

|                                                  |               |               |
|--------------------------------------------------|---------------|---------------|
| $\alpha$ Flaw Detection Spray Developer (ALP-TD) | SDS No.       | 5823          |
| TRUSCO NAKAYAMA CORPORATION                      | Revision Date | May. 22, 2025 |

## SAFETY DATA SHEET(SDS)

### 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name :  $\alpha$  Flaw Detection Spray Developer (ALP-TD)  
 Company Name : TRUSCO NAKAYAMA CORPORATION  
 Address : 28-1 SHINBASHI 4-chome, MINATO-KU, TOKYO, JAPAN  
 Phone Number : 0120-509-849  
 Fax Number : 0120-509-839  
 Mail Address : techno.center@trusco.co.jp

### 2 HAZARDS IDENTIFICATION

Hazards Category

|                                                            |               |
|------------------------------------------------------------|---------------|
| Aerosols                                                   | : Category 1  |
| Flammable Liquids                                          | : Category 2  |
| Skin Corrosion/Irritation                                  | : Category 2  |
| Serious Eye Damage/Eye Irritation                          | : Category 2A |
| Carcinogenicity                                            | : Category 1A |
| Reproductive Toxicity                                      | : Category 1A |
| Specific Target Organ Systemic Toxicity(Single Exposure)   | : Category 3  |
| Specific target organ systemic toxicity(Repeated exposure) | : Category 1  |
| Specific target organ systemic toxicity(Repeated exposure) | : Category 2  |
| Hazardous to The Aquatic Environment(Acute)                | : Category 2  |
| Hazardous to The Aquatic Environment(Chronic)              | : Category 2  |

The one without the description cannot be classified.

#### Allocation of Label Elements

##### Pictogram

Flame  
 Exclamation mark  
 Health Hazard  
 Environment



##### Signal Word

Danger

##### Hazard Statement

Extremely flammable aerosol  
 Pressurized container : may burst if heated  
 Highly flammable liquid and vapour  
 Cause skin irritation  
 Cause serious eye irritation  
 May cause cancer  
 May damage fertility or the unborn child  
 May cause harm to breast-fed children  
 May cause respiratory irritation; or May cause drowsiness or dizziness  
 Causes damage to organs through prolonged or repeated exposure  
 May causes damage to organs through prolonged or repeated exposure  
 Toxic to aquatic life  
 Toxic to aquatic life with long lasting effects

##### Precautionary Statement

##### Prevention

Before use, read the safe data sheet (SDS).  
 Keep out of reach of children.

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Do not handle until all safety precautions have been read and understood.  
 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 Do not spray on an open flame or other ignition source.  
 Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Do not burn, even after use.  
 Do not breathe dust/fume/gas/mist/vapours/spray.  
 Avoid contact during pregnancy/while nursing.  
 Wash points of contact thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing/eye protection/face protection/respiratory protection.

#### Response

In case of fire : Use dry chemical, carbon dioxide(CO<sub>2</sub>), and foam to extinguish.  
 IF SWALLOWED : Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.  
 IF ON SKIN : Wash with plenty of soap and water.  
 If skin irritation or rash occurs : Get medical advice/attention.  
 IF INHALED : Remove person to fresh air and keep comfortable for breathing.  
     Get medical advice/attention if you feel unwell.  
 IF IN EYES : Rinse cautiously with water for several minutes. Get medical advice/attention.  
 If exposed or concerned : Get medical advice/attention.  
 Take off contaminated clothing.  
 Wash contaminated clothing before reuse.  
 Absorb spillage to prevent material damage.  
 Collect spillage.

#### Storage

Store locked up.  
 Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
 Protect from sunlight. Do not expose to temperatures exceeding 40°C.

#### Disposal

Dispose of contents /container in accordance with local/regional/national/international regulations.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients and Contents

| Component name                                                                      | CAS number                                    | wt%   |
|-------------------------------------------------------------------------------------|-----------------------------------------------|-------|
| Magnesium carbonate hydroxide                                                       | 12125-28-9                                    | 1~5   |
| Ethanol                                                                             | 64-17-5                                       | 30~40 |
| Heptane                                                                             | 142-82-5                                      | 5~10  |
| Isohexane                                                                           | 101316-67-0(75-83-2/79-29-8/96-14-0/107-83-5) | 5~10  |
| Hexane                                                                              | 110-54-3                                      | <1    |
| Reaction product of hydroxy-terminated dimethyl(siloxanes and silicones) and silica | 102782-80-9                                   | 1~5   |
| 1-Propanol                                                                          | 71-23-8                                       | 1~5   |
| Propane                                                                             | 74-98-6                                       | 10~20 |
| Butane                                                                              | 106-97-8                                      | 30~40 |

### 4 FIRST-AID MEASURES

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 Call a physician if you feel unwell.

#### Skin

Wash with plenty of soap and water.  
 Call a physician if you feel unwell.

#### Eye

Immediately flush eyes with plenty of water for at least 15 minutes.  
 Call a physician.

#### Ingestion

|                                                  |               |               |
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Rinse mouth. Do not induce vomiting.  
Call a physician.

## 5 FIRE-FIGHTING MEASURES

### Extinguishing Media

Dry chemical, carbon dioxide(CO<sub>2</sub>), and foam

### Specific Fire Fighting

Must not use water to extinguish fires.

Quickly removed from the surrounding flammable.

The use of extinguishing agents specified.

Fire fighting is done from the windward.

On small fires use carbon dioxide (CO<sub>2</sub>) or dry chemical.

On large fires use dry chemical or foam.

Sealed containers that are exposed to high temperatures over the water to cool.

### Protection for Fire-fighter

Wear full body protective clothing with breathing apparatus.

## 6 ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Wear protective equipments in case of operation.

### Environmental Precautions

Avoid release to the environment.

### Methods for Cleaning Up

Remove potential ignition source in vicinity as soon as possible.

Prepare extinguishing agent.

Prevent leakage by enclosing with nonflammables and collect into empty container by scoop or the like.

Absorbed to non-flammable dry sand, if a large amount of spill to prevent enclosed in embankment.

If do not stop the leakage from the container, releasing carried away in a place not at risk of being open.

Spilled material is collected in a container that can be sealed, then remove to safe place.

Deposits, waste treatment is based on the local regulations.

Working from the windward, to evacuate people downwind.

## 7 HANDLING AND STORAGE

### Handling

Use in a well ventilated area.

Keep away from heat, spark and flames.

Use spark-proof tools and explosion-proof equipment.

After handling, wash well hands and face and rinse your mouth.

Facilities storing or utilizing this material should be equipped with an eye wash facility and a safety shower.

Leakage, overflow, to prevent scattering, we do not generate steam in vain.

In the handling area and deny unnecessary entry.

Resting place shall not bring contaminated protective equipment such as gloves.

Wear protective equipments when risk of exposure occurs.

To work in an enclosed area that you work with appropriate protective equipment with a local exhaust ventilation sufficient.

### Precautions

Do not breathe vapor or mist.

Handling of the outdoors, as much as possible to work from the windward.

Note is flammable at higher temperatures.

Do not handle in a fire place.

Do not handle in the place more than 40 °C.

Do not use continuously for more than 30 seconds.

Do not store near heat or open flame areas exposed to direct sunlight.

Not want to use toward food and the human body.

### Handling Precautions for Safety

Avoid physical damage to containers.

### Storage

|                                                  |               |               |
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Fire prohibited strictly.

Do not store in direct sunlight or where more than 40 °C.

Keep away from sources of ignition.

Store in a cool, dry, well-ventilated area away from incompatible substances.

Note that because there is a risk of corrosion and rupture the container is stored in a moisture or humid place.

Store in a tightly closed container.

Safe containers and packaging materials

None in particular.

## 8 EXPOSURE/PERSONAL PROTECTION

### Engineering Controls

Handling equipment is used explosion-proof.

Attach an exhaust device to prevent vapor from staying.

That the equipment and shall become hot, and the source of ignition in the vicinity of the location, such as handling not been placed.

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limit Values

| Chemical name | ACGIH                     |
|---------------|---------------------------|
| Ethanol       | STEL 1,000ppm             |
| Heptane       | TWA 400 ppm, STEL 500 ppm |
| Isohexane     | TWA 500ppm, STEL 1000ppm  |
| Hexane        | TWA 50ppm                 |
| 1-Propanol    | TWA 100ppm                |
| Propane       | TWA 1,000ppm              |
| Butane        | TWA -, STEL (1000ppm)     |

### Personal Protective Equipment

#### Respiratory Protection

Wear an organic gas mask or positive pressure air respirator if necessary.

#### Skin Protection

Solvent-resistant gloves

#### Eye Protection

Wear chemical worker's goggles.

#### Skin and body protection

Such as long-sleeved work clothes

#### Hygiene measures

Do not eat, drink or smoke during work.

Replacement of the adsorbent, such as the mask is performed each time or use plans.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

|                                  |   |                    |               |
|----------------------------------|---|--------------------|---------------|
| Physical State                   | : | Liquid             | (Base liquid) |
| Color                            | : | White              |               |
| Odor                             | : | Solvent odor       |               |
| pH                               | : | Not available      |               |
| Boiling Point(°C)                | : | Not available      |               |
| Melting Point(°C)                | : | Not available      |               |
| Flammability                     | : | Not available      |               |
| Flash point(°C)                  | : | -22                |               |
| Auto-ignition Temperature(°C)    | : | Not available      |               |
| Flammability or Explosive Limits |   |                    |               |
| Lower                            | : | Not available      |               |
| Upper                            | : | Not available      |               |
| Vapour Pressure (KPa)            | : | Not available      |               |
| Vapour Density                   | : | Not available      |               |
| Relative density(g/cm3)          | : | 0.83               |               |
| Solubility                       | : | Insoluble in water |               |

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|                                        |   |               |
|----------------------------------------|---|---------------|
| Partition Coefficient: n-octanol/water | : | Not available |
| Decomposition Temperature(°C)          | : | Not available |
| Dynamic viscosity rate                 | : | Not available |
| Relative gas density                   | : | Not available |
| Particle properties                    | : | Not available |

## 10 STABILITY AND REACTIVITY

### Stability

Stable under normal temperatures and pressures.

### Reactivity

No self-reactive

### Conditions to Avoid

Heat, flames, ignition sources and incompatibles.

### Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and other oxidized substances.

## 11 TOXICOLOGICAL INFORMATION

| Chemical name                                                                       | Acute toxicity (oral)       | Acute toxicity (dermal)     | Acute toxicity (inhalation: gas) | Acute toxicity (inhalation: vapour) | Acute toxicity (inhalation: dust, mist) | Skin corrosion / irritation | Serious eye damage / eye irritation |
|-------------------------------------------------------------------------------------|-----------------------------|-----------------------------|----------------------------------|-------------------------------------|-----------------------------------------|-----------------------------|-------------------------------------|
| Magnesium carbonate hydroxide                                                       | Classification not possible | Classification not possible | Classification not possible      | Classification not possible         | Classification not possible             | Classification not possible | Classification not possible         |
| Ethanol                                                                             | Not applicable to category  | Not applicable to category  | Not applicable to category       | Not applicable to category          | Classification not possible             | Not applicable to category  | Category 2B                         |
| Heptane                                                                             | Not applicable to category  | Not applicable to category  | Not applicable to category       | Not applicable to category          | Classification not possible             | Category 2                  | Category 2A                         |
| Isohexane                                                                           | Classification not possible | Classification not possible | Classification not possible      | Classification not possible         | Classification not possible             | Category 2                  | Classification not possible         |
| Hexane                                                                              | Not applicable to category  | Classification not possible | Not applicable                   | Not applicable to category          | Classification not possible             | Category 2                  | Category 2A                         |
| Reaction product of hydroxy-terminated dimethyl(siloxanes and silicones) and silica | Classification not possible | Classification not possible | Classification not possible      | Classification not possible         | Classification not possible             | Classification not possible | Classification not possible         |
| 1-Propanol                                                                          | Not applicable to category  | Not applicable to category  | Not applicable to category       | Classification not possible         | Classification not possible             | Not applicable to category  | Category 1                          |
| Propane                                                                             | Not applicable to category  | Not applicable to category  | Not applicable to category       | Not applicable to category          | Not applicable to category              | Not applicable to category  | Classification not possible         |
| Butane                                                                              | Not applicable to category  | Not applicable to category  | Not applicable to category       | Not applicable to category          | Not applicable to category              | Classification not possible | Classification not possible         |

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| Chemical name                                                                       | Respiratory/skin sensitizer                                                                             | Germ cell mutagenicity      | Carcinogenicity             | Toxic to reproduction       | Specific target organs/systemic toxicity following single exposure | Specific target organs/systemic toxicity following repeated exposure | Aspiration hazard           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------|
| Magnesium carbonate hydroxide                                                       | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Classification not possible                                        | Classification not possible                                          | Classification not possible |
| Ethanol                                                                             | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Category 1A                 | Category 1A                 | Category 3 (respiratory tract irritation, narcotic effects)        | Category 1 (liver); Category 2 (central nervous system)              | Classification not possible |
| Heptane                                                                             | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Category 3 (respiratory tract irritation, narcotic effects)        | Category 1 (nervous system)                                          | Category 1                  |
| Isohexane                                                                           | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Classification not possible                                        | Classification not possible                                          | Classification not possible |
| Hexane                                                                              | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Not applicable to category  | Classification not possible | Category 2                  | Category 3 (narcotic effects, respiratory tract irritation)        | Category 1 (nervous system)                                          | Category 1                  |
| Reaction product of hydroxy-terminated dimethyl(siloxanes and silicones) and silica | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Classification not possible                                        | Classification not possible                                          | Classification not possible |
| 1-Propanol                                                                          | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Not applicable to category  | Category 2                  | Category 3 (narcotic effects, respiratory tract irritation)        | Classification not possible                                          | Classification not possible |
| Propane                                                                             | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Category 3 (narcotic effects)                                      | Classification not possible                                          | Not applicable to category  |
| Butane                                                                              | Respiratory sensitizer:<br>Classification not possible; Skin sensitizer:<br>Classification not possible | Classification not possible | Classification not possible | Classification not possible | Category 3 (narcotic effects)                                      | Category 1 (central nervous system)                                  | Not applicable to category  |

## 12 ECOLOGICAL INFORMATION

| Chemical name | Hazardous to the aquatic environment (Acute) | Hazardous to the aquatic environment (Chronic) | Hazard to the ozone layer | Residuality and decomposition | Ecological accumulation | Mobility in soil |
|---------------|----------------------------------------------|------------------------------------------------|---------------------------|-------------------------------|-------------------------|------------------|
|---------------|----------------------------------------------|------------------------------------------------|---------------------------|-------------------------------|-------------------------|------------------|

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|                                                                                     |                             |                             |                             |         |         |         |
|-------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------|---------|---------|
| Magnesium carbonate hydroxide                                                       | Classification not possible | Classification not possible | Classification not possible | No data | No data | No data |
| Ethanol                                                                             | Not applicable to category  | Not applicable to category  | Classification not possible | No data | No data | No data |
| Heptane                                                                             | Category 1                  | Category 1                  | Classification not possible | No data | No data | No data |
| Isohexane                                                                           | Classification not possible | Classification not possible | Classification not possible | No data | No data | No data |
| Hexane                                                                              | Category 2                  | Not applicable to category  | Classification not possible | No data | No data | No data |
| Reaction product of hydroxy-terminated dimethyl(siloxanes and silicones) and silica | Classification not possible | Classification not possible | Classification not possible | No data | No data | No data |
| 1-Propanol                                                                          | Not applicable to category  | Not applicable to category  | Classification not possible | No data | No data | No data |
| Propane                                                                             | Classification not possible | Classification not possible | Classification not possible | No data | No data | No data |
| Butane                                                                              | Classification not possible | Classification not possible | Classification not possible | No data | No data | No data |

### 13 DISPOSAL CONSIDERATIONS

Dispose of contents /container in accordance with local/regional/national/international regulations.

### 14 TRANSPORT INFORMATION

UN Class

Aerosols, flammable, Class 2.1

UN No.

UN1950

Packing Group

Not regulated.

### 15 REGULATORY INFORMATION

Follow all regulations in your country.

### 16 OTHER INFORMATION

References

JIS Z 7253 (2019)

GHS data-base (NITE)

|                                                  |               |               |
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