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| UNIC TEHCNOLOGY CORP. NO.8, Tzu Chiang Str., Tucheng Industrial Dist., New Taipei City, Taiwan, R.O.C. TEL : +886-2-22696669 FAX : +886-2-22695899 | Material Safety Data Sheet | File No. | MSDS-UR-3006(R85) |
| | | Issue Date | 2018. 01.08 |
| | GRADE : ABS UR-3006(R85) | Revised Date | |
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1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/ UNDERTAKING

1.1. 1.1. Product name: ABS (Acrylonitrile-Butadiene-Styrene)

1.2. Details of the supplier of the safety data sheet

- A. Name of manufacture/supplier: UNIC TECHNOLOGY CORP.
- B. Address: NO.8, Tzu Chiang Str., Tucheng Industrial Dist., New Taipei City, Taiwan, R.O.C.
- C. TEL: +886-2-22696669
- D. FAX: +886-2-22695899
- E. Website: www.unicgroup.com

1.3. Emergency telephone numbers

- A. Telephone number: +886-22696669

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

- A. Classification(in accordance with EC No. 1272/2008): Not classified
- B. Classification(in accordance with 1999/45/EC): Not classified


2.2. Other hazards

- This product (mixture) does not meet the PBT and/or vPvB criteria.
- NFPA rating: (0-4 steps) : Health=0, Flammability=0, Reactivity=0

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1. Mixture

Information on ingredients

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| Chemical name | CAS No. | EINECS No. | REACH No. | Concentration or concentration range (wt%) | Classification (EC No 1272/2008) | Classification (67/548/EEC) |
|---------------------------------|-----------|------------|---|--|----------------------------------|-----------------------------|
| Acrylonitrile-Butadiene-Styrene | 9003-56-9 | | 01-2119457861-32-0074 01-2119474195-34-0006 01-2119471988-16-0105 | >97% | | |
| Other additives | | | | 0.1 ~3% | | |

4. FIRST AID MEASURES

4.1. Description of first aid measures

A. Ingestion:

- Material is not expected to be absorbed from the gastrointestinal tract.
- Rinse mouth with water
- Do not induce vomiting unless directed to do so by medical personnel.

B. Eye Contact:

- Immediately flush eyes with plenty of water while holding eyelids open.
- Seek medical attention if irritation persists.

C. Skin Contact:

- Remove contaminated clothing.
- Get medical attention if necessary.

D. Inhalation:

- Rinse mouth with water
- Move person to fresh air.
- Assist breathing if necessary.
- Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed


A. Acute effects:

- Inhalation: Acute exposure: May cause irritation.
- Skin: Acute exposure: May cause irritation.
- Eye: Acute exposure: May cause irritation.

B. Delayed effects: No relevant information found

4.3. Indication of any immediate medical attention and special treatment needed

- Treatment may vary with condition of victim and specifics of incident.

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5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

- Suitable extinguishing media: Dry chemical, carbon dioxide, water spray and foam or water fog.
- Unsuitable extinguishing media: Not available

5.2. Special hazards arising from the substrate or mixture

- Airborne dust may form flammable or explosive mixture with air.
- Toxic carbon compounds can be produced during combustion.

5.3. Advice for fire-fighters

- Keep people away.
- Isolate fire area and deny unnecessary entry.
- Cool surroundings with water to localize fire zone.
- Soak thoroughly with water to cool and prevent re-ignition.
- Protective fire fighting clothing (including fire fighting helmet, coat, pants, boots, and gloves), positive-pressure self contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Isolate area.
- Keep unnecessary personnel away.
- Avoid contact with skin, eyes and dust, gas inhalation.


6.2. Environmental precautions

- Spills should be collected to prevent contamination of waterways.
- Keep out of irrigation ditches, sewers, and water supplies.
- If large spills, advise emergency services.
- Dispose in accordance with The Waste Control Law.

6.3. Methods and material for containment and cleaning up

- Clean the ground, if dust is poured into the ground. If there is scattering, recover by local exhaust ventilation facilities.
- Keep unnecessary personnel away. Sweep up.

6.4. Reference to other sections: Not available

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- Refer to "Section 8 Exposure controls/personal protection" and "Section 13 Disposal consideration" as appropriate.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

- Good housekeeping and controlling dusts are necessary for safe handling of products.
- Avoid friction and keep away from possible ignition sources.
- Earth the dust containers.
- Put on appropriate personal protective equipment.
- Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Store in cool, dry and well-ventilated place

7.3. Specific end use(s): Not available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Occupational Exposure Limits:

- ACGIH: Glass fiber – 1fiber/cc or 5mg/m₃

* ACGIH = American Conference of Governmental Industrial Hygienists

8.2. Exposure controls

A. Appropriate engineering controls:


A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

B. Individual protection measures, such as personal protective equipment:

- Respiratory Protection: Use the respirator be given official approval by Korea Occupational Safety & Health Agency. Under conditions of frequent use or heavy exposure, Respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

※ When take shelter (If solid)

