Safety Data Sheet (SDS)

Preparation Date  2015/07/21
Revision Date   2019/01/31

Section 1 - CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier  WPB20-X
Product Code  WPB20X0002
Company Name  PENTEL CO., LTD.
Address  7-2,KOAMICHO,NIHONBASHI,CHUO-KU,TOKYO
Company Contact  QUALITY ASSURANCE DEPARTMENT I
Phone Number  03-5695-7210
Fax Number  03-5645-8204
Mail Address  hinpo@pentel.co.jp
Emergency Phone Number  03-5695-7210
Recommended Use and Restriction on Use  ink


Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Health Hazards  Acute toxicity (Inhalation: vapour) Category 4
Acute toxicity (Inhalation: dust and mist) Category 4
Serious eye damage/eye irritation Category 2A
Specific target organ toxicity (single exposure) Category 2(blood, respiratory apparatus,kidney,central nervous system)
Specific target organ toxicity (repeated exposure) Category 2(remoporative apparatus)
Other hazards than mentioned above are Not applicable or Classification not possible.

GHS Label Elements

Symbols

Signal Word  Warning
Hazard Statements
H319 Causes serious eye irritation
H332 Harmful if inhaled
H371 May cause damage to blood, respiratory apparatus,kidney,central nervous system
H373 May cause damage to respiratory apparatus through prolonged or repeated exposure

Precautionary Statements
Prevention
Avoid breathing dust and fume.(P261)

Precautionary Statements
Wear eye protection and face protection.(P280)
Do not breathe mist, vapours and spray.(P260)
Avoid breathing mist, vapours and spray.(P261)
Wash hand thoroughly after handling.(P264)
Wash eye thoroughly after handling.(P264)
Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

### Distinction of Substance or Mixture

#### ENCS No./ISHL No.

<table>
<thead>
<tr>
<th>Chemical Name or Generic Name</th>
<th>Concentration or Its Ranges</th>
<th>Formula</th>
<th>ENCS No./ISHL No.</th>
<th>CAS RN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>7.5%</td>
<td>HOCH₂CH₂OH</td>
<td>(2)–230 Existing</td>
<td>107–21–1</td>
</tr>
<tr>
<td>Glycerol</td>
<td>7.5%</td>
<td>CH₂OHCH(OH)C_H₂OH</td>
<td>(2)–242 Existing</td>
<td>56–81–5</td>
</tr>
<tr>
<td>Aluminum</td>
<td>2.64%</td>
<td>Al</td>
<td>Unknown Unknown</td>
<td>7429–90–5</td>
</tr>
<tr>
<td>Propylene glycol mono methyl ether</td>
<td>1.425%</td>
<td>(2)–404.(7)–97 Existing</td>
<td>107–98–2</td>
<td></td>
</tr>
</tbody>
</table>

**Impurities and/or Stabilizing Additives which Contribute to the**

No information available

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Section 4 – FIRST AID MEASURES

#### Inhalation

Get medical advice and attention if you feel unwell.

#### Skin Contact

Wash with soap and water.

#### Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. When the ocular stimulation lasts, Seek medical treatment and advice.

#### Ingestion

Rinse mouth. Do NOT induce vomiting. Get medical advice and attention if you feel unwell.

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Section 5 – FIRE FIGHTING MEASURES

#### Extinguishing Media

Dry chemicals, CO₂, water spray or regular foam.
Section 6 – ACCIDENTAL RELEASE MEASURES

Environmental Precautions
Pay attention not to cause the influence on the environment by discharging into rivers. This product is water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

Methods and Equipment for Containment and Cleaning up
Vacuum or sweep up material and place in a disposal container.

Prevention Measures for Secondary Accidents
Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. After removal, flush contaminated area thoroughly with water.

Section 7 – HANDLING AND STORAGE

Handling Technical Measures
Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION”.

Precautions for Safe Handling
Wash hand thoroughly after handling.
Avoid swallowing.
Avoid contact with eyes.
Protect from high temperature and direct sunlight.

Prevents Handling of Incompatible Substances or Mixtures
Refer to "Section 10 – STABILITY AND REACTIVITY”.

Storage Precautionary Statements
Conditions for Safe Storage
Refer to "Section 10 – STABILITY AND REACTIVITY”. Have containers keep away from direct sunlight and heat.
Keep away from heat.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
Respiratory Protection
Use personal respiratory equipment as required.

Hand Protection
Use personal gloves as required.

Eye Protection
Use personal eye protection as required.

