**MATERIAL SAFETY DATA SHEET**

### 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>ACETONE FOR POLYBEST</th>
<th>(ACETONE FOR FIBER REINFORCED PLASTICS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinds of product</td>
<td>Acetone</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company name</td>
<td>SUNDAY PAINT Co., Ltd</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>6-1-124 Nishi Kujou, Konohana-ku, Osaka 554-0012</td>
<td></td>
</tr>
<tr>
<td>Charge section</td>
<td>Mayor of customer service</td>
<td></td>
</tr>
<tr>
<td>Phone number</td>
<td>06-6466-6700</td>
<td></td>
</tr>
<tr>
<td>Fax number</td>
<td>06-6466-2751</td>
<td></td>
</tr>
<tr>
<td>Product use</td>
<td>For general</td>
<td></td>
</tr>
<tr>
<td>Date of issue</td>
<td>July 1, 2002</td>
<td></td>
</tr>
<tr>
<td>Date of prepared</td>
<td>May 1, 2013</td>
<td></td>
</tr>
</tbody>
</table>

### 2. HAZARDS IDENTIFICATION

#### GHS classification

<table>
<thead>
<tr>
<th>Physicochemical danger</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosives</td>
<td>No classification</td>
</tr>
<tr>
<td>Flammable gases</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Flammable aerosols</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Oxidizing gases</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Gases under pressure</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flammable solids</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Self-reactive substances and mixtures</td>
<td>No classification</td>
</tr>
<tr>
<td>Prophetic liquids</td>
<td>No classification</td>
</tr>
<tr>
<td>Prophetic solids</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Self-heating substances and mixtures</td>
<td>No classification</td>
</tr>
<tr>
<td>Substances and mixtures which, in contact with water, emit flammable gases</td>
<td></td>
</tr>
<tr>
<td>Oxidizing liquids</td>
<td>No classification</td>
</tr>
<tr>
<td>Oxidizing solids</td>
<td>Out of classification</td>
</tr>
<tr>
<td>Organic peroxides</td>
<td>No classification</td>
</tr>
<tr>
<td>Corrosive to metals</td>
<td>No classification</td>
</tr>
</tbody>
</table>

#### Environmental hazard

| Hazardous to the aquatic environment acute hazard | No classification |
| Hazardous to the aquatic environment chronic hazard | No classification |

#### Acute toxicity

- oral: Out of category
- dermal: Out of category
- inhalation / gas: Out of classification
- inhalation / steam: Out of category
- inhalation / mine dust / a mist: No classification
- skin corrosion / irritation: No classification
- eye damage / irritation: Category 2
- sensitization - respiratory: No classification
- sensitization - skin: Out of category
- germ cell mutagenicity: Out of category
- carcinogenicity: No classification
- toxic to reproduction: Category 2
- specific target organ systemic toxicity (single exposure): Category 3
  (Respiratory tract irritation, Narcotic effects)
- specific target organ systemic toxicity (repeated exposure): No classification
- aspiration toxicity: Out of category

#### Specific target organ systemic toxicity

- respiratory: No classification
- skin: Out of category

#### Specific effects of exposure

- respiratory tract irritation: No classification
- narcotic effects: No classification
**Precautionary statements**

**Prevention**
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Ground/bond container and receiving equipment - if the explosive is electrostatically sensitive.
- Use explosion-proof electrical/ventilating/lighting Equipment.
- Take precautionary measures against static discharge.
- Wear protection gloves, protection glasses, protection side, protection clothes.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment - if this is not the intended use.
- Use only outdoors or in a well-ventilated area.
- Keep container tightly closed.

**First aid measures**
- IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER/doctor/physician if you feel unwell.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- 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.

**Storage**
- Store in cool/well-ventilated place.
- Store container tightly closed well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
- Store locked up.

**Disposal**
- Dispose of contents/container to accordance with local/regional/national/international regulation.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Chemical name / generic name</th>
<th>Chemical characteristic (chemical formulas)</th>
<th>Poisonous and Deleterious Substances Control Law Ingredient</th>
<th>ISHL (JPN) Chemicals requiring ENCS list notation (JPN)</th>
<th>Pollutant Release and Transfer Registers (PRTR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A mixture.</td>
<td>No information.</td>
<td>No information.</td>
<td>No correspond.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ingredient**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS no</th>
<th>%</th>
<th>Poisonous and Deleterious Substances Control Law Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>100.0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES
Inhalation
- If inhaled vapour or gases and felt unwell, remove to fresh air and keep at rest in a position comfortable for breathing.
- And call a doctor/physician if feels unwell.

