

KAITEKI THERMO Bio BASE

## SAFETY DATA SHEET

## &lt;1. Product and company identification &gt;

Product Name KAITEKI THERMO Bio BASE  
Reference No. 3786-0000  
Company MIZUTANI PAINT CO., LTD.  
Address 03-90,NISHIMIKUNI 4-CHOME YODOGAWA-KU,OSAKA,JAPAN  
Section concerned Quality Assurance Dep.  
Phone No. 06-6394-2653 FAX No. 06-6391-3429  
Emergency contact Mizutani Paint Co., Ltd. Production Dep.  
Emergency phone No. 06-6391-3151  
Product type Solvent based biomass silicon resin paint BASE  
Principal use Building materials use, others  
Date Aug. 28, 2014  
Revision day Jun. 28, 2017

## &lt;2. Hazards identification &gt;

## [GHS classification]

Flammable liquids : Category 3  
Acute toxicity (oral) : Not classified  
Acute toxicity (skin) : Not classified  
Acute toxicity (inhalation: gas) : Not applicable  
Acute toxicity (inhalation: vapour) : Category 4  
Acute toxicity (inhalation: dust, mist) : Not classified  
Skin corrosion / irritation : Category 2  
Serious eye damages / eye irritation : Category 2  
Respiratory sensitization : Not classified  
Skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Category 2  
Reproductive toxicity : Category 1  
Specific target organ toxicity single exposure : Category 2 (Central nervous system, Respiratory system, Kidney)  
Category 3 (May cause respiratory irritation)  
Specific target organ toxicity repeated exposure : Category 2 (Nervous system, Respiratory system)  
Aspiration hazard : Not applicable  
Aquatic toxicity (acute) : Category 2  
Aquatic toxicity (chronic) : Category 2  
Hazardous to the ozone layer : Classification not possible

## [GHS label elements including precautionary statements]



Signal word : DANGER

## [Hazard statement]

- Flammable liquid and vapour.
- Harmful if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- Suspected of causing cancer.

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- May damage fertility or the unborn child.
- Causes damage to organs.
- Causes damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

## [Precautionary statements]

## 【Prevention】

- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Use explosion-proof electrical/ventilating/lighting/ equipment.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use only outdoors or in well-ventilated area.
- Wash hands thoroughly after handling.
- Avoid release to the environment.

## 【Response】

- In case of fire: Don't use water. Use the specific extinguishing media (Powder, CO<sub>2</sub>, Foams).
- If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a physician.
- If swallowed: Rinse mouth with water. Do not induce vomiting. Immediately call a physician.
- If on skin : Remove all contaminated clothing. Wash with plenty of soap and water.
- Arrange medical treatment by a physician on injured skin and painful parts.
- If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If exposed or concerned, or if you feel unwell: Get medical advice/attention.
- At the leakage: Collect spillage.

## 【Storage】

- Store in a dry place. Keep container tightly closed in the locked place.

## 【Disposal】

- Dispose of contents / container to waste in accordance with local / regional / national / international regulations (to be specified).

## &lt;3. Composition/information on ingredients &gt;

Distinction of chemical or mixture : mixture

Hazardous, harmful element :

Chemistry substance name	CAS No.	Content(%)	Note
Xylene	1330-20-7	5 ~ 10	PRTR 1・80
Ethyl benzene	100-41-4	1 ~ 10	PRTR 1・53
1,3,5-Trimethylbenzene	108-67-8	1 ~ 5	PRTR 1・297
Naphthalene	91-20-3	0.1 ~ 1	
Petroleum naphtha, light aromatic	64742-95-6	10 ~ 20	
Petroleum naphtha, heavy aromatic	64742-94-5	1 ~ 5	
1,2,4-Trimethylbenzene	95-63-6	5 ~ 10	PRTR 1・296
Silica	7631-86-9	~ 1	
Titanium dioxide	13463-67-7	~ 20	
Synthetic iron oxide yellow	51274-00-1	~ 20	
Ferric oxide	1309-37-1	~ 20	
Phthalocyanine blue	147-14-8	~ 5	
Phthalocyanine green	1328-53-6	~ 5	
Nickel titanium yellow	8007-18-9	~ 5	
( Nickel )		( ~ 0.2 )	PRTR Specific1・309
( Antimony )		( ~ 0.5 )	

