

# SAFETY DATA SHEET

Product Name: ASACLEAN™  
SDS No.: ASA-Gr1-SG-001  
First issue: January 11, 2019

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## 1. IDENTIFICATION

Product Name: ASACLEAN™ U, UE, newE, newEX, SA, CG, C, GL2, IMX, SL, YG  
SDS Number: ASA-Gr1-SG-001

### SUPPLIERS DETAILS

Supplier: Nagase Singapore Pte Ltd.  
Address: 600 North Bridge Road #11-01 Parkview Square Singapore 188778  
Telephone number: +65-66450-305  
Facsimile number: +65-63980-236  
Manufacturer: Asahi Kasei Corporation  
Department: ASACLEAN Business Dept.  
Address: Hibiya Mitsui Tower, 1-1-2 Yurakucho, Chiyoda-Ku, Tokyo 100-0006, Japan  
Telephone number: +81-3-6699-3274  
Facsimile number: +81-3-6699-3458

**EMERGENCY TELEPHONE NUMBER:** +65-66450-305 (9:00-17:00)

### RECOMMENDED APPLICATION:

Purging compound for thermoplastic injection molding machines and extruders

### RESTRICTION ON USAGE:

Usage for the following applications is strictly prohibited:

- Being implanted into human body.
- Invasive or non-invasive contact with human body (including blood, body fluids, etc.) continuously for 30 days or more

## 2. HAZARD(S) IDENTIFICATIONS

### GHS CLASSIFICATION:

#### PHYSICAL AND CHEMICAL HAZARDS:

Flammable solid: Classification not possible  
Corrosive to metals: Classification not possible  
Those items except the above are out of scope for classification.

#### HEALTH TOXICITY:

Acute toxicity (oral): Classification not possible  
Acute toxicity (dermal): Classification not possible  
Acute toxicity (Inhalation: gases): Classification not possible  
Acute toxicity (Inhalation: vapors): Classification not possible  
Acute toxicity (Inhalation: dusts / mists): Classification not possible  
Skin corrosion / irritation: Classification not possible  
Serious eye damage / eye irritation: Classification not possible  
Respiratory sensitization: Classification not possible  
Skin sensitization: Classification not possible  
Germ cell mutagenicity: Classification not possible  
Carcinogenicity: Classification not possible  
Reproductive toxicity: Classification not possible  
Specific target organ toxicity (single exposure): Classification not possible  
Specific target organ toxicity (repeated exposure): Classification not possible  
Aspiration Hazard: Classification not possible

#### HAZARDOUS TO THE AQUATIC ENVIRONMENT:

Toxicity to the aquatic environment (acute): Classification not possible  
Toxicity to the aquatic environment (chronic): Classification not possible  
Hazardous to the ozone layer: Classification not possible

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## GHS LABEL ELEMENTS:

Pictograms: None

Signal words: None

Hazard statements: None

【First-aid】: Refer to “4. FIRST-AID MEASURES”

【Storage】: Refer to “7. HANDLING AND STORAGE”

【Disposal】: Refer to “13. DISPOSAL CONSIDERATIONS”

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Classification of the substance or mixture: Mixture

| Grade Type | Composition         | Content %    | Gazette Notice Title(Relevant Laws) | CAS No.       |
|------------|---------------------|--------------|-------------------------------------|---------------|
| U          | Styrenic resin      | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 20 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 30 | Rgstd/Non-disclosed                 | Non-disclosed |
| UE         | Styrenic resin      | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 40 | Rgstd/Non-disclosed                 | Non-disclosed |
| newE       | Styrenic resin      | More than 80 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| newEX      | Styrenic resin      | Less than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| SA         | Styrenic resin      | More than 80 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 20 | Rgstd/Non-disclosed                 | Non-disclosed |
| CG         | Styrenic resin      | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 40 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| C          | Styrenic resin      | Less than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| GL2        | Styrenic resin      | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 20 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 40 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| IMX        | Styrenic resin      | More than 70 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 30 | Rgstd/Non-disclosed                 | Non-disclosed |
| SL         | Styrenic resin      | More than 80 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
| YG         | Styrenic resin      | Less than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Resin additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Inorganic additives | More than 50 | Rgstd/Non-disclosed                 | Non-disclosed |
|            | Other additives     | Less than 10 | Rgstd/Non-disclosed                 | Non-disclosed |

The specific chemical identities and percentages of composition have been withheld as trade secrets.

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## 4. FIRST-AID MEASURES

- INHALATION:** If you feel unwell by inhalation of vapour or gas produced from melted material, move to fresh air and keep at rest in a position comfortable for breathing.  
Call a doctor if you feel unwell.
- SKIN CONTACT:** In case of pellets or powder, wash with plenty of water/soap.  
In case of melted material, immerse in cold water.  
Do not peel off any solidified resin on the skin.  
In case of burns, get medical advice/attention.
- EYE CONTACT:** 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.
- INGESTION:** Rinse mouth. Do NOT induce vomiting.  
Immediately call a doctor.
- FIRST-AIDER PROTECTION:** Wear personal protective equipment gloves, safety glasses and respirator to avoid skin/eye contact, inhalation and ingestion during treatment process.