- Dust, mist, fume-purifying respiratory protection

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- Any air-purifying respirator with a corpuscle filter of high efficiency
- Any respiratory protection with an electromotion fan(for dust, mist, fume-purifying)
- ※ When take shelter (If liquid)
 - Any chemical cartridge respirator with organic vapour cartridge(s).
 - Any chemical cartridge respirator with a full facepiece and organic vapour cartridge(s).
 - Any air-purifying respirator with a full facepiece and an organic vapour canister.
- ※ For Unknown Concentration or Immediately Dangerous to Life or Health
 - Self-contained breathing apparatus(pressure-demand or other positive-pressure mode in combination)
 - Supplied-air respirator with full facepiece
 - Eye Protection: Wear primary eye protection such as splash resistant safety goggle with a secondary protection faceshield. Provide an emergency eye wash station and quick drench shower in the immediate work area.
 - Hand Protection: Wear chemical resistant protected gloves.
 - Body Protection: Wear chemical resistant protected clothing.
- C. Environmental Exposure Controls: Not available

8.3. DNEL, PNEC, OEL, EQS and DMEL values : Not available


9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

- A. Appearance: Pellet in natural or compounded color
- B. Odor: Minimal

9.2. Important health, safety and environmental information:

- A. pH: Not applicable
- B. Boiling point/boiling range: Not applicable
- C. Melting point: Not applicable
- D. Flash point: Not applicable
- E. Flammability(solid, gas): Not available
- F. Explosive properties: Not available
- G. Oxidizing properties: Not available
- H. Vapour pressure: Not applicable

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I. Relative density: 1.02 ~ 1.12

J. Solubility:

- Soluble: acetone, methyl-ethyl ketone, dichloromethane
- Insoluble: alcohol, aliphatic compound solvents, mineral oil

K. Water solubility: Not applicable

L. Partition coefficient: Not applicable

M. Viscosity: Not applicable

N. Vapour density: Not applicable

O. Evaporation rate: Not applicable

9.3. Other information:

- A. Autoignition Temperature: Not applicable

10. STABILITY AND REACTIVITY

10.1. Stability

- Stable

10.2. Possibility of Hazardous Reaction

- Not likely occurs.

10.3. Conditions to avoid

- Avoid heat, flame, spark and other ignition sources
- Avoid contact with incompatible materials.

10.4. Materials to avoid

- Acids, flammable materials, base, halogenic carbon compounds, oxidizing materials.

10.5. Hazardous decomposition products

- Upon heating, cyanides, ammonia, acrylonitrile, styrene, carbon oxides, nitrogen.
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11. TOXICOLOGICAL INFORMATION

11.1. Potential acute health effects

- A. Inhalation: Not available.
- B. Ingestion: Not available
- C. Eye contact: Not available.
- D. Skin contact: Not available.

11.2. Toxicity and irritation:

- A. Acute toxicity:

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- oral: Not available
- dermal: Not available
- inhalation: Not available
- B. Skin corrosion/irritation:
 - Not available
- C. Eye corrosion/irritation:
 - Not available
- D. Respiratory sensitization: Not available
- E. Skin Sensitization:
 - Not available
- F. Carcinogenicity:
 - Not available
- G. Mutagenicity: Not available
- H. Reproductive toxicity:
 - Not available
- I. Specific target organ toxicity(single exposure): Not available
- J. Specific target organ toxicity(repeated exposure):
 - Not available
- K. Aspiration hazard: Not available

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity:

- A. Acute aquatic toxicity
 - Fish: Not available
 - Invertebrate: Not available
 - Algae: Not available

12.2. Mobility:


- Not available

12.3. Persistence/degradability:

- Not available

12.4. Bioaccumulative potential:

- A. Bioaccumulation : Not available

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B. Biodegradability : Not available

12.5. Results of PBT assessment: Not available

12.6. Other adverse effects: Not available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- The user of this product must properly characterize the waste/container generated from the use of this product in accordance with all applicable federal, state and/or local laws and regulations in order to determine the proper disposal of the waste in accordance with all applicable federal, state and/or local laws and regulations.
- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with local regulation.

13.2. Additional information: Not available

14. TRANSPORTATION INFORMATION

14.1. UN number: Not applicable

14.2. UN proper shipping name: Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable


14.5. Environmental hazard: Not applicable

14.6. Special precautions for user related to transport or transportation measures: Not available

15. REGULATORY INFORMATION

15.1. National and/or international regulatory information

- **POPs Management Law:** Not applicable
- **Information of EU Classification**
 - * Classification : Not applicable
 - * Risk Phrases: Not applicable

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* Safety Phrase: Not applicable

- U.S. Federal regulations

* **OSHA PROCESS SAFETY (29CFR1910.119):** Not applicable

* **CERCLA Section 103 (40CFR302.4) :** Not applicable

* **EPCRA Section 302 (40CFR355.30) :** Not applicable

* **EPCRA Section 304 (40CFR355.40) :** Not applicable

* **EPCRA Section 313 (40CFR372.65) :** Not applicable

- Rotterdam Convention listed ingredients: Not applicable

- Stockholm Convention listed ingredients: Not applicable

- Montreal Protocol listed ingredients: Not applicable

16. OTHER INFORMATION

16.1. Full text of classification(R- and H-Phrases): Not applicable

16.2. Reference: