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UPDATED / /

Material Safety Data Sheet

1. Chemical Product and Company Identification

Product name : TORELINA A310MX04, A400MX05, A305M45, A610M-X03, A310M N3, A310M N7

Name of supplier : Toray Plastics(ShenZhen) Ltd.

Address :

SHATOU JIAOTANG IND' DISTRICT SHAJING,BAOAN,SHENZHEN,P.R.CHINA.(518104)

Telephone number : +86-755-27235000

FAX number : +86-755-27235016

Manager of Production Department : General Manager

Recommended use of the chemical and restrictions on use :

Recommended use: for automobiles ,electric and electronic device, general use

Use restriction: Do not use for self-contained mechanical devise

If considering use for medical purposes or food container purposes, please contact us in advance about the specific usage.

Product No.(MSDS No.) : D3E-RS0045-1

2. Hazards Identification

GHS Classification : Classification not possible

Other hazards which are not covered by the GHS :

Refer to the Material Safety Data Sheet for this product before use.

Volatile gases which may irritate eyes, nose and throat may be released.

Use adequate local exhaust ventilation during drying and molding.

Sweep up and dispose of spilled resin to eliminate slipping hazard.

Keep away from heat source, steam pipe and direct sunlight. Store in cool places.

Follow the local law and regulations of storage.

Do not pile up bags too high in order to avoid injury caused by falling of the product.

Follow the local law and regulations concerning disposal.

3. Composition/Information on Ingredients

Substance/Mixture : Mixture

Chemical name :

Poly(phenylene sulfide) resin

Synonyms :

PPS resin

Common chemical name

Poly(phenylene sulfide)

Composition : 30-50

Chemical formula(Constitutional/Structural formula)
((C6H4)S)n
CAS No. : 26125-40-6,25212-74-2
ENCS No. : 7-1143
ISHL No. : 7-1143
TSCA : Regd.

Common chemical name
Almino Bolo Silicate Glass
Composition : 35-45
Chemical formula(Constitutional/Structural formula)
SiO2.Al2O3.(Ca,Mg)O.B2O3.(Na,K)2O
CAS No. : 65997-17-3
ENCS No. : N.A.
ISHL No. : N.A.
TSCA : Regd.

Common chemical name
Calcium carbonate
Composition : 5-45
Chemical formula(Constitutional/Structural formula)
CaCO3
CAS No. : 471-34-1
ENCS No. : 1-122
ISHL No. : 1-122
TSCA : Regd.

4. First-Aid Measures

Inhalation :
Remove the victim from the contamination immediately to fresh air.
In case of accident or if you feel unwell, seek medical advice immediately.
Evacuate victim that inhaled gas from the molten polymer to fresh air.
Seek medical advice, if victim does not recover.

Skin contact :
If a person touches the molten polymer, cool the affected part with fresh water.
Do not try to remove the polymer by force and seek medical advice if the person got burnt.

Eye contact :
Gently rinse the affected eyes with clean water for at least 15 minutes. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
Have the victim remove contact lenses if he is wearing them and continue rinsing.
Do not let the victim rub his eyes.

Ingestion :
Rinse mouth with water. Give the person one or two glasses of water, try to get the victim to vomit by putting a finger in the throat.
In case of accident or if you feel unwell, seek medical advice immediately.
If you feel unwell after vomit, seek medical advice.

Protective measures for a first aid person :
Wear protection gloves when removing melting polymer or high temperature polymer.

5. Fire-Fighting Measures

Extinguishing Media :

S43-In case of fire, use
water mist, water jet, foam, dry powder, CO2,
Specific Hazards under fire :
S41-In case of fire and/or explosion do not breathe fumes.
Toxic gases will form upon combustion of :
carbon monoxide, sulfur oxides,
Fires involving this material produce large amounts of sooty smoke.
During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Specific fire-fighting measures :
Apply water from a safe distance to cool and protect surrounding area.
Move container from fire areas if it can be done without risk.
Keep personnel removed from and upwind of fire.
Evacuate non-essential personnel to safe area.
Protection of fire-fighters :
Firefighters should wear proper protective equipment.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures :
Sweep up spilled pellets on road or floor to avoid tripping.
Measures for environmental effects :
Do not wash away into shower or waterway.
If pellets got released in environment, take adequate steps to prevent aquatic animals and birds dying from eating pellets.
Methods and materials for containment and cleaning up :
Sweep up, place in a bag and hold for waste disposal.
Preventive measures for secondary accident :
Shut off all sources of ignition; No flares, smoking or flames in area.

