 57-2

Carbon Black (LIGHT GUN METAL:0.8%, TITAN:0.5%)

Mineral spirit (LIGHT GUN METAL : 4.7%, COPPER:5.5%, TITAN:5.8%)

Xylene (LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Nonane (LIGHT GUN METAL : 0.2%, COPPER:0.2%, TITAN:0.2%)

Ethyl benzene (LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Cumene (LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Trimethyl benzene(LIGHT GUNMETAL:1.2%, COPPER:1.4%, TITAN:1.4%)

Diethyl ethanolamine (LIGHT GUN METAL : 0.2%, COPPER:0.2%, TITAN:0.2%)

Propyleneglycol monomethylether

(LIGHT GUN METAL : 0.8%, COPPER:1.0%, TITAN:1.0%)

Pollutant Release and Transfer Register (PRTR)

Class I : 1,3,5- Trimethyl benzene

(LIGHT GUN METAL : 0.3%, COPPER:0.3%, TITAN:0.3%)

1,2,4- Trimethyl benzene

(LIGHT GUN METAL : 0.8%, COPPER:1.0%, TITAN:1.0%)

Xylene

(LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Cumene

(LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Ethyl benzene

(LIGHT GUN METAL : 0.0%, COPPER:0.0%, TITAN:0.0%)

Polyoxyethylene alkylether

(LIGHT GUN METAL : 1.3%, COPPER:1.5%, TITAN:1.6%)

Diethyl ethanolamine

(LIGHT GUN METAL : 0.2%, COPPER:0.2%, TITAN:0.2%)

1 6 . OTHER INFORMATION

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QUOTATION LITERATURE Substances M S D S

Pigments M S D S, Talc M S D S, PEG M S D S,

Silicone M S D S

Substances information :Ministry of Health, Labour and  
Welfare(WEB SITE)

In the written contents the value of content,  
physical-chemistry-character and etc. is not guarantee value.

Written contents may be revised if obtain new information.

Since notes are the things for usual handling, in special handling, consider  
this point.

Moreover, since evaluation of hazard detrimental nature is not necessarily  
enough, be cautious of handling enough.

• REFERENCES

The information here is given in good faith, but no warranty, express or  
implied is made.

Final determination of suitability of any material is the solo responsibility  
of the user.