FORMOSA CHEMICALS & FIBRE CORPORATION
201, TUNG HWA N. ROAD, TEIPEI, TAIWAN

SAFETY DATA SHEET

Product name: Glass Fiber Reinforced ABS Resin (ABS + Glass fiber Resin)
Grade Name： TAIRILAC
AG20GF，AG20GF-A(Black)，AG20GF-AC(Blue)
Freight classification: Plastics, Milky off-white solid
Used for: Injection
Dated Prepared: February 5, 2015
Dated Revised: January 10, 2019

1.COMPANY IDENTIFICATION

Manufacturer (Company)
Name: FORMOSA CHEMICALS & FIBRE CORPORATION.
Address: 201, TUNG HWA N.R., TAIPEI, TAIWAN
Department: Plastics Division
Telephone Number: +886-5-3770144
Facsimile Number: +886-5-3770184
Emergency Phone: +886-2-27178405

2.HEALTH HAZARD INFORMATION

GHS Classification:

This product is not hazardous under the criteria of U.S. Occupational Safety and Health Standard 29 CFR 1910 Subpart Z and United Nations GHS Parts 2, 3, and 4.

Potential Health Effects:

Inhalation:

Unlikely to be hazardous by inhalation unless heated.

Fumes evolved by overheating during improperly processing may be injurious to health.

Eye Contact:

Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin Contact:

Molten material can cause severe burns.

Ingestion:

Minimal toxicity

Health Hazard (Acute and chronic):

Neither acute nor chronic effects are likely.

3.COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name:	Acrylonitrile-Butadiene-Styrene Resin	Glass Fiber	Additives
Formula	≧75%	15~25 %	< 5%
CAS No.	9003-56-9	65997-17-3	-

4.FIRST-AID MEASURES

Eye Contact：

Remove contact lenses at once. Immediately flush eyes with large quantities of water for at least 15 minutes. Get medical attention.

Skin Contact：

If contact with molten product occurs, treat as for thermal burn. Do not try to peal molten polymer from the skin. Get medical attention promptly.

Inhalation：

Not likely to be inhaled due to physical form. For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms developing, get medical attention.

Ingestion：

Not a likely route of exposure. If person is conscious, give large amounts of water to drink. Induce vomiting. Get medical attention.

5.FIRE-FIGHTING MEASURES

Extinguishing Measures:

At the time of fire, high heat as well as gases containing dense black smoke, carbon dioxide, carbon monoxide, nitrogen oxides, etc. are generated. At the time of fire-fighting, wear proper protective clothing and respirators.

Extinguishing Media:

Water, water spray, and various kinds of fire-extinguisher may be used.

6.ACCIDENTAL RELEASE MEASURES

Fire Fighting：

Water spray is the preferable extinguishing medium. Use water spray to cool fire exposed surfaces, protect personnel and extinguish the fire. Respiratory and eye protections are required for fire fighting personnel.

Extinguishing Media:

Water spray and form. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.

Hazardous combustion products：

Combustion products may include intense heat and high levels of black smoke containing, carbon monoxide, carbon dioxide. Formation of traces of aliphatic and aromatic hydrocarbons, aldehyde, acids, phenol and phenol derivatives may occur.

Flash Point： Not applicable

Lower Flammable Limit：Not applicable

Upper Flammable Limit：Not applicable

Auto ignition Temperature： > 550℃

7.HANDLING AND STORAGE

Handling:

The gas generated at the time of processing may irritate the respiratory organs and skin. and when inhaled in large amount, vomiting and headaches may occur in certain individuals. Thus, avoid inhalation of such gases. In the case of mechanical processing (cutting, sanding, etc.), the fine dust generated by crushing may cause dust explosion by the static electricity and electrical sparks that are generated. Thus, aim at keeping the work place clean so that dust will not accumulate.

Storage:

Store in a place which is not exposed to the direct rays of the sun, and keep away from heat or ignition sources.

8.EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Concentration: Not Specified

Tolerable Concentration:

Neither Japan Association of Industrial Health nor ACGIH specifies the tolerable concentration of ABS resin dust, but it is believed that the following values are reasonable guidelines for operation.

