SAFETY DATA SHEET

Issued Date 2009/9/28
Revision Date 2022/10/12

1. Identification

* Product name 2 Urethane Thinner

* Reference number 23101

* Company Washin Paint Co.,Ltd.

* Company address 2100-18 Kamiyoshiba Satte-shi Saitama-ken 340-0121 Japan

* Section concerned

* Person in change

* Phone No.

* FAX No.

* Emergency contact

* Product kind

* Principal use

Engineering Department

Takeyuki Kawashima

0480–48–2021

0480–48–2024

Under the contact of the

2. Hazards identification

[Classification]

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^{*} If the signal word "Danger" applies, the signal word "Worning" should not appear.

^{*} For the details with "Specific target organ systemic toxicity", refer to "11.Toxicological information".

[Symbol]

Flame

Exclamation mark





[Precautionary statement]

(Prevention)

- * Obtain and understand special instructions before use.
- * Keep away from ignition sources such as heat/sparks/open flame. No smoking.
- * Store container tightly and avoid release to the environment.
- * Prevent the electro static discharge. Ground a container/carrier receptacle and so on.
- * Use the tools that sparks don't come out.
- * Avoid breathing vapours/mist/spray.
- * Don't eat, drink or smoke when using this product.
- * Wear protective gloves and eye/face protection when it needs.
- * Wash hands thoroughly and gargle after handling.

(Response)

- * In case of fire, use carbon dioxide/powder/foams for extinction.
- * If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.
- * If in eyes: Rince cautiously with water, get medical advice/attention.
- * If on skin or cloth: Wash with plenty of soap and water. Take off contaminated clothing and exchange it.
- * If skin irritation occurs, seek medical advice/attention.
- * If exposed or concerned: Get medical attention/advice.

(Strage)

* Store container tightly closed in the place which well-ventilated, cool and child doesn't reach.

(Disposal)

- * Don't dispose contents to the river and the sewage. Dispose after using them up.
- * Dispose container in accordance with local/regional/national regulation. Don't use another purpose.

3. Composition/information on ingradients

| Property | Mixture |
|--------------|---------|
| Product kind | Thinner |

| Chemical name | Weight (%) | CAS No. | Chemical structure | Notice duty |
|---------------------------------|---------------|----------|--------------------|-------------|
| n-butyl acetate | 10~20 | 123-86-4 | C6H12O2 | 0 |
| ethyl acetate | 10~20 | 141-78-6 | C4H8O2 | 0 |
| 2-methoxy-1-methylethyl asetate | 20~30 | 108-65-6 | C6H12O3 | _ |
| isobutyl acetate | 20~30 | 110-19-0 | C6H12O2 | 0 |
| _ | _ | _ | _ | _ |

4. First-aid measures

(When swallowing

- * Without making vomit by force, be rested and have a medical attention.
- * The vomit doesn't make swallow. Get medical attention.

(When inhaling)

- * Do the artificial respiration in case of breathing's being irregular or stopping.
- * The vomit doesn't make swallow.
- * Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.

(When adhering to the skin)

- * Wipes up quickly with cloth and washes it off sufficiently using plenty of water and soap. Don't use organic solvent, thinner and so on.
- * If you get damage or feel pain, seek medical advice/attention.

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(When entering eyes)

- * Wash for more than 15 minutes with a plenty of water at once.
- * Get a medical attention as fast as possible.

5. Fire-fighting measures

(Suitable extinguishing media)

* Water (), Carbon dioxide (\bigcirc), Foams (\bigcirc), Powder (\bigcirc), Dry sand (), Other (),

(Specific hazards arising from the chemical)

* Liquid and vapour are extremely flammable.

If they expose to heat, flame and an oxidizer, there is danger of intense fire.

- * When heated, there is a fear of intense bust of container by expansion or resolution.
- * When burning, there is possibility to make carbon monoxide occur.

(Specific extinguishing method)

- * Tell Fire Service the place and the dangerous/hazardous property.
- * Prevent outflow being in water pipe or watercourse.
- * Wear respiratory-protective-equipment and protective-glove.
- * Remove combustibles quickly from the surrounding area.
- * Uses the suitable extinguishing media.
- * Do fire fighting from the windward.

(Special protective equipment and precautions for fire-fighters)

★ Wear respiratory-protective-equipment, chemical-defense clothes/glove/boots,/glasses/mask as occasion demands.

6. Accidental release measures

(Personal precautions, protective equipment and emargency prosedures)

- * Lead personnel to the windward from outflow areas.
- * Avoid the inhalation of vapour. Avoid the contact to the skin and eyes. Promote ventilation.
- * Wear protective equipments (gloves, protective mask, apron and goggles).

(Environmental precautions)

- * Prevent outflow being in water pipe or watercourse.
- * When water pipe or watercourse are polluted, contact organs concerned.

