



SAFETY DATA SHEET

Issuing Date 24-May-2015

Revision Date 24-May-2015

Revision Number 0

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 800036

Product Name S-200W LP Part A

Contains Bisphenol A - Epichlorohydrin polymer

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Epoxy Lettering Ink Part A

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Company

Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701
TEL: 775-885-9959

For further information, please contact

E-mail Address No information available.

1.4. Emergency telephone number

Emergency Telephone Number 775-885-9959

| | |
|--------|-----|
| Europe | 112 |
|--------|-----|

Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

| | |
|-----------------------------------|------------|
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Skin Sensitization | Category 1 |
| Chronic Aquatic Toxicity | Category 3 |

Physical Hazards

None

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) Xn - Harmful
R-code(s) Xn;R20/22 - Xi;R36/38 - R43 - R52-53

For the full text of the R-phrases mentioned in this Section, see Section 16

2.2. Label Elements

**Signal Word****Warning****Hazard Statements**

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P362 - Take off contaminated clothing and wash before reuse

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

P273 - Avoid release to the environment

2.3. Other information

Section 3. Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Chemical Name | EC-No | CAS-No | Weight % | Classification | EU - GHS Substance Classification | REACH No. |
|---------------------------------------|-----------|------------|----------|--------------------------------|---|-------------------|
| Titanium dioxide | 236-675-5 | 13463-67-7 | 30-60 | - | | No data available |
| Bisphenol A - Epichlorohydrin polymer | 500-033-5 | 25068-38-6 | <25 | Xi; R36/38 R43 N; R51-53 | Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411) | No data available |
| Barium sulfate | Present | 7727-43-7 | 10-30 | Xn; R20/22 | | No data available |
| Silicon dioxide | Present | 7631-86-9 | 0.1-1 | - | | No data available |

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1. Description of first-aid measures**General Advice**

Immediate medical attention is required. If symptoms persist, call a physician.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

| | |
|-----------------------------------|--|
| Skin Contact | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician. |
| Ingestion | Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician. |
| Protection of First-aiders | Use personal protective equipment. Avoid contact with skin, eyes and clothing. |

4.2. Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician May cause sensitization of susceptible persons. Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Dry powder. Foam. Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by skin contact.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and materials for containment and cleaning up

Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

6.4. Reference to other sections

See Section 12 for additional information.

Section 7. Handling and storage

7.1. Precautions for Safe Handling

Handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.

Hygiene Measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

7.3. Specific end use(s)**Exposure Scenario**

No information available.

Other Guidelines

No information available.

Section 8. Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

| Chemical Name | EU | The United Kingdom | France | Spain | Germany |
|--|--|---|---|---|---|
| Titanium dioxide 13463-67-7 | | STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³ | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ | |
| Barium sulfate 7727-43-7 | | STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³ | | TWA: 10 mg/m ³ | TWA: 4 mg/m ³ TWA: 1.5 mg/m ³ Ceiling / Peak: 4 mg/m ³ |
| Silicon dioxide 7631-86-9 | | STEL: 18 mg/m ³ STEL: 7.2 mg/m ³ TWA: 6 mg/m ³ TWA: 2.4 mg/m ³ | | | TWA: 4 mg/m ³ |
| Component | Italy | Portugal | The Netherlands | Finland | Denmark |
| Titanium dioxide 13463-67-7 (30-60) | | TWA: 10 mg/m ³ | | | TWA: 6 mg/m ³ |
| Barium sulfate 7727-43-7 (10-30) | | TWA: 10 mg/m ³ | | | |
| Silicon dioxide 7631-86-9 (0.1-1) | | | | TWA: 5 mg/m ³ | |
| Chemical Name | Austria | Switzerland | Poland | Norway | Ireland |
| Titanium dioxide 13463-67-7 | STEL 10 mg/m ³ TWA: 5 mg/m ³ | TWA: 3 mg/m ³ | STEL: 30 mg/m ³ TWA: 10.0 mg/m ³ | TWA: 5 mg/m ³ STEL: 10 mg/m ³ | TWA: 10 mg/m ³ TWA: 4 mg/m ³ |
| Barium sulfate 7727-43-7 | | | | TWA: 0.5 mg/m ³ STEL: 1.5 mg/m ³ | TWA: 2 mg/m ³ STEL: 6 mg/m ³ |
| Silicon dioxide 7631-86-9 | TWA: 4 mg/m ³ TWA: 0.3 mg/m ³ | TWA: 4 mg/m ³ TWA: 0.3 mg/m ³ | | TWA: 1.5 mg/m ³ STEL: 3 mg/m ³ | TWA: 6 mg/m ³ TWA: 2.4 mg/m ³ |

Derived No Effect Level No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

| | |
|--|---|
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. |
| Personal protective equipment | |
| Eye Protection | Safety glasses with side-shields. |
| Skin and Body Protection | Lightweight protective clothing. |
| Hand Protection | Protective gloves. |
| Respiratory Protection | If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. |
| Environmental Exposure Controls | No information available. |