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## &lt;4. First-aid measures &gt;

## Eye contact :

- Wash 15 minutes or more with plenty of clean water immediately. Wash completely to the reverse side of an eyelid.
- Receive the diagnosis of physician as soon as possible.

## Skin contact :

- Wipe quickly clinging matter with clean cloth.
- Wash the affected area with plenty of running water using a mild soap or skin shampoo. Don't use solvents and thinner.
- Arrange medical treatment by a physician on injured skin and painful parts.

## Inhalation :

- Remove the victim inhale solvent vapor and gasses in abundance to fresh air and keep in warm and quiet. If breathing is weak, irregular or has stopped, open his airway, loose his collar and belt and administer artificial respiration. Arrange medical treatment by a physician as soon as possible.
- Remove the victim inhale vapor and gasses of organic solvents and more to fresh air and keep quiet. Then, arrange medical care.

## Ingestion :

- If swallow in the wrong, keep the victim quiet and arrange medical inspection by physician, immediately.
- Prevent to swallow the vomiting.
- Don't vomit things forcibly except dependence on the instruction of physician.

## &lt;5. Fire-fighting measures &gt;

Extinction medicine : Powder, CO<sub>2</sub>, Foams

## Specific extinction method :

- Don't use water. • Use the specific extinguishing media.
- Fire-fighters should wear proper protective equipment's (Fire-proof wares etc.,)
- Remove Flammable materials near fire immediately.
- Cool the airtight container exposed to the high temperature sprinkling water.
- Do the extinction activity from the windward.

## &lt;6. Accidental release measures &gt;

- Wear proper protective equipment's (Gloves, protective mask, apron and goggles)
- Take up and place in closed container and keep in safety zone.
- Ensure treatment of the contaminated and waste in compliance with government requirements.
- Absorb spill with inner materials (e.g. dry sand, earth) then place in a chemical waste containers. For large spills, dike for pollution further release.
- Shut off all source of ignition, heat, and Flammable materials immediately.
- Prepare proper fire-extinguisher for the fire.
- Take up the spill by equipment made of plastics to avoid sparks.
- Be careful not to be exhausted to the river etc. and be careful not to cause the influence on the environment.

## &lt;7. Handling and storage &gt;

## Handling :

- Use only in the well-ventilated areas. • Keep container tightly and closely.
- Keep away from fire, spark and heat in using area.
- Equipment should be grounded and bonded. Use explosion proof electrical equipment.
- Use reduced-sparking hand-tools.
- Use the uniform and the work shoes of the electrification prevention type while working.
- Use adequate exhaust ventilation in closed area and wear proper protective equipment during using this materials.

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- Wear a protection tool appropriate which touches eyes, the skins, mucous membranes, and clothes.
- Wash your the hand and face, etc. well after handling. Don't bring the pollution protection tool into the rest room.

## Storage :

- Protect from direct sunlight.
- Store in a cool dry, well-ventilated location.
- Keep away from fire and heat.