(Methods and materials for containment and cleaning up)

- * Remove ignition sources. Prohibit smoking and fire. Use the tools which don't spark.
- * Collects outflow to the container which can be shut, and move it to the safe place.
- * Prevent outflow using dry sand, earth or other imcombustible material, and make absorb residue to collect it.
- * It may use water sprayer to absorb the diffusion of vapour.
- * Dispose wastes based on the regurations concerned.

7. Handling and storage

(Handring: Technical measure)

- * Handle this based on the related laws (Industrial Safety and Health Law, Fire Defense Law, etc.).
- * Forrow the operation-standard, keep working atmosphere below TLV, promote ventilation.
- * When in working, wear antistatic work clothing, shoes.
- * Remove ignition sources, prohibit smoking and fire, Use tools which don't spark.
- * Ground equipments (transport, dip, stirring liquid) and use explosion-proof type electric equipments.
- * After handling, wash hands with soap water. It should wash work clothing separately.

(Handring: Notice)

- * Ground equipments and use explosion-proof type electric equipments.
- * Avoid contact with strong oxidizing reagent.
- * It has a fear of causing a reaction by heating, acidic material and alkaline material.
- $\boldsymbol{\ast}$ Use the container which has no damage, no corrosion and no breakage.
- * Gather used containers to the decided safekeeping place.

(Storage)

- * Store container tightly closed in the place which well-ventilated and cool.
- * Follow the Fire Defense Law and so on because of flammable liquid.

8. Exposure controls/personal protection

Standard control concentration, threshold limit value etc.

(Control parameters e.g. occupational exposure limit values or biological limit values)

| Chemical name | Standard control concentration | Tthreshold limit value | ACGIH (TLV) | PRTR |
|---------------------------------|--------------------------------|------------------------|----------------|------|
| n-butyl acetate | 150ppm | 100ppm | 150ppm | _ |
| ethyl acetate | 200ppm | 200ppm | 400ppm | _ |
| 2-methoxy-1-methylethyl asetate | _ | _ | _ | _ |
| isobutyl acetate | 150ppm | _ | 150ppm | _ |
| _ | _ | _ | _ | _ |

(Equipment measure)

- * Set up sealed systems or local ventilation systems.
- * Set up safe shower, bathroom and face washing near the work area, and display the position.
- * Show the signs such like 'INFRAMABLES' or 'NO UNAUTHORIZED ENTRY'.
- * When handling flammable liquid, there needs explosion-proof type ventilation equipments/systems.

(Protection measure)

- * As occasion demands, wear following guards appropriately.
 - air-supplied respirator, air SCBA, oxygen SCBA, chemical-cartridge respirator, protective glasses, protective gloves, protective boots, protective clothing,
- * Check protective equipments regularly by the check list.
- * Don't eat, drink or smoke when using this product.
- * Wash hands with soap before eat, drink or smoke.
- * The person who showed the symptom of the asthma once should not contact this chemical because he may cause the same symptom.
- * Contact lens bring about special harm.
 - Don't use soft contact lens because it absorbs irritant and has possibility to concentrate them.
- * Wear chemical-proof type protective gloves and antistatic protective shoes.

9. Physical and chemical properties

(Physical state: Liquid)

| Colour | Trans | sparent col | orless | Density | 0.91 | $g/mL(25^{\circ}C)$ | Flash point | 20 | °C |
|---------------|-------|-------------|-----------|-------------|----------------|---------------------|---------------------|--------------|----|
| Odour | Solv | ent odour | | PH | Not corre | espond | Ignition point | 344 | °C |
| Boiling point | Lower | 77 | °C | Solbility | Not sol. 1 | In water | Flammability or exp | losive limit | S |
| Boiling point | Upper | 146 | °C | Partiton co | efficient n-oc | tanol/water | Lower | 1.2 | % |
| Vapour pres | sure | 10000 | Pa (ref.) | | No data | | Upper | 11.5 | % |

10. Stability and reactivity

(Chemical stability)

- * The product seems to be stable.
- * It has a possibility of the dangerous/harmful reaction.
- * It reacts to the oxidizing materials.
- * No other reactions were informed.

(Conditions to avoid)

- * Heating, Contact with the avoidance, Ignition source.
- * Degradation product which has dangerous/hazardous property.
- * Vapour of organic solvent.
- * Heat, light, metal powder and peroxide.