Skin contact
- Wipe off clinging substance with clean cloth quickly.
- Wash off thoroughly with plenty of water and soap. Do not use solvent or paint thinner.
- If any change of appearance is seen, or pain persists and feels unwell, consult a doctor/physician.

Eye contact
- Wash off with plenty of clean water immediately for 15 minutes or more. And remove contact lens, if present and easy to do.
- And completely wash it including the underside of eyelid.
- Consult a physician as soon as possible.
- Call a POISON CENTER or doctor/physician immediately.

Ingestion
- If swallowed accidentally, rest and consult a doctor/physician immediately.
- Do not let swallow vomit.
- Avoid forcing to vomit without physician's instruction.

The protection of the person taking first aid measure
- Wear proper protectors (safety goggles, respirator, gloves, etc.)
- Ventilate

5. FIRE-FIGHTING MEASURES

Extinguishing media
- Carbon dioxide gas, foam, dry powder
- Water (stick water, high pressure water jet)

Special fire extinguishing method (protection of fire-fighting person)
- Wear proper protectors (heat-resistant clothes, etc.)
- Remove flammable matters immediately.
- Use designated extinguishant.
- If sealed container is exposed to high temperature, water to cool.
- Fire-Fight from windward.
- Perform fire fighting cope with protecting ti fire neighbor.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
- Wear proper protectors (safety goggles, respirator, gloves, apron, etc.) Declare off-limits of the outskirts and do not bring it close anyone other than the person concerned and prevent a second disaster.
- Remove ignition source, heat source and flammable matters immediately.
- Prepare proper extinguisher for accidental fire.

Environmental precautions
- Take cautions not to cause influence on enviroment by discharge to river.

Methods and materials for containment and cleaning up
- Dispose of waste or clinging matter according to related regulation.
- Recollect leakage in the container can be sealed and keep in safety place.
- Recollect with tool of non-spark material.
- Recollect with dry sand, soil, or other nonflammable matter. If in large quantity, prevent from flowing out by banking.

7. HANDLING AND STORAGE

Handling

Handling technical measures
- Handle in good ventilated area.
- Close container tightly with closer after use.
- Take away from open flame, spark, heat-source
- Use a non-spark type hand tool.
- While working, wear antistatic working suits and shoes.
- Wear proper protectors to prevent from contact on skin, mucous membrane, wearing clothes and eyes.
- Wash hands and face well after handling, and avoid to bring polluted protectors in any place where person stays.
- In closed place, ensure good local exhaust ventilation and wear proper protectors.

Handling instructions
- As a measure against static electricity accident, ground equipment and use electric appliances of explosion proof type.
A material product that contains Class 2 Organic Solvents on exceeding 5% is obligated to be stored in a closed equipment or in local exhaust ventilation equipment.

Storage

Strage, technical measures
- Avoid a direct sunlight.
- Keep in good ventilated place.
- Keep away from open flame and heat source.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Taking measures for equipments
- Use explosion proof type equipment.
- Install ventilation equipment to prevent concentrating of vapour.
- Ground equipment for transferring, pumping and stirring of fluid.
- Provide equipment devised so that heat or ignition source can not be placed in the neighborhood of handling place.
- Install ventilation equipment to prevent concentrating of vapour.
- Provide equipment devised so that heat or ignition source can not be placed in the neighborhood of handling place.
- In door application, use either not to expose the operator directly, such as using automatic painting machinees, or that keeps the operator from exposure, such as local exhaust ventilation equipment.
- In application in closed space such as inside of tank, install equipment that can ventilate completely even its bottom.
- Consider so that the operator can not touch or expose to corrosive substance directly.

Management density / permission density

<table>
<thead>
<tr>
<th>Chemical substance name</th>
<th>Exposure limits ppm</th>
<th>Exposure limits mg/m3</th>
<th>skin</th>
<th>ACGIH_TWA ppm</th>
<th>ACGIH_TWA mg/m3</th>
<th>skin</th>
<th>R.C</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone</td>
<td>500</td>
<td>–</td>
<td>–</td>
<td>500</td>
<td>1180</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Protective equipment

Respiratory protective equipment
- Wear a gas mask for poisonous gases.
- Wear a mask with supplying air in closed place.
- Wear the proper protective mask against the hazardous substance.

Hand protective equipment
- Wear the glove that organic solvents or chemicals can not permeate through.

Eyes protective equipment
- Wear protective eyeglasses or goggles.

Skin and body protective equipment
- Wear suitable clothing that should be impervious to chemicals and to avoid direct contact of skin in handling.