## &lt;8. Exposure controls/protection &gt;

## Exposure density of hazardous, harmful element :

Chemistry substance name	Management density	ACGIH (TLV)
Xylene	50 ppm	100 ppm
Ethyl benzene	20 ppm	100 ppm
1,3,5-Trimethylbenzene	—	25 ppm
Naphthalene	—	10 ppm
Petroleum naphtha, light aromatic	—	100 ppm
Petroleum naphtha, heavy aromatic	—	100 ppm
1,2,4-Trimethylbenzene	—	25 ppm
Titanium dioxide	—	10 mg/m <sup>3</sup>

## Equipment requirement :

- Use non-spark closed type equipment.
- Prevent remaining vapors with adequate ventilation.
- Equipment should be grounded and bonded in case of transport, suction and stirring liquids.
- Don't use equipment having high temperature and source of fire around handling this materials.
- In poor ventilated area, use automatic spraying equipment and adequate ventilator to avoid direct workers' exposure to solvent vapors.
- In the closed area of tank, use ventilator effective to closed and bottom area.

## Protection tool :

- Eye protection ; Wear protective goggles.
- Skin protection ; Wear impervious clothing such as gloves, apron and body suits.
- Respiratory protection ; Use a respiratory protection mask for organic solvent gasses.  
Wear positive pressure self-contained breathing apparatus in closed area.
- Others ; Wear the energizing shoes when you paint static electricity.

## &lt;9. Physical and chemical properties &gt;

## Appearance :

- Form : Liquids
- Color : The color has been described to the product name.
- Odor : Solvent odor

## Specific temperatures/temperature ranges at which changes in physical state occur :

- Boiling point ; 130 ~ 290 °C (Reference value)
- Autoignition temperature ; 432 °C (Reference value)
- Flashpoint ; 32 °C
- Explosion properties ; Explosion limit upper bound 7.0 % (Reference value)  
Explosion limit lower bound 0.6 % (Reference value)
- Vapor pressure : 1333 Pa(25.9 °C)(Reference value)
- Density ; 1.0 ~ 1.3 g/cm<sup>3</sup>
- Solubility ; It doesn't melt to water

## &lt;10. Stability and reactivity &gt;

## Stability:

- There is no problem in stability in preservation under the room temperature.

## Hazardous polymerization reaction:

## KAITEKI THERMO BIO BASE

- The product unit is not polymerized. After BASE and HARDENER are mixed, if left to itself, the mixture gels.

## Conditions to avoid:

- Don't heat the product. Pressure rises abnormally in the airtight container, and there are an explosion and dread of the ignition.

## Hazardous decomposition products;

- CO and a harmful gas such as NOx might be generated by combustion etc.

## &lt;11. Toxicological information &gt;

Acute toxicity (inhalation: vapour) : Category 4

Skin corrosion / irritation : Category 2

Serious eye damages / eye irritation : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 1

Specific target organ toxicity single exposure : Category 2 (Central nervous system, Respiratory system, Kidney)

Category 3 (May cause respiratory irritation)

Specific target organ toxicity repeated exposure : Category 2 (Nervous system, Respiratory system)

## &lt;12. Ecological information &gt;

Aquatic toxicity (acute) : Category 2

Aquatic toxicity (chronic) : Category 2

- Note the handling of the leakage thing and waste because it might influence the environment.
- Deal so that neither the product nor the washing water may flow directly to ground, the river, and the drain ditch.
- Information is not possessed about decomposition, accumulation, and the fish toxicity of the product.

## &lt;13. Disposal considerations &gt;

- Waste paints and opened containers should be asked to dispose with licensed industrial waste treatment company.
- Don't wash away the water used for cleaning of vessels and equipment into shower or water way.
- The wastes producing from process of water refining and of incineration should be disposed of in accordance with governmental laws and environmental control regulations or asked of dispose with licensed special company.

## &lt;14. Transport information &gt;

## General :

- Transport and store according to general caution and instructions in before mentioned comment.
- Load the product for the fall and no damage after it is confirmed that there is no leakage in the container.
- Do the collapse of cargo piles prevention surely.

## Land transportation :

- Transport this product in compliance with the Fire-fighting Law, Law of Industrial Safety & Hygiene and Poisonous & Deleterious Material Control Law, if any.

## Maritime transportation :

- Maritime transportation should be in compliance with 「SENPaku-ANZEN-HOU」

## Air transportation :

- Air transportation should be in compliance with the Aviation Act.