11. Toxicological information

| Chemical name | Acute toxicity | | | | |
|---------------------------------|----------------|----------------|----------------|-----------------------------|--|
| Onemical name | Oral | Vapours | | | |
| n-butyl acetate | Not classified | Not classified | Not applicable | Classification not possible | |
| ethyl acetate | Not classified | Not classified | Not applicable | Not classified | |
| 2-methoxy-1-methylethyl asetate | Not classified | Not classified | Not applicable | Classification not possible | |
| isobutyl acetate | Not classified | Not classified | Not applicable | Category 4 | |
| _ | _ | - | - | - | |

| Chemical name | | | Serious eye damage/ eye irritation | Respiratory sensitization |
|---------------------------------|-----------------------------|-----------------------------|---------------------------------------|------------------------------|
| | 1111000 | | - | |
| n-butyl acetate | Classification not possible | Not classified | Category 2B | Classification not possible |
| ethyl acetate | Classification not possible | Not classified | Category 2B | Classification not possible |
| 2-methoxy-1-methylethyl asetate | Classification not possible | Not classified | Category 2B | Classification not possible |
| isobutyl acetate | Not classified | Classification not possible | Category 2B | Classification not possible |
| _ | - | 1 | - | 1 |

| Chemical name | ISkin sensitization | Germ cell mutagenicity | (Carcinogenicity | Reproductive toxicity |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| n-butyl acetate | Classification not possible | Classification not possible | Classification not possible | Classification not possible |
| ethyl acetate | Not classified | Not classified | Classification not possible | Classification not possible |
| 2-methoxy-1-methylethyl asetate | Not classified | Classification not possible | Classification not possible | Not classified |
| isobutyl acetate | Classification not possible | Classification not possible | Classification not possible | Classification not possible |
| _ | _ | _ | - | _ |

| Chemical name | Specific target organ systemi | Aspiration hazard | |
|---------------------------------|-------------------------------|-----------------------------|-----------------------------|
| Chemical hame | Single exposure | Repeated exposure | Aspiration nazaru |
| n-butyl acetate | Category 3 | Classification not possible | Classification not possible |
| ethyl acetate | Category 3 | Not classified | Classification not possible |
| 2-methoxy-1-methylethyl asetate | Category 3 | Classification not possible | Classification not possible |
| isobutyl acetate | Category 3 | Classification not possible | Classification not possible |
| _ | - | - | _ |

^{*} Hazards information is peculiar to the chemicals. It doesn't change according to the content.

12. Ecological information

| Chemical name | Hazardous to aquatic environment | | | |
|---------------------------------|----------------------------------|----------------|-----------------------------|--|
| Chemical name | Acute | Chronic | Ozone layer | |
| n-butyl acetate | Category 3 | Not classified | Classification not possible | |
| ethyl acetate | Not classified | Not classified | Classification not possible | |
| 2-methoxy-1-methylethyl asetate | Not classified | Not classified | Classification not possible | |
| isobutyl acetate | Category 3 | Not classified | Classification not possible | |
| _ | - | - | _ | |

^{*} Hazards information is peculiar to the chemicals. It doesn't change according to the content.

* Residual property/resolvability

There are not data as a mixture.

* Creature accumulation characteristics

There are not data as a mixture.

There are not data as a mixture.

13. Disposal consideration

- * Requests disposal to the agency who has solid-waste-treatment license.
- * When disposing container, dispose after removing a content fully.
- * Dispose of contents/container in accordance with local/regional/national regulation.

14. Transport information

(National regulation)

* UN number 1263 * Guideline number 128

* Land transportation Follow the transporting way to be specified in the Industrial Safety and Health Law.

Fire Defense Law and so on.

* Air transportation Follow the transporting way to be specified in the Aviation Law.

* Marine transpotation Follow the transporting way to be specified in the Ship Safety Law.

* Fire Defense Law Annex class 4-1 Danger class II

(International regulation)

* UN number 1263 * UN proper shipping name PAINT

* UN classification Class 3 Flammable liquid

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(Special precautions)

- * In case of transportation, carry "transportation notice" or "Yellow Card".
- * Confirm container tightly closed and no leaking before transportation.
- * In case of transportation, fix a container tightly and use buffering one as occasion demands.

15. Regulatory information

* Industrial Safety and Health Law

Dangerous goods

Ordinance on the Prevention of Organic Solvent Poisoning

Ordinance on Prevention of Lead Poisoning

Ordinance on Prevention of Hazards due to Specified Chemical Substances

Flammable liquid

Class-2

Not applicable Not applicable

* Pollutant Release and Transfer Register Law

Not listed

* Poisonous and Deleterious Substances Control Law

Not applicable

* Fire Defense Law

Annex class 4

* Ship Safety Law

* Offensive Odor Control Low

Annex class 4-1 Flammable liquid

Listed

16. Other information

(Main reference)

- * National Institute of Tecnology and Evaluation Opend data
- * Japan Paint Manufacturers Association

Raw material data base

The guide book for the creating SDS and label [mixture (paint)] Second edition

Model MSDS and label samples [mixture (paint)]

* Japan Industrial Safety and Health Association

The OJT text for the MSDS of mixture (chemicals) by GHS compatible

- * "YOZAI Pocket Book"
- * "KIKEN BOSAI KYUKYU BINRAN"
- * International Chemical Safety Cards (ICSC)
- * SDS of raw materials

(Notice)

- * This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.
- * It should not therefore be construed as guaranteeing any specific property of the product.
- * In case of use, set a safe conditions for handling.
- * All chemicals have possibility of unknown hazards, so it needs a due attention for handling.
- * Applicable scope of this document is only in Japan.