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | | |
|-----------------------|----------------|-------------------|-------|
| Physical State | Viscous liquid | Appearance | White |
| Odor | Mild Solvent | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks/ - Method</u> |
|---|---|--------------------------|
| pH | No data available | None known |
| Melting Point/Range | No data available | None known |
| Boiling Point/Boiling Range | No data available | None known |
| Flash Point | 110 °C | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Vapor Pressure | No data available | None known |
| Vapor Density | No data available | None known |
| Relative Density | 1.81 | None known |
| Water Solubility | No data available | None known |
| Solubility in other solvents | No data available | None known |
| Partition coefficient: n-octanol/water | No data available | None known |
| Autoignition Temperature | No data available | None known |
| Decomposition Temperature | No data available | None known |
| Viscosity | No data available | None known |
| Flammable Properties | Combustible material: may burn but does not ignite readily. | |
| Explosive Properties | No data available | |
| Oxidizing Properties | No data available | |

9.2. Other information

| | |
|-----------------------------------|-------------------|
| VOC Content (%) | 11 |
| VOC (g/l) | 205 |
| Flammability Limits in Air | No data available |

Section 10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Incompatible products.

10.5. Incompatible materials

Oxidizing agents. Peroxides. Free radical initiators.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides.

Section 11. Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Product Information

Inhalation

There is no data available for this product.

Eye Contact

Causes serious eye irritation.

Skin Contact

Causes skin irritation. May cause allergic skin reaction

Ingestion

May be harmful if swallowed.

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------------------------------|-----------------------|-------------------------|--------------------------|
| Titanium dioxide | > 10000 mg/kg (Rat) | | > 6820 mg/m ³ |
| Bisphenol A - Epichlorohydrin polymer | 11400 mg/kg (Rat) | - | - |
| Silicon dioxide | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | >2.2 mg/L (Rat) 4 h |

Sensitization

May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Mutagenic Effects

No information available.

Carcinogenic Effects

No information available.

Reproductive Toxicity

No information available.

Developmental Toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Target Organ Effects

Eyes. Lungs. Respiratory system.

Aspiration Hazard

No information available.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity Effects

Harmful to aquatic life with long lasting effects.

| Chemical Name | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|-----------------|--|--|----------------------------|--|
| Silicon dioxide | EC50 72 h: = 440 mg/L (Pseudokirchneriella subcapitata) | LC50 96 h: = 5000 mg/L static (Brachydanio rerio) | | EC50 48 h: = 7600 mg/L (Ceriodaphnia dubia) |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential.

No information available.

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

| Chemical Name | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|---------------------------------------|--|--|---|
| Bisphenol A - Epichlorohydrin polymer | Group III Chemical | | |

Section 13. Disposal considerations**13.1. Waste treatment methods****Waste from Residues / Unused Products**

Dispose of in accordance with local regulations.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information**IMDG/IMO**

| | |
|--|---------------------------|
| 14.1. UN-Number | Not regulated. |
| 14.2. Proper Shipping Name | Not regulated. |
| 14.3. Hazard Class | Not regulated. |
| 14.4. Packing Group | Not regulated. |
| Description | Not applicable. |
| 14.5. Marine Pollutant | None. |
| 14.6. Special Provisions | None. |
| 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No information available. |

RID

| | |
|----------------------------|-----------------|
| 14.1. UN-Number | Not regulated. |
| 14.2. Proper Shipping Name | Not regulated. |
| 14.3. Hazard Class | Not regulated. |
| 14.4. Packing Group | Not regulated. |
| Description | Not applicable. |
| 14.5. Environmental hazard | None. |
| 14.6. Special Provisions | None. |

ADR

| | |
|----------------------------|-----------------|
| 14.1. UN-Number | Not regulated. |
| 14.2. Proper Shipping Name | Not regulated. |
| 14.3. Hazard Class | Not regulated. |
| 14.4. Packing Group | Not regulated. |
| Description | Not applicable. |
| 14.5. Environmental hazard | None. |
| 14.6. Special Provisions | None. |

ICAO

| | |
|----------------------------|-----------------|
| 14.1. UN-Number | Not regulated. |
| 14.2. Proper shipping name | Not regulated. |
| 14.3. Hazard Class | Not regulated. |
| 14.4. Packing Group | Not regulated. |
| Description | Not applicable. |
| 14.5. Environmental hazard | None. |
| 14.6. Special Provisions | None. |

IATA

| | |
|-----------------------------------|-----------------|
| 14.1. UN-Number | Not regulated. |
| 14.2. Proper Shipping Name | Not regulated. |
| 14.3. Hazard Class | Not regulated. |
| 14.4. Packing Group | Not regulated. |
| Description | Not applicable. |
| 14.5. Environmental hazard | None. |
| 14.6. Special Provisions | None. |

| |
|---|
| Section 15. Regulatory information |
|---|

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**International Inventories**

| | |
|----------------------|----------|
| TSCA | Complies |
| EINECS/ELINCS | Complies |
| DSL/NDSL | - |
| PICCS | - |
| ENCS | - |
| IECSC | - |
| AICS | - |
| KECL | - |

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No information available

| |
|--------------------------------------|
| Section 16. Other information |
|--------------------------------------|

Full text of R-phrases referred to under Sections 2 and 3

R43 - May cause sensitization by skin contact

R36/38 - Irritating to eyes and skin

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R20/22 - Harmful by inhalation and if swallowed

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H411 - Toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects

Key literature references and sources for datawww.ChemADVISOR.com/

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Revision Note

Initial Release.

This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

General Disclaimer

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End of Safety Data Sheet