

SAFETY DATA SHEET

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1. IDENTIFICATION

Product Name: ASACLEAN™ U, UE, newE, newEX, SA, CG, C, GL2, IMX, SL, YG
SDS Number: ASA-Gr1-IN-001-4

SUPPLIERS DETAILS

Supplier: MISUMI India Pvt Ltd
Address: Plot No 241, Udyog Vihar, Phase-1, Gurgaon-122016, Haryana, INDIA
Telephone number: +91-124-4688808

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: +91-124-4688808 (9:00-17:30)

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: vapours): 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

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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

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 Resin additives Inorganic additives	More than 50 Less than 20 Less than 30	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed
UE	Styrenic resin Resin additives Inorganic additives	More than 50 Less than 10 Less than 40	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed
newE	Styrenic resin Resin additives Other additives	More than 80 Less than 10 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed
newEX	Styrenic resin Resin additives Inorganic additives Other additives	Less than 50 Less than 10 Less than 50 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed Non-disclosed
SA	Styrenic resin Resin additives	More than 80 Less than 20	Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed
CG	Styrenic resin Inorganic additives Other additives	More than 50 Less than 40 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed
C	Styrenic resin Resin additives Inorganic additives Other additives	Less than 50 Less than 10 More than 50 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed Non-disclosed
GL2	Styrenic resin Resin additives Inorganic additives Other additives	More than 50 Less than 20 Less than 40 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed Non-disclosed
IMX	Styrenic resin Other additives	More than 70 Less than 30	Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed
SL	Styrenic resin Resin additives Inorganic additives Other additives	More than 80 Less than 10 Less than 10 Less than 10	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed Non-disclosed
YG	Styrenic resin Resin additives Inorganic additives	Less than 50 Less than 10 More than 50	Rgstd/Non-disclosed Rgstd/Non-disclosed Rgstd/Non-disclosed	Non-disclosed Non-disclosed Non-disclosed

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	Other additives	Less than 10	Rgstd/Non-disclosed	Non-disclosed
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The specific chemical identities and percentages of composition have been withheld as trade secrets.

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.

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.

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

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.

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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.

SAFE CONTAINER MATERIAL FOR PACKING: Use appropriate storage containers.

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 / m³

RESPIRABLE PARTICULATE: 3 mg / m³

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Physical form: Solid

Shape: Pellet

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

Odour: Specific slight odour

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/m³)

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, 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 (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Dermal)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: gases)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: vapour)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: dust / mist)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Skin Corrosion / Irritation	Classification not possible (No data available)	Classification not possible (No data available)	Category 2 (newEX,CG,YG)	Classification not possible (No data available)	Classification not possible Remarks*
Serious Eye Damage/ Eye Irritation	Classification not possible (No data available)	Classification not possible (No data available)	Category 2B (newEX,CG,YG)	Classification not possible (No data available)	Classification not possible Remarks*
Respiratory or Skin Sensitization	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Germ Cell Mutagenicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Carcinogenicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Reproductive Toxicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Specific Target Organ / Systemic Toxicity (single exposure)	Classification not possible (No data available)	Classification not possible (No data available)	Category 3 Respiratory tract irritation (newEX,CG,YG)	Classification not possible (No data available)	Classification not possible Remarks*

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Specific Target Organ / Systemic Toxicity (repeated exposure)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Respiratory Toxicity by Inhalation	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (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.

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.

13. DISPOSAL CONSIDERATIONS

Refer to all local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

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)

15. REGULATORY INFORMATION

The Manufacture, Storage and Import of Hazardous Chemical Rules.

Schedule 1, Part II - List of Hazardous and Toxic Chemicals: Not applicable

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.

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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;
 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		1.32
newE	160~300	Sit in the barrel 30 minutes or longer at 280~300°C	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.

SAFETY DATA SHEET

Product Name: ASACLEAN™
SDS No.: ASA-Gr3-IN-002-4
First issue : January 14, 2020

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1. IDENTIFICATION

Product Name: ASACLEAN™ newM, PT, PX2, PF
SDS Number: ASA-Gr3-IN-002-4

SUPPLIERS DETAILS

Supplier: MISUMI India Pvt Ltd
Address: Plot No 241, Udyog Vihar, Phase-1, Gurgaon-122016, Haryana, INDIA
Telephone number: +91-124-4688808

Manufacturer: Asahi Kasei Corporation
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: +91-124-4688808 (9:00-17:30)

RECOMMENDED APPLICATION:

Purging compound for thermoplastic injection molding machines and extruders

RESTRICTION ON USAGE:

Usage for the following application 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:

Combustible solid: Classification not possible
Metal-corrosive material: 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: vapours): 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 / systemic toxicity (single exposure): Classification not possible
Specific target organ / systemic 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

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Product Name: ASACLEAN™
SDS No.: ASA-Gr3-IN-002-4
First issue : January 14, 2020

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GHS LABEL ELEMENTS:

Pictograms: None
Signal word: 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.
newM	Acrylic 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
PT	Polycarbonate 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
PX2	Polycarbonic resin	Less than 60	Rgstd/Non-disclosed	Non-disclosed
	Resin additives	Less than 10	Rgstd/Non-disclosed	Non-disclosed
	Inorganic additives (Incl. GF)	Less than 50	Rgstd/Non-disclosed	Non-disclosed
	Other additives	Less than 10	Rgstd/Non-disclosed	Non-disclosed
PF	Polycarbonic resin	More than 70	Rgstd/Non-disclosed	Non-disclosed
	Resin additives	Less than 10	Rgstd/Non-disclosed	Non-disclosed
	Inorganic additives	Less than 20	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.

