

PRODUCT NAME: KE-951-U**MATERIAL SAFETY DATA SHEET**

SECTION 1. COMPANY IDENTIFICATION

COMPANY IDENTIFICATION

MANUFACTURER'S NAME: Shin-Etsu Chemical Co., Ltd.

ADDRESS: 6-1, 2-Chome, Ohtemachi, Chiyodaku, Tokyo, JAPAN

EMERGENCY TELEPHONE NUMBER:

02-2715-0055(Shin-Etsu Silicone Taiwan Co., Ltd.)

TELEPHONE NUMBER FOR INFORMATION:

03-3246-5121(Tokyo, JAPAN)

02-2715-0055(Shin-Etsu Silicone Taiwan Co., Ltd)

DATA PREPARED : 01/19/1994

LAST REVISION : 09/26/2008

DATA ISSUED : 03/12/2012

ISSUE NO 201203000606

BASE NO 10

PRODUCT NAME :

KE-951-U

PRODUCT CLASSIFICATION:

Silicone Rubber Compound

SECTION 2. COMPOSITION

SINGLE OR MIXTURE:

Mixture

CHEMICAL IDENTIFICATION:

Organopolysiloxane mixture

HAZARDOUS COMPONENT(S)/(CAS No.):

No hazardous materials present

SECTION 3. HAZARDS IDENTIFICATION

HAZARDS CLASSIFICATION:

None (based on IMO)

None (based on DOT)

FIRE AND EXPLOSION:

No flammable and explosive hazard

POTENTIAL HEALTH EFFECT:

SKIN contact ; No significant effect.

INGESTION ; No information is available.

SECTION 4. FIRST AID MEASURES

INGESTION ; Wash out mouth with water provided person is

PRODUCT NAME: KE-951-U

conscious. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT(method used):

Not applicable (Solid)

FLAMMABLE LIMITS:

Not applicable

EXTINGUISHING MEDIA:

Foam, dry chemical, carbon dioxide or fine water spray

SPECIAL FIRE FIGHTING PROCEDURE:

None

UNUSUAL FIRE AND EXPLOSION HAZARD:

None

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Collect spilled materials and place in a container.

SECTION 7. HANDLING AND STORAGE

PRECAUTION TO BE TAKEN IN HANDLING AND STORING:

Keep container closed when not in use.

Store in a cool place.

Keep away from heat and flame.

Keep out of reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

ACGIH TLV-TWA : Not established,

OSHA PEL : Not established

RESPIRATORY PROTECTION(specify type):

See SECTION 11 of this MSDS for OTHER INFORMATION

VENTILATION:

LOCAL EXHAUST: See SECTION 11 of this MSDS for OTHER INFORMATION

MECHANICAL(general): See SECTION 11 of this MSDS for OTHER INFORMATION

SPECIAL: Unknown

OTHER: Unknown

PROTECTIVE GLOVES:

Plastic film

EYE PROTECTION:

Not required

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Not required

WORK/HYGIENIC PRACTICES:

Wash hands after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:

Not applicable

VAPOR PRESSURE:

Not applicable

VAPOR DENSITY(air=1):

Not applicable

SPECIFIC GRAVITY:

1.14 (25 degrees C)

MELTING POINT:

Not applicable

EVAPORATION RATE:

Not applicable (Butyl Acetate=1)

SOLUBILITY IN WATER:

Not soluble

APPEARANCE(color):

Milk-white, translucent

APPEARANCE(form):

Solid

ODOR:

Odorless

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

Stable

CONDITION TO AVOID:

None

INCOMPATIBILITY(material to avoid):

None

HAZARDOUS DECOMPOSITION OR BY-PRODUCT:

Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITION TO AVOID:

None

SECTION 11. TOXICOLOGICAL INFORMATION

SKIN IRRITATION:

Not applicable

EYE IRRITATION:

Not applicable

ACUTE TOXICITY(LD50):

No information is available.

ACUTE TOXICITY(LC50):

Not applicable

CHRONIC TOXICITY:

No information is available.

CARCINOGENICITY:

NTP:Not listed, IARC:Not listed, OSHA REGULATED:Not listed

OTHER INFORMATION:

This product can generate formaldehyde at approximately 150 degrees C(300°F) and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles or protective clothing when this product is heated at approximately 150 degrees C(300°F) and above in the presence of air.

SECTION 12. ECOLOGICAL INFORMATION

BIODEGRADATION:

Not applicable

BIOACCUMULATION:

Not applicable

AQUATIC TOXICITY:

Not applicable

OTHER INFORMATION:

None

SECTION 13. DISPOSAL CONSIDERATIONS

Can be land-filled or burned in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local laws.

SECTION 14. TRANSPORT INFORMATION

UN No.:

None

IMO CLASSIFICATION AND CLASS:

None



PACKAGING GROUP:

None

PROPER SHIPPING NAME:

None

TECHNICAL SHIPPING NAME:

None

MARINE POLLUTANT:

None

DOT REPORTABLE QUANTITY(49CFR 172.101, APP.) :

HAZARD SUBSTANCE(S) NAME / (CAS No.), CONTENTS AND RQ

Not applicable

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT(TSCA) STATUS:

Listed on the TSCA Inventory.

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EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

(EINECS) STATUS:

Listed on the EINECS.

LABELING ACCORDING TO EC-REGULATIONS REQUIRED:

SYMBOL : Not required

R-PHRASE : Not required

S-PHRASE : Not required

CONTAINS : None

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SUPERFUND AMENDMENTS AND REAUTHORIZAITION ACT OF 1986(SARA)

TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the emergency planning and community Right-To-Know Act of 1986 and 40 CFR 372.

This information must be included in all MSDS's that are copied and distributed for the material.

The toxic chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

** None **

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CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 Chemical(s) under the statute.

The California Proposition 65 Chemical(s) contained in this product are:

CHEMICAL NAME/(CAS No.) AND CONTENTS

** None **

SECTION 16. OTHER INFORMATION



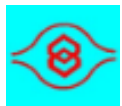
For Industrial Use Only

Do not inhale exhaust gas at curing.

This materials safety data sheet is offered solely for your information, consideration and investigation.

The data described in this MSDS consist of data on literature, our acquisitional data and analogical inference by data of similar chemical substance or product.

Shin-Etsu Chemical Co., Ltd. provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.



FORMOSA ABS PLASTICS (NINGBO) LIMITED COMPANY

FPG INDUSTRIAL ZONE, XIAPU, BEILUM, NINGBO, CHINA

MATERIAL SAFETY DATA SHEET

Product name: ABS Resin
 Grade Name: TAIRILAC AG15E 1

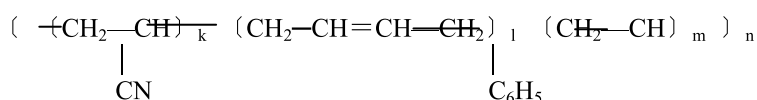
Freight classification: Plastics, Milky off-white solid
 Used for: Injection and Extrusion
 Dated Prepared: October 01, 2003
 Dated Revised: November 16, 2018

1.COMPANY IDENTIFICATION

Manufacturer (Company)
 Name: FORMOSA ABS PLASTICS (NINGBO) LIMITED COMPANY
 Address: FPG INDUSTRIAL ZONE, XIAPU, BEILUM, NINGBO, CHINA.
 Department: Plastics Division
 Telephone Number: 86-574-86902999 Ext.2116
 Facsimile Number: 86-574-86902903
 Emergency Phone: 86-574-86902999 Ext.2132

2.COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name: Acrylonitrile-Butadiene-Styrene Copolymer
 Chemical Formula (Constitutional or Structural):



Ingredients and Composition: Approx. 100%
 Published Reference number of Gazette:
 Chemical Substances Control Law: 6-720, 6-126
 CAS registry number: 09003-56-9

3.HEALTH HAZARD INFORMATION

Class Name: Not Applicable
 Physical and Chemical Hazards: Not Applicable
 Adverse Human Health Effects: Not Applicable
 Environmental Effects: Not Applicable

4.FIRST AID MEASURES



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Eye Contact:

When it enters the eyes, if the eyes are rubbed, it may cause irritation or injure the cornea. Thus, wash with water without rubbing. Remove contact lenses immediately. In case of any abnormalities, receive the treatment of a physician.

Skin Contact:

Wash with water. If condensates of gas generated from the substance molten at high temperature comes into contact with the skin, wash well with soapy water.

Inhalation:

Judging from the shape, it is unlikely that the pellets will be inhaled. In case lots of fumes generated from high temperature molten resins are inhaled, move to a place having fresh air. In case of coughs or difficulty in respiration, receive the treatment of a physician.

Ingestion:

Although this is unlikely to happen, there is no acute toxicity even if it is swallowed. In case large amount of it is swallowed. Receive the treatment of a physician.

5. FIRE AND EXPLOSION HAZARD DATA

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

In case it is spilled on the road or floor, there is danger of slipping and falling. Thus, collect the spilled pellets and dispose of them.

If it is accidentally released, it may cause environmental contamination, so immediately collect all that have been released.

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:

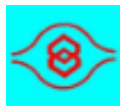
Store in a place which is not exposed to the direct rays of the sun, and keep away from heat or ignition sources.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Control Concentration: Not Specified

Tolerable Concentration:

Neither Japan Association of Industrial Health nor ACGIH specifies the tolerable concentration of ABS resin dust,



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FPG INDUSTRIAL ZONE, XIAPU, BEILUM, NINGBO, CHINA

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 Japan Association of Industrial Health (1995) Class 3 Dust	2 mg/m ³	8 mg/m ³
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 desirable 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 handling 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 PROPERTY

Appearance:	Milky Off-White Pellet Form Solids
Boiling Point:	None
Initial Boiling Point:	None
Vapor Pressure:	None
Volatility:	None
Melting point:	There is no definite melting point, and it becomes soft gradually over a broad range (130°C ~ 150°C)
Specific Gravity:	1.03 ~ 1.07
Solubility:	Insoluble in water

10. STABILITY AND REACTIVITY

Flash point: None

Upper Explosion Limit: None

Lower Explosion Limit: None

Flammability:

Autoignitability: Autoignition Temperature is 466 °C (ASTM-D1929-77)

Reactivity with Water: None

Oxidizability: None as far as ordinary storage and handling are concerned.

Self-Reactivity / Explosiveness:



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Although there is no self-reactivity at normal temperature. When the temperature becomes high (280°C ~400°C), 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 LD₅₀ (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



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FPG INDUSTRIAL ZONE, XIAPU, BEILUM, NINGBO, CHINA

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 or implied, 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.