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## 5. FIRE-FIGHTING MEASURES

- EXTINGUISHING MEDIA:** Water spray, water-jet and other various fire extinguishers.
- SPECIFIC HAZARDS / TOXICITY AT FIRE:** May emit gases including styrene, ethylbenzene, etc.
- FIRE-FIGHTING INSTRUCTIONS:** Extinguish fire from a windward direction
- PROTECTION TO FIRE-FIGHTERS:** Wear protective clothing. In case of large amount of gases, emitted, breathing apparatus should be used.

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## 6. ACCIDENTAL RELEASE MEASURES

- NOTES ON HUMAN BODY:** When pellets and powder are spilled on the floor, promptly clean to prevent slipping.
- ENVIRONMENTAL NOTES:** Due to possible adverse affects to fish, birds, etc., immediately clean up any material that may have spilled into bodies of water.
- REMOVAL METHOD:** Sweep with vacuum cleaner, broom, etc., and dispose of properly.
- PREVENTIVE MEASURE OF SECONDARY DISASTER:** None

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## 7. HANDLING AND STORAGE

- HANDLING:**
- 1) Using condition /temperature, prohibition(\*1):Refer to Table 1 on page 7 of 7.
  - 2) Though there is less likelihood of pellets igniting under normal temperatures, avoid any fire/ignition sources in the vicinity of the product and perform adequate housekeeping to keep the surrounding clean.
  - 3) Cool down purge pile with water as soon as possible.
  - 4) Ensure proper ventilation since resins processed at high temperatures will emit gases. Local ventilation preferably should be provided.
  - 5) Change ASACLEAN to other material immediately after the temperature reaches preset temperature in case of starting up of machine or temperature changing.
  - 6) Turn off the heater or lower barrel temperature 150°C or less in case of ASACLEAN sitting in the barrel one hour or longer.

**STORAGE:**

**SUITABLE STORAGE CONDITION:**

- 1) Store material away from heat and ignition sources.
- 2) Avoid direct sunlight.
- 3) Store material away from high temperature and high humidity.

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**SAFE CONTAINER MATERIAL FOR PACKING:** Use appropriate storage containers.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**MEASURES FOR FACILITIES:** Provide local exhaust ventilation for comfortable working environments.

**CONTROL OF CONCENTRATION:** Not established

**ALLOWABLE CONCENTRATION:** Although neither Japan Association of Industrial Health nor ACGIH established the allowable concentration for dust, the following values are considered to be appropriate for operation.

ACGIH (2018 version):

Allowable concentration as general dust (TWA)

INHALABLE PARTICULATE: 10mg / m<sup>3</sup>

RESPIRABLE PARTICULATE: 3 mg / m<sup>3</sup>

### PROTECTIVE TOOLS:

Respiratory organ: Box respirator for organic gas should be worn when working in areas where inhalation of high temperature gases is possible.

For hand: Wear heat-proof gloves when molten resin is handled.

For eye: During purging operation, resin-made glasses and resin-made goggles with side-shields should be worn.

For skin & body: Work wear with long sleeves is recommended when molten resin is handled.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE:

Physical form: Solid

Shape: Pellet

Color: Milky white ~ light yellow, (SL: Transparency and the white are mixed.)

Odor: Specific slight odor

pH: Not applicable

### TEMPERATURE RANGES WHEREIN PHYSICAL FORM CHANGES:

Melting Point: Does not exhibit sharp melting point, but softens at about 60°C for IMX, about 80°C for SL and about 130°C for other types.

Flash Point: 380°C

Auto-ignition Temperature: 490°C

### Explosive Limits

Lower Limit: Not applicable (Lower limit for dust explosion: 35g/m<sup>3</sup>)

Upper Limit: Not applicable

Specific Gravity(\*2): Refer to Table 1 on page 7 of 7.

### Solubility:

Water: Insoluble

Other solvent: Soluble in methyl ethyl ketone, cyclohexanone, etc. (except for inorganic content).

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## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable under normal temperature.

**REACTIVITY:** None

### CONDITIONS TO AVOID:

-Avoid using outside the specified range for the use temperature.

-Do not let sit in barrel for more than 30 minutes at the temperature higher than 280°C. (U, UE,

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newE, SA, C, GL2, IMX, SL)

-Do not let sit in barrel for ANY period of time at any temperature. (newEX, YG, CG)

**MATERIALS TO AVOID:** None

**HAZARDOUS / TOXIC DECOMPOSITION PRODUCTS:**

Styrene, Ethylbenzene, etc.

## 11. TOXICOLOGICAL INFORMATION

|   | Base Resin   | Resin Additives                                    | Inorganic Additives (Including GF)                          | Other Additives                                    | Composition (Product)                              |
|---|--|--|---|--|--|
| Acute Toxicity (oral)   | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Acute Toxicity (Dermal)                                       | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Acute Toxicity (Inhalation: gases)                            | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Acute Toxicity (Inhalation: vapour)                           | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Acute Toxicity (Inhalation: dust / mist)                      | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Skin Corrosion / Irritation                                   | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Category 2<br>(newEX,CG,YG)                                 | Classification not possible<br>(No data available) | Classification not possible<br>Remarks*            |
| Serious Eye Damage/ Eye Irritation                            | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Category 2B<br>(newEX,CG,YG)                                | Classification not possible<br>(No data available) | Classification not possible<br>Remarks*            |
| Respiratory or Skin Sensitization                             | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Germ Cell Mutagenicity  | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Carcinogenicity   | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Reproductive Toxicity   | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Specific Target Organ / Systemic Toxicity (single exposure)   | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Category 3<br>Respiratory tract irritation<br>(newEX,CG,YG) | Classification not possible<br>(No data available) | Classification not possible<br>Remarks*            |
| Specific Target Organ / Systemic Toxicity (repeated exposure) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |
| Respiratory Toxicity by Inhalation                            | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) | Classification not possible<br>(No data available)          | Classification not possible<br>(No data available) | Classification not possible<br>(No data available) |

(Remarks):

\*: Even though the product is classifiable for some items if looked solely as a GF (glass fiber) unit, it's labeled as "Classification not possible" as a form of kneaded-pellet product since it (GF content) is judged as having little effect.

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## 12. ECOLOGICAL INFORMATION

Toxicity: There are no specific data on neither this product nor each ingredients.  
Persistence and Degradability: No data available  
Bio accumulative potential: No data available  
Mobility in soil: No data available  
Other adverse effects: No known significant effects to critical hazards.

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## 13. DISPOSAL CONSIDERATIONS

Refer to all local regulations.  
Do not dump this product into sewers, on the ground or into any body of water.

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## 14. TRANSPORT INFORMATION

### LAND TRANSPORT

ADR, RID  
Class: Not applicable  
Packing Group (PG): Not applicable  
UN Number: Not applicable  
Proper Shipping Name: ASACLEAN™ (Purging Compound)

### SEA TRANSPORT

IMDG  
Class: Not applicable  
Packing Group (PG): Not applicable  
UN Number: Not applicable  
Proper Shipping Name: ASACLEAN™ (Purging Compound)

### AIR TRANSPORT

ICAO/IATA  
Class: Not applicable  
Packing Group (PG): Not applicable  
UN Number: Not applicable  
Proper Shipping Name: ASACLEAN™ (Purging Compound)

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## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the product

Environmental Protection and Management Act: Not applicable  
Workplace Safety and Health Act: Not applicable

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## 16. OTHER INFORMATION

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Asahi Kasei Corporation. It relates only to the specific product designated herein, and does not relate to use in combination with any other material or in any process. Asahi Kasei Corporation assumes no legal responsibility for use of or reliance upon this information.

According to our company policy, both usages of this product to purge when producing the following medical equipment written below and to produce general medical equipment itself are strictly prohibited.

- Being implanted into human body.
- Invasive (human body) applications
- Contact with human body (including blood, body fluid, etc.) continuously for 30 days or more.

For any other medical-related applications, please contact the ASACLEAN Business Dept. (Phone +81-3-6699-3274).

### For any query with respect to what is contained herein, please refer to:

ASACLEAN R&D Dept.  
Asahi Kasei Corporation  
1-3-1 Yakoh, Kawasaki-Ku, Kawasaki City, Kanagawa, 210-0863, Japan;

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Tel: +81-44-271-2503, Fax: +81-44-271-2333

(Table1)

| Grade Type | *1: Using condition          |   | *2: Specific Gravity (23°C) |
|------------|------------------------------|---|-----------------------------|
|            | Temperature Range (Unit: °C) | <u>Prohibition</u> condition (*)                    |                             |
| newEX      | 200~330                      | Sit in the barrel at overall temperature range      | 1.48                        |
| YG         | 200~330                      |   | 1.62                        |
| CG         | 180~330                      |   | 1.39                        |
| U          | 180~330                      | Sit in the barrel 30 minutes or longer at 280~330°C | 1.25                        |
| SA         | 180~330                      |   | 1.05                        |
| C          | 180~330                      |   | 1.63                        |
| GL2        | 180~330                      |   | 1.31                        |
| UE         | 180~300                      | Sit in the barrel 30 minutes or longer at 280~300°C | 1.32                        |
| newE       | 160~300                      |   | 1.06                        |
| SL         | 150~300                      |   | 1.05                        |
| IMX        | 160~280                      | Refer to the note below(*)                          | 1.12                        |

\*Note: All ASACLEAN grades should be prevented from siting in the barrel for one hour or longer at the temperature above 150°C.