U.N. Number : Class 3 (Flammable liquids), UN1263 PAINT P.G.III

## &lt;15. Regulatory information &gt;

Law of pollutant release and transfer register.

Law of Industrial Safety and Hygiene : Flammable Liquid.

Regulation of the use of organic solvents : Class 2 organic solvent.

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Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Fire-fighting Law : Class 4 , No.2 class petroleum.

## &lt;16. Other information &gt;

The main quotation document :

- Japan Paint Manufacturers Association edit " The SDS label preparation guidebook corresponding to GHS"
- Japan Paint Manufacturers Association edit " The substance database for SDS"
- Solvent pocket book

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The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication. Nothing herein in to be construed as a warranty, express or implied.

In all cases it is the responsibility of the users to determine the applicability of such information or the suitability of any products for their own particular purpose.

## KAITEKI THERMO Bio BASE

3786-0000-D 7/7

Attached paper

## Composition table for Safety Data Sheet

Product Name	KAITEKI THERMO Bio
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Color name	Chemistry substance									Content(%)				
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭
BASE THERMO N6 GRAY	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	1~ 5	0.1~1	—	—
BASE THERMO OLIVE GREEN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	5~10	—	0.1~1	—	—
BASE THERMO OCEAN BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	1~ 5	1~ 5	—	1~ 5	—	—
BASE THERMO KOLN BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	5~10	—	1~ 5	1~ 5	—	—
BASE THERMO DULL ORANGE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	1~ 5	5~10	1~ 5	—	—	—
BASE THERMO DUNKELL BLOWN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	1~ 5	1~ 5	5~10	0.1~1	—	—
BASE THERMO NASUKON	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	—	1~ 5	1~ 5	—	—
BASE THERMO NATURAL GRAY	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	1~ 5	1~ 5	1~ 5	0.1~1	—	—
BASE THERMO NEW GREEN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	5~10	1~ 5	1~ 5	—	—
BASE THERMO NEW COFFEE BROWN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	1~ 5	1~ 5	1~ 5	1~ 5	—	—
BASE THERMO PEARL GRAY	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO MAROON	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	—	10~20	0.1~1	—	—
BASE THERMO LIGHT BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	5~10	1~ 5	1~ 5	1~ 5	—	—
BASE NEW THERMO BROWN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	—	10~20	0.1~1	—	—
BASE NEW THERMO BLACK	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	—	—	—	1~ 5	—	—	1~ 5
BASE NEW THERMO SKY BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	1~ 5	1~ 5	—	1~ 5	—	—
BASE THERMO SUNRISE BEIGE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO SILK ORANGE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO WASSER BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO BABY BLUE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO WHITE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO MERMAID GREEN	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO LIGHT GRAY	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
BASE THERMO LIGHT BEIGE	7.0	5.0	4.1	0.1~1	10~20	1~ 5	10.0	0.1~1	10~20	—	—	—	—	—
TOP COAT BASE THERMO SUNRISE BEIGE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO SILK ORANGE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO WASSER BLUE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO BABY BLUE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO WHITE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO MERMAID GREEN	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO LIGHT GRAY	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—
TOP COAT BASE THERMO LIGHT BEIGE	9.0	7.0	4.1	0.1~1	10~20	5~10	10.0	0.1~1	1~ 5	—	—	—	—	—

※ NEW THERMO BLACK contains 0.16% as Ni and contains 0.43% as Sb.