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 methyl methacrylate (newM), methyl acrylate (newM), Xylene (newM), phenol (PT, PX2, PF), 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.

6. ACCIDENTAL RELEASE MEASURES

- NOTES ON HUMAN BODY:** When pellets or 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

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.

SAFE CONTAINER MATERIAL FOR PACKING: Use appropriate storage containers.

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 / m³

RESPIRABLE PARTICULATE: 3 mg / m³

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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 goggle with side-shields should be worn.
- For skin & body: Work wear with long sleeves is recommended when molten resin is handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

- Physical form: Solid
Shape: Pellet
Colour: Milky white
Odour: Specific slight odour
pH: Not applicable

TEMPERATURE RANGES WHEREIN PHYSICAL FORM CHANGES:

- Melting Point: Does not exhibit sharp melting point, but softens at about 100°C for type newM and at about 150°C for type PT, PX2 and PF.
- Flash Point (*2): Refer to Table 1 on page 7 of 7.
- Auto-ignition Temperature (*3): Refer to Table 1 on page 7 of 7.
- Explosive Limits
- Lower Limit: Not applicable
- Upper Limit: Not applicable
- Specific Gravity (*4): Refer to Table 1 on page 7 of 7.
- Solubility:
- Water: Insoluble
- Other solvent: Soluble in aromatic and ester solvents

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal temperature.

REACTIVITY: None

CONDITIONS TO AVOID:

- Avoid using outside the specified temperature range.
- Do not let sit in barrel for more than 30 minutes at the temperature higher than 280°C (newM), and higher than 300°C (PT).
- Do not let sit in barrel for ANY period of time at the temperatures higher than 370°C.(PX2, PF)

MATERIALS TO AVOID: None

HAZARDOUS / TOXIC DECOMPOSITION PRODUCTS:

- newM: Methyl methacrylate, Methyl acrylate, Xylene, etc.
PT, PX2, PF: Phenol, etc.

11. TOXICOLOGICAL INFORMATION

	Base resin	Resin Additives	Inorganic Additives (Incl. GF)	Other Additives	Composition (Product)
Acute Toxicity (oral)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Category 5 (PX2, PF)	Classification not possible (Remarks*1)

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Acute Toxicity (Dermal)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: gases)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: vapour)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Acute Toxicity (Inhalation: dust / mist)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Skin Corrosion / Irritation	Classification not possible (No data available)	Classification not possible (No data available)	Category 2 (PX2)	Classification not possible (No data available)	Classification not possible (Remarks*2)
Serious Eye Damage/ Eye Irritation	Classification not possible (No data available)	Classification not possible (No data available)	Category 2B (PX2)	Classification not possible (No data available)	Classification not possible (Remarks*2)
Respiratory or Skin Sensitization	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Germ Cell Mutagenicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Carcinogenicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Reproductive Toxicity	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)
Specific Target Organ / Systemic Toxicity (single exposure)	Classification not possible (No data available)	Classification not possible (No data available)	Category 3 Respiratory tract irritation (PX2)	Classification not possible (No data available)	Classification not possible (Remarks*2)
Specific Target Organ / Systemic Toxicity (repeated exposure)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (Remarks)
Respiratory Toxicity by Inhalation	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)	Classification not possible (No data available)

(Remarks):

In the column of "Composition (Product)", other types of grade except those grades specifically categorized therein are "Classification not possible".

*1: Since inclusion of other additives is less than 1%, the product is labeled as "Classification not possible".

*2: 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.

12. ECOLOGICAL INFORMATION

Toxicity: There are no specific data on neither this product nor each ingredient.

Persistence and Degradability: No data available

Bio accumulative potential: No data available

Mobility in soil: No data available

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Other adverse effects: No known significant effects to critical hazards.

13. DISPOSAL CONSIDERATIONS

Refer to all local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

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)

15. REGULATORY INFORMATION

The Manufacture, Storage and Import of Hazardous Chemical Rules.

Schedule 1, Part II - List of Hazardous and Toxic Chemicals: Not applicable

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

SAFETY DATA SHEET

Product Name: ASACLEAN™
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(Table1)

Grade Type	*1: Using condition		*2: Flash Point (Unit:°C)	*3: Auto-ignition Temperature (Unit:°C)	*4: Specific Gravity (23°C)
	Temperature Range (Unit:°C)	<u>Prohibition</u> condition (*)			
newM	180~300	Sit in the barrel 30 minutes or longer at 280~300°C	370	460	1.18
PT	200~360	Sit in the barrel 30 minutes or longer at 300~360°C	>460	>520	1.19
PX2	280~420	Sit in the barrel at 370~420°C	>460	>520	1.61
PF	280~420		>460	>520	1.26

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