Item	Time Weighted Average Value	
	Inhalable Dust	Total Dust
Recommendation Value of ACGIH (1995 ~ 1998) 〔Nuisance Dust〕	5 mg/m^3	10 mg/m^3

Equipment Countermeasures:

At the time of processing in high temperature, gas will be generated from the portion open to the atmosphere. Thus, in order to obtain comfortable work environment, it is desireable to install local ventilation.

Protective Equipment for Respiration:

In case of work which generates dust such as mechanical processing or sanding of resin products, dust respirator shall be worn. In case of work is done in a place having high concentration of generated gases or fumes, wear a chemical cartridge respirator (for organic chemicals).

Protective Goggles:

In case of work which generates dust such as mechanical processing or sanding of resin products, wear protective goggles made of plastics.

Protective Gloves:

When handling pellets, there is no special need of gloves, but when handing molten resins, wear gloves having good thermal insulation.

Protective Clothing:

Ordinary work clothing will do, but in case of handling molten resins, wear work clothing having long sleeves.

9.PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Water Solubility： Insoluble
Odor and Appearance： Pellet
Boiling Point: Not applicable
Vapor Density: Not applicable
Vapor Pressure： Negligible
Softening Point： 130~150℃
Auto ignition Temperature： > 550℃
Specific Gravity： 1.18~1.21 (water=1)

10.STABILITY AND REACTIVITY

Flash point: None
Upper Explosion Limit: None
Lower Explosion Limit: None
Flammability:
Auto-ignitability: Auto-ignition Temperature is 466 ℃ (ASTM-D1929-77)
Reactivity with Water: None
Oxidizability: None as far as ordinary storage and handling are concerned.

Self-Reactivity / Explosiveness:
Although there is no self-reactivity at normal temperature. When the temperature becomes high (280 ℃～400℃), the resin decomposes and generates decomposed gases. Thus, the molten resin shall be cooled rapidly with water.
Dust Explosiveness: Explosive
Stability / Reactivity:
None as far ordinary storage and Handling are concerned.

11.TOXICOLOGICAL INFORMATION

Skin Corrosiveness: None
Irritability (Skin, Eyes): There is physical irritability.
Allergenic and Sensitizing Effects: None
Acute Toxicity (Includes 50% Lethal Dose):
Oral LD_{50} (Rat) > 5g/kg (Assumed Value)
Sub-Acute Toxicity: No Information
Chronic Toxicity: No Information
Carcinogenic Effects: No Information
Mutagenic Effects: No information
Effects on the Reproductive System: No Information
Teratogenic Effects: No Information
Others (Includes generation of toxic gases by reaction with water, etc.)

12.ECOLOGICAL INFORMATION

Biodegradability: Not Biodegradable
Bioaccumulation : No Information
Fish Toxicity: No Information
Others: In order to prevent the marine animals and birds from ingesting it, it just not be abandoned or dumped in any ocean or water area.

13.DISPOSAL CONSIDERATIONS

It shall be handled in accordance with the laws, rules, and ordinances related to the disposal of waste matters.

14.TRANSPORT INFORMATION

Avoid wetting or rough handling so that the packaging will not be damaged. In case the bags are damaged and the pellets are scattered, pay attention so that no one will slip and fall. All of the materials that have spilled shall be rapidly collected.

15.REGULATORY INFORMATION

The Fire Services Act of Japan Specified Flammables (3,000 kg or above)

16.OTHER INFORMATION

References: 1)

Manual for Preventing the Discharging of Resin Pellets / Japan Plastics Industry Federation February, 1993.

The information described herein was prepared on the basis of the materials, information, and data available at the present time, and the above information may be revised by new knowledge. The precautionary items were based on ordinary handling. In case of special handling, safety measures in compliance with the application and usage shall be executed. The above was given as information, and no guarantee, express orimplied, is made. Final determination of safety and suitability of any material is the sole responsibility of the keeper and user. All materials may present unknown hazards, and therefore should be handled with adequate caution. Although certain hazards are described herein, they may not be the only hazards in relation to the products.