## Chemistry substance name :

- |                                       |                               |
|---------------------------------------|-------------------------------|
| ① Xylene                              | ⑧ 1,3,5-Trimethylbenzene      |
| ② Ethyl benzene                       | ⑨ Naphthalene                 |
| ③ White spirit                        | ⑩ Titanium dioxide            |
| ④ Petroleum naphtha, heavy aromatic   | ⑪ Synthetic iron oxide yellow |
| ⑤ Petroleum naphtha, light aromatic   | ⑫ Ferric oxide                |
| ⑥ Petroleum naphtha, medium aliphatic | ⑬ Phthalocyanine blue         |
| ⑦ 1,2,4-Trimethylbenzen               | ⑭ Nickel titanium yellow      |

## KAITEKI THERMO Bio HARDENER

## SAFETY DATA SHEET

## &lt;1. Product and company identification &gt;

Product Name KAITEKI THERMO BIO HARDENER  
Reference No. 3786-0011  
Company MIZUTANI PAINT CO., LTD.  
Address 03-90,NISHIMIKUNI 4-CHOME YODOGAWA-KU,OSAKA,JAPAN  
Section concerned Quality Assurance Dep.  
Phone No. 06-6394-2653 FAX No. 06-6391-3429  
Emergency contact Mizutani Paint Co., Ltd. Production Dep.  
Emergency phone No. 06-6391-3151  
Product type Solvent based biomass silicon resin resin paint HARDENER  
Principal use Building materials use, others  
Date Aug. 28, 2014  
Revision day Jun. 28, 2017

## &lt;2. Hazards identification &gt;

## [GHS classification]

Flammable liquids : Category 3  
Acute toxicity (oral) : Not classified  
Acute toxicity (skin) : Not classified  
Acute toxicity (inhalation: gas) : Classification not possible  
Acute toxicity (inhalation: vapour) : Category 4  
Acute toxicity (inhalation: dust, mist) : Not classified  
Skin corrosion / irritation : Category 2  
Serious eye damages / eye irritation : Category 2  
Respiratory sensitization : Classification not possible  
Skin sensitization : Classification not possible  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Category 2  
Reproductive toxicity : Category 1  
Specific target organ toxicity single exposure : Category 1 (Central nervous system, Respiratory system  
Kidney, Liver)  
Specific target organ toxicity repeated exposure : Category 1 (Nervous system, Respiratory system)  
Aspiration hazard : Not applicable  
Aquatic toxicity (acute) : Category 2  
Aquatic toxicity (chronic) : Category 3  
[GHS label elements including precautionary statements]



Signal word : DANGER

## [Hazard statement]

- Flammable liquid and vapour.
- Harmful if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- Suspected of causing cancer.
- May damage fertility or the unborn child.
- Causes damage to organs.



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- Causes damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

## [Precautionary statements]

## 【Prevention】

- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Use explosion-proof electrical/ventilating/lighting/ equipment.

## [Precautionary statements]

## 【Prevention】

- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Use explosion-proof electrical/ventilating/lighting/ equipment.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use only outdoors or in well-ventilated area.
- Wash hands thoroughly after handling.
- Avoid release to the environment.

## 【Response】

- In case of fire: Don't use water. Use the specific extinguishing media (Powder, CO<sub>2</sub>, Foams).
- If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a physician.
- If swallowed: Rinse mouth with water. Do not induce vomiting. Immediately call a physician.
- If on skin : Remove all contaminated clothing. Wash with plenty of soap and water.
- Arrange medical treatment by a physician on injured skin and painful parts.
- If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If exposed or concerned, or if you feel unwell: Get medical advice/attention.
- At the leakage: Collect spillage.

## 【Storage】

- Store in a dry place. Keep container tightly closed in the locked place.

## 【Disposal】

- Dispose of contents / container to waste in accordance with local / regional / national / international regulations (to be specified).

## &lt;3. Composition/information on ingredients &gt;

Distinction of chemical or mixture : mixture

Hazardous, harmful element :

Chemistry substance name	CAS No.	Content(%)	Note
Xylene	1330-20-7	17.0	PRTR 1・80
Ethyl benzene	100-41-4	13.0	PRTR 1・53
White spirit	64742-82-1	10 ~ 20	

## &lt;4. First-aid measures &gt;

Eye contact :

- Wash 15 minutes or more with plenty of clean water immediately. Wash completely to the reverse side of an eyelid.
- Receive the diagnosis of physician as soon as possible.

Skin contact :

- Wipe quickly clinging matter with clean cloth.
- Wash the affected area with plenty of running water using a mild soap or skin shampoo.
- Don't use solvents and thinner.
- Arrange medical treatment by a physician on injured skin and painful parts.

## KAITEKI THERMO Bio HARDENER

## Inhalation :

- Remove the victim inhale solvent vapor and gasses in abundance to fresh air and keep in warm and quiet. If breathing is weak, irregular or has stopped, open his airway, loose his collar and belt and administer artificial respiration. Arrange medical treatment by a physician as soon as possible.
- Remove the victim inhale vapor and gasses of organic solvents and more to fresh air and keep quiet. Then, arrange medical care.

## Ingestion :

- If swallow in the wrong, keep the victim quiet and arrange medical inspection by physician, immediately.
- Prevent to swallow the vomiting.
- Don't vomit things forcibly except dependence on the instruction of physician.

## &lt;5. Fire-fighting measures &gt;

Exinction medicine : Powder, CO<sub>2</sub>, Foams

Specific extinction method :

- Don't use water. • Use the specific extinguishing media.
- Fire-fighters should wear proper protective equipment's (Fire-proof wares etc.,)
- Remove Flammable materials near fire immediately.
- Cool the airtight container exposed to the high temperature sprinkling water.
- Do the extinction activity from the windward.

## &lt;6. Accidental release measures &gt;

- Wear proper protective equipment's (Gloves, protective mask, apron and goggles)
- Take up and place in closed container and keep in safety zone.
- Ensure treatment of the contaminated and waste in compliance with government requirements.
- Absorb spill with inner materials (e.g. dry sand, earth) then place in a chemical waste containers. For large spills, dike for pollution further release.
- Shut off all source of ignition, heat, and Flammable materials immediately.
- Prepare proper fire-extinguisher for the fire.
- Take up the spill by equipment made of plastics to avoid sparks.
- Be careful not to be exhausted to the river etc. and be careful not to cause the influence on the environment.

## &lt;7. Handling and storage &gt;

## Handling :

- Use only in the well-ventilated areas. • Keep container tightly and closely.
- Keep away from fire, spark and heat in using area.
- Equipment should be grounded and bonded. Use explosion proof electrical equipment.
- Use reduced-sparking hand-tools.
- Use the uniform and the work shoes of the electrification prevention type while working.
- Use adequate exhaust ventilation in closed area and ware proper protective equipment during using this materials.
- Wear a protection tool appropriate which touches eyes, the skins, mucous membranes, and clothes.
- Wash your the hand and face, etc. well after handling. Don't bring the pollution protection tool into the rest room.

## Storage :

- Protect from direct sunlight.
- Store in a cool dry, well-ventilated location.
- Keep away from fire and heat.

**KAITEKI THERMO Bio HARDENER**
**<8. Exposure controls/protection >**

Exposure density of hazardous, harmful element :

Chemistry substance name	Management density	ACGIH (TLV)
Xylene	50 ppm	100 ppm
Ethyl benzene	—	100 ppm
1,2,4-Trimethylbenzene	—	25 ppm
1,3,5-Trimethylbenzene	—	25 ppm

Equipment requirement :

- Use non-spark closed type equipment.
- Prevent remaining vapors with adequate ventilation.
- Equipment should be grounded and bonded in case of transport, suction and stirring liquids.
- Don't use equipment having high temperature and source of fire around handling this materials.
- In poor ventilated area, use automatic spraying equipment and adequate ventilator to avoid direct workers' exposure to solvent vapors.
- In the closed area of tank, use ventilator effective to closed and bottom area.

Protection tool :

- Eye protection ; Wear protective goggles.
- Skin protection ; Wear impervious clothing such as gloves, apron and body suits.
- Respiratory protection ; Use a respiratory protection mask for organic solvent gasses.  
Wear positive pressure self-contained breathing apparatus in closed area.
- Others ; Wear the energizing shoes when you paint static electricity.

**<9. Physical and chemical properties >**

Appearance :

- Form : Liquids
- Color : Colorlessness
- Odor : Solvent odor

Specific temperatures/temperature ranges at which changes in physical state occur :

- Boiling point ; 138.4 ~ 180 °C (Reference value)
- Autoignition temperature ; 454 °C (Reference value)
- Flashpoint ; 28 °C
- Explosion properties ; Explosion limit upper bound 7.0 % (Reference value)  
Explosion limit lower bound 0.6 % (Reference value)
- Vapor pressure : 1200 Pa(20 °C)(Reference value)
- Density ; 0.95 ~ 1.00 g/cm<sup>3</sup>
- Solubility ; It doesn't melt to water

**<10. Stability and reactivity >**

Stability:

- There is no problem in stability in preservation under the room temperature.

Hazardous polymerization reaction:

- The product unit is not polymerized. After BASE and HARDENER are mixed, if left to itself, the mixture gels.

Conditions to avoid:

- Don't heat the product. Pressure rises abnormally in the airtight container, and there are an explosion and dread of the ignition.

Hazardous decomposition products;

- CO and a harmful gas such as NO<sub>x</sub> might be generated by combustion etc.

**<11. Toxicological information >**

Acute toxicity (inhalation: vapour) : Category 4

Skin corrosion / irritation : Category 2

Serious eye damages / eye irritation : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 1

## KAITEKI THERMO Bio HARDENER

Specific target organ toxicity single exposure : Category 1 (Central nervous system, Respiratory system  
Kidney, Liver)

Specific target organ toxicity repeated exposure : Category 1 (Nervous system, Respiratory system)

## &lt;12. Ecological information &gt;

Aquatic toxicity (acute) : Category 2

Aquatic toxicity (chronic) : Category 3

- Note the handling of the leakage thing and waste because it might influence the environment.
- Deal so that neither the product nor the washing water may flow directly to ground, the river, and the drain ditch.
- Information is not possessed about decomposition, accumulation, and the fish toxicity of the product.

## &lt;13. Disposal considerations &gt;

- Waste paints and opened containers should be asked to dispose with licensed industrial waste treatment company.
- Don't wash away the water used for cleaning of vessels and equipment into shower or water way.
- The wastes producing from process of water refining and of incineration should be disposed of in accordance with governmental laws and environmental control regulations or asked of dispose with licensed special company.

## &lt;14. Transport information &gt;

General :

- Transport and store according to general caution and instructions in before mentioned comment.
- Load the product for the fall and no damage after it is confirmed that there is no leakage in the container.
- Do the collapse of cargo piles prevention surely.

Land transportation :

- Transport this product in compliance with the Fire-fighting Law, Law of Industrial Safety & Hygiene and Poisonous & Deleterious Material Control Law, if any.

Maritime transportation :

- Maritime transportation should be in compliance with 「SENPaku-ANZEN-HOU」

Air transportation :

- Air transportation should be in compliance with the Aviation Act.

U.N. Number : Class 3 (Flammable liquids), UN1263 PAINT P.GIII

## &lt;15. Regulatory information &gt;

Law of pollutant release and transfer register.

Law of Industrial Safety and Hygiene : Flammable Liquid.

Regulation of the use of organic solvents : Class 2 organic solvent.

Fire-fighting Law : Class 4 , No.2 class petroleum.

## &lt;16. Other information &gt;

The main quotation document :

- Japan Paint Manufacturers Association edit " The SDS label preparation guidebook corresponding to GHS"
- Japan Paint Manufacturers Association edit " The substance database for SDS"
- Solvent pocket book

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