Skin and Body Protection
Use personal protective clothing and face protection as required.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical State
liquid

Form
liquid (viscous liquid)

Colour
gold

Odour
slight odor

Odour threshold
No data available

pH
No data available

Melting Point/Freezing Point
No data available

Initial Boiling Point and Boiling Ranges
No data available
### Flash Point
No data available

### Evaporation Rate
No data available

### Flammability (solid, gas)
No data available

### Flammability or Explosive Limits
<table>
<thead>
<tr>
<th>Lower Limit</th>
<th>Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### Vapour Pressure
No data available

### Vapour Density
No data available

### Specific Gravity (Density)
No data available

### Partition Coefficient : n-Octanol/Water
No data available

### Auto-Ignition Temperature
No data available

### Decomposition Temperature
No data available

### Viscosity
No data available

### Kinematic viscosity
No data available

### Section 10 - STABILITY AND REACTIVITY
- **Reactivity**
  - Chemical stability: No data available
  - Possibility of Hazardous Reaction: No data available
  - Conditions to Avoid: No data available
  - Incompatible Substances or Mixtures: No data available
  - Hazardous Decomposition Products: No data available

### Section 11 - TOXICOLOGICAL INFORMATION
- **Acute Toxicity**
  - No information available
- **Skin Corrosion/Irritation**
  - No data available
- **Serious eye damage/eye irritation**
  - No data available
- **Respiratory Sensitization**
  - No data available
- **Skin Sensitization**
  - No data available
- **Germ Cell Mutagenicity**
  - No data available
- **Carcinogenicity**
  - No data available
- **Reproductive Toxicity**
  - No data available
- **Specific target organ toxicity (single exposure)**
  - No data available
- **Specific target organ toxicity (repeated exposure)**
  - No data available
- **Aspiration Hazard**
  - No data available

### Section 12 - ECOLOGICAL INFORMATION
- **Hazardous to the aquatic environment (acute)**
  - No data available
- **Hazardous to the aquatic environment (long-term)**
  - No data available
- **Hazardous to the ozone layer**
  - No data available

### Section 13 - DISPOSAL CONSIDERATIONS
- **Residual Waste**
  - Disposal should be in accordance with applicable regulations and standards by the respective local governments.
Contaminated Container and Packaging

Section 14 – TRANSPORT INFORMATION

International Regulations

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Pollutant</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport in bulk</td>
<td>Not applicable</td>
</tr>
<tr>
<td>according to MARPOL</td>
<td></td>
</tr>
<tr>
<td>73/78, Annex II, and</td>
<td></td>
</tr>
<tr>
<td>the IBC code</td>
<td></td>
</tr>
<tr>
<td>Regulatory Information by Air</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Regulatory Information by Road or Rail</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Regulatory Information by Sea</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Marine Pollutant</td>
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<td></td>
</tr>
<tr>
<td>Regulatory Information by Air</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Regulations in Japan

Emergency Response Guide Number

Not applicable

Section 15 – REGULATORY INFORMATION

Regulatory information with regard to this product in your country or in your region should be examined by your own responsibility.

Section 16 – OTHER INFORMATION

Information Contact

This information is furnished without warranty express or implied.

Other Property

This information is believed to be accurate to the best knowledge of PENTEL Co., Ltd. but not assumes legal responsibility for use of or reliance upon this information.
Safety Data Sheet (SDS)

Preparation Date 2017/12/12

Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier  WPB20-Z
Product Code  WPB20Z0002
Company Name  PENTEL CO., LTD.
Address  7-2,KOAMICHO,NIHONBASHI,CHUO-KU,TOKYO
Company Contact  QUALITY ASSURANCE DEPARTMENT I
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Recommended Use and Restriction on Use  ink

KFR10–Z, WPB7–Z

Section 2 – HAZARDS IDENTIFICATION

GHS Classification

Health Hazards
Acute toxicity (Inhalation: vapour) Category 4
Acute toxicity (Inhalation: dust and mist) Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Specific target organ toxicity (single exposure) Category 1(blood,kidney,central nervous system)
Specific target organ toxicity (repeated exposure) Category 2(lung)
Other hazards than mentioned above are Not applicable or Classification not possible.

GHS Label Elements

Symbols

Danger
H315 Causes skin irritation
H319 Causes serious eye irritation
H332 Harmful if inhaled
H370 Causes damage to blood,kidney,central nervous system
H373 May cause damage to lung through prolonged or repeated exposure

Precautionary Statements
Prevention
Avoid breathing dust and fume.(P261)

Precautionary Statements
Wear protective gloves.(P280)
Wear eye protection and face protection.(P280)
Do not breathe mist, vapours and spray.(P260)
Avoid breathing mist, vapours and spray.(P261)
Response Precautionary Statements
IF ON SKIN: Wash with plenty of soap and water.(P302+P352)

Storage Precautionary Statements
Dispose of contents and container in accordance with local, regional and national regulations (to be specified).(P501)

Disposal Precautionary Statements
Dispose of contents and container in accordance with local, regional and national regulations (to be specified).(P501)

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS
Distinction of Substance or Mixture

<table>
<thead>
<tr>
<th>Chemical Name or Generic Name</th>
<th>Concentration or Its Ranges</th>
<th>Formula</th>
<th>ENCS No./ISHL No.</th>
<th>CAS RN</th>
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</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>10%</td>
<td>HOCH2CH2OH</td>
<td>(2)–230</td>
<td>Existing 107–21–1</td>
</tr>
<tr>
<td>Glycerin</td>
<td>10%</td>
<td>CH2OHCH(OH)C H2OH</td>
<td>(2)–242</td>
<td>Existing 56–81–5</td>
</tr>
<tr>
<td>Aluminum</td>
<td>2.7%</td>
<td>Al</td>
<td>Unknown Unknown 7429–90–5</td>
<td></td>
</tr>
<tr>
<td>Propylene glycol monomethyl ether</td>
<td>1.35%</td>
<td></td>
<td>(2)–404,(7)–97 Existing 107–98–2</td>
<td></td>
</tr>
</tbody>
</table>

Impurities and/or Stabilizing Additives which Contribute to the

Section 4 – FIRST AID MEASURES
Inhalation
Get medical advice and attention if you feel unwell.

Skin Contact
Wash with soap and water.
Eye Contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
Continue rinsing.
When the ocular stimulation lasts, Seek medical treatment and advice.

Ingestion
Rinse mouth. Do NOT induce vomiting.
Get medical advice and attention if you feel unwell.

Section 5 - FIRE FIGHTING MEASURES
Extinguishing Media
Small fires: Dry chemical, CO2, water spray or regular foam.

Section 6 - ACCIDENTAL RELEASE MEASURES
Environmental Precautions
Pay attention not to cause the influence on the environment by discharging into rivers.
This product is water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

Methods and Equipment for Containment and Cleaning up
Vacuum or sweep up material and place in a disposal container.
Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
After removal, flush contaminated area thoroughly with water.
Prevention Measures for Secondary Accidents
Prevent flowing into drain, sewage, basement, and closed area.
Remove thoroughly since the smooth and slippery surface will be formed on the floor.

Section 7 - HANDLING AND STORAGE
Handling Technical Measures
Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION”.
Precautions for Safe Handling
Wash hands thoroughly after handling.
Avoid swallowing.
Avoid contact with eyes.
Protect from high temperature and direct sunlight.
Prevent handling of incompatible substances or mixtures.
Refer to "Section 10 – STABILITY AND REACTIVITY”.

Storage Precautionary Statements
Conditions for Safe Storage
Refer to "Section 10 – STABILITY AND REACTIVITY”.
Have containers keep away from direct sunlight and heat.
Keep away from heat.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering Controls
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
Respiratory Protection
Use personal respiratory equipment as required.
Hand Protection
Use personal gloves as required.
Eye Protection
Use personal eye protection as required.
### Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Physical State</strong></td>
<td>Liquid (viscous liquid)</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Silver</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Slight odor</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Melting Point/Freezing Point</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Initial Boiling Point and Boiling Ranges</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability or Explosive Limits</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Lower Limit</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Upper Limit</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Vapour Pressure</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Vapour Density</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Specific Gravity (Density)</strong></td>
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<tr>
<td><strong>Partition Coefficient : n-octanol/water</strong></td>
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<tr>
<td><strong>Auto-Ignition</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Decomposition</strong></td>
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<tr>
<td><strong>Temperature</strong></td>
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<td><strong>Viscosity</strong></td>
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<tr>
<td><strong>Kinematic viscosity</strong></td>
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</table>

### Section 10 – STABILITY AND REACTIVITY

<table>
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<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reactivity</strong></td>
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<tr>
<td><strong>Chemical stability</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Possibility of Hazardous Reaction</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Conditions to Avoid</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Incompatible Substances or Mixtures</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Hazardous Decomposition Products</strong></td>
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</tr>
</tbody>
</table>

### Section 11 – TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Toxicity</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Skin Corrosion/Irritation</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Respiratory or Skin Sensitization</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Germ Cell Mutagenicity</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Carcinogenicity</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Reproductive Toxicity</strong></td>
<td>No data available</td>
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<tr>
<td><strong>Specific target organ toxicity (single exposure)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Specific target organ toxicity (repeated exposure)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Aspiration Hazard</strong></td>
<td>No data available</td>
</tr>
</tbody>
</table>

Use personal protective clothing and face protection as required.
Section 12 - ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute) No data available
Hazardous to the aquatic environment (long-term) No data available
Hazardous to the ozone layer No data available

Section 13 - DISPOSAL CONSIDERATIONS

Residual Waste Disposal should be in accordance with applicable regulations and standards by the respective local governments.
Commission a waste disposal company, or a local public body who are licensed by local or regional government, to dispose of the material.

Contaminated Container and Packaging Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments.

Section 14 - TRANSPORT INFORMATION

International Regulations Regulatory Information by Sea Not applicable
Marine Pollutant Not applicable
Transport in bulk according to MARPOL 73/78,Annex II,and the IBC code Not applicable
Regulatory Information by Air Not applicable

Regulations in Japan Regulatory Information by Road or Rail Not applicable
Regulatory Information by Sea Marine Pollutant Not applicable
Transport in bulk according to MARPOL 73/78,Annex II,and the IBC code Not applicable
Regulatory Information by Air Not applicable

Emergency Response Guide Number Not applicable

Section 15 - REGULATORY INFORMATION

Regulatory information with regard to this product in your country or in your region should be examined by your own responsibility.

Section 16 - OTHER INFORMATION

Information Contact No information available
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Other Property Not applicable