Other information
- Wear electricity shoes on electrostatic painting.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Physical state : Liquid
- Color : No information.
- Odor : Solvent smell
- Ph : No information.
- Melting point/freezing point : No information.
- Boiling point, initial boiling point, a boiling range : 56 °C
- Flash point : -18 °C
- Auto-ignition temperature : 465 °C
- Flammability (solid, gas) : No information.
- Lower and upper explosive(flammable) limits : 13 / 2.1 vol %
- Vapor pressure (G) : No information.
- Vapor density : No information.
- Evaporation rate : No information.
- Specific gravity (relative density) : 0.79
- Solubility
  - Solubility for the water : No information.
  - Dissolubility for the water : No information.
  - Solubility for the solvent : No information.
  - Dissolubility for the solvent : No information.
- Octanol/water partition coefficient : No information.
10. STABILITY AND REACTIVITY

Stability state
- It is stable in normal safekeeping condition / handling condition.

Conditions to avoid
- Organic hyperoxidation and others.

Mixed hazardous substance
- A strong base, a strong acid volatilism material strong; a reducing material.

Hazardous decomposition products
- When poisonous gases such as carbon monoxide burn, it occurs.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
acetone
- LD50(oral) : -
- LD50(dermal) : -
- LC50(vapour) : -
- LC50(dust/mist) : -

Teratogenicity
acetone : Category 2B

Specific target organs/from head to foot toxic - single time revelation
acetone : Category 2
(Respiratory tract irritation, Narcotic effects)

Aspiration toxicity
acetone : Category 2

12. ECOLOGICAL INFORMATION

- Take care for spills or waste in handling because of its environmental impact. Especially take care for product or rinsing water not to flow into ground, river and drain directly.

13. DISPOSAL CONSIDERATION

Leftover waste
- Let authorized industrial waste disposing agent to dispose of abolished paint, containers and others under agreement.
- Dispose of abolished paint, materials and waste from incineration in accordance with regulation or laws of 'Specified Hazardous Industrial Wastes' of Special Controlled Industrial Waste.
- Must not dispose of waste water from washing container, machinery and etc. into the ground or drain without treatment.
- Dispose of waste from waste water treatment, incineration and etc. in accordance with regulation or laws relating to disposal and cleaning of waste, or let special disposing agent to dispose.
- Incinerate abolished paint absorbed to diatomaceous earth by small quantity in the open-type incinerator. Or incinerate them by spraying in the fire box. If it is apprehended that hazardous gases such as dioxins are generated, let authorized industrial waste disposing agent to dispose under agreement."
- Let authorized industrial waste disposing agent to dispose of abolished paint and materials under agreement, because there are specified as Special Controlled Industrial waste (waste oil).

Pollution container and packing
- Let authorized industrial waste disposing agent to dispose of them under agreement.
- Dispose of used container after removing contents completely.

14. TRANSPORT INFORMATION

- After confirming the state of container had no leakage, and load to prevent collapsing, fall and damage.
- Obey the discription of 'Handling and Strage'.

UN number : 1993
Class : 3
Packing group : |

Land transportation
- If falling under 'Fire Service Act', 'Industrial Safety and Health Act' or 'Poisonous and Deleterious Substances Control Act', obey the transport method regulated in each law.

Marine transportation
- Obey the provisions of 'Ship Safety Act'.

Air transport
- Obey the provisions of 'Civil Aeronautics Act'.
15. REGULATORY INFORMATION

Fire Service Law
- Dangerous Materials Class 4 Group 1 Petroleum, Non-Solution, dangerous grades II.

Occupational Safety and Health Law
- Table 1-4 by Act of Parliament, Flammable material
- Article 57-2, notifiable substances
- Ordinance on Prevention of Organic Solvent Poisoning, Class 2 Organic Solvents

Ship Safety Act
- inflammable liquids

Civil Aeronautics Act
- inflammable liquids

High pressure gas control law
-

Special Management Industrial Waste
-

Pollutant Release and Transfer Register
-

16. OTHER INFORMATION

Literatures
- MSDS of raw materials
- "Raw Materials Database" edited by Japan Paint Manufacturers Association
- "Materials Safety Data Sheet Guide (Mixture)" edited by Japan Paint Manufacturers Association
- "Solvent Pocket Book" Ohmsha, Ltd.
- The Handbook for Precautions and First Aids to Dangerous Goods.
- International Chemical Safety Cards.

Other information
- This MSDS is necessary to handle our manufacture property and gathered up the matter which must be paid attention briefly for normal handling.
- However the content noted above is prepared based on information or data available at the present, the evaluation of hazardousness and harmfulness is not adequate necessary, so be careful in handling.
- This MSDS may be revised without notice by revising law or new knowledge.
- This MSDS is based on the standard of Japan Paint Manufacturers Association with Laws of Japan but not from local government, accord to relevant local laws as required when handling.