7. Handling and Storage

Handling :
Preventive measures :
Exposure control for handling personnel :
S20-When using do not eat or drink.
S21-When using do not smoke.
S22-Do not breathe dust.
S23-Do not breathe
gas
fumes
S51-Use only in the well-ventilated areas.
Protective measures against fire & explosion :
Do not carelessly use fire nearby.
Take precautionary actions of powder-dust explosion, if powder-dust occurred during secondary process.
Local ventilation / Total air ventilation :
Do not inhale the gas and fumes generated during molding.
Safety treatments :
Prevent deposition of dust.
Good general ventilation should be sufficient for most conditions.
Do not touch high temperature resin without protector.
Do not keep this material under high temperature condition for a long time.
Plastics pellets easily generates static electricity, so take countermeasures to eliminate static

electricity if necessary.

Safety Measures/Incompatibility :

S29-Do not empty into drains.

Protect against physical damage.

Do not drop onto, or slide across sharp objects.

Avoid rough handling or dropping.

See information on each ingredients if powder-dust occurs.

Storage :

Recommendation for storage :

This material is flammable.

Follow fire defense law and local regulations for storage and handling.

Incompatible storage condition :

S15-Keep away from heat.

S16-Keep away from sources of ignition -No smoking.

Keep away from heat source, steam pipe and direct sunlight. Store in cool places.

8. Exposure Control/Personal Protection

Engineering measures :

When Processing, partial ventilation is desirable to eliminate generated gas and powder-dust.

Adopted value :

Japan Society for Occupational Health and ACGIH do not determine adopted value of powder-dust.

Generally, data shown below is known about dusts.

Recommended value of Japan Society for Occupational Health(2006)

Third class dust

The weighted average per hour: inhaled dusts 2mg/m3

total dusts 8mg/m3

Recommend value of ACGIH(2006) General dust:

The weighted average per hour: inhaled dusts 3mg/m3

total dusts 10mg/m3

Personal protective equipment :

Respiratory protection :

S38-In case of insufficient ventilation, wear suitable respiratory equipment.

Against powder-dust: protective mask for powder-dust.

Against gas from molten polymer: protective mask for organic gas.

Hand protection :

S37-Wear suitable gloves.

Wear protection gloves of heat-resistance when handling melting polymer.

Eye protection :

Wear protective eyeglasses or chemical safety goggles.

Skin and body protection :

S36-Wear suitable protective clothing.

It is desirable to put on long sleeve clothing so as not to touch skin directly.

Wear protection clothing of heat-resistance when handling melting polymer.

Safety and Health measures :

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke at work.

9. Physical and Chemical Properties

Physical properties :

Appearance : solid pellet

Color : White Brown

Odor : None

pH : Not Available

Phase change temperature :

Boiling point : None

Boiling range(Mixture) : None

Melting point : 278°C

Decomposition temperature : Not Available

Flash point : Not Available

Ignition temperature : >500°C

Explosion : Not Available

Vapour pressure : None

Vapour density : None

Density : 1750-2040kg/m3

Octanol /water partition coefficient : Not Available

10. Stability and Reactivity

Stability :

This product is considered a stable material under normal and anticipated storage and handling conditions.

Possibility of hazardous reactions :

This product is considered a stable material under normal and anticipated storage and handling conditions.

Dangerous condition :

direct sunlight, fire, heat, etc.

Incompatible materials :

None

Decomposition products :

During burning, black smoke ,carbon dioxide, carbon monoxide, nitrogen oxide may be produced.

11. Toxicological Information

Acute toxicity :

Classification not possible.(N.A.)

Skin corrosion/irritation :

Classification not possible.(N.A.)

Serious eye damage/eye irritation :

Classification not possible.(N.A.)

Respiratory or skin sensitization :

Classification not possible.(N.A.)

Germ cell mutagenicity :

Classification not possible.(N.A.)

Carcinogenic effects :

Classification not possible.(N.A.)

Toxicity for reproduction :

Classification not possible.(N.A.)

Specific Target Organ/Systemic Toxicity (Single Exposure) :

Classification not possible.(N.A.)

Specific Target Organ/Systemic Toxicity (Repeated Exposure) :

Classification not possible.(N.A.)

Aspiration hazards :
Classification not possible.(N.A.)
Others :
As for articles that are "Classification not possible", there are no instances reported on harmful effects to health and environment, according to recent datum.

12. Ecological Information

Ecological toxicity :
Classification not possible.(N.A.)
Hazardous to the aquatic environment/Acute :
Classification not possible.(N.A.)
Hazardous to the aquatic environment/Chronic :
Classification not possible.(N.A.)
Biodegradability :
Classification not possible.(N.A.)
Bioaccumulation :
Classification not possible.(N.A.)
Mobility in soil :
Classification not possible.(N.A.)

13. Disposal Consideration

Dispose to an authorized waste collection point.
Follow the local law and regulations of waste disposal and prevention against public nuisance.
Do not cast waste(waste fluid, solid waste and washing drainage etc.) that includes this product directly into a river, or bury it underground.
Check if there is no resin left, if disposing the package after use.(paper package, flexible container etc.)
Follow the local law and regulations of waste disposal. Do not use the package for other purposes.

14. Transport Information

International guide line :
N.A.
UN No./Packaging group :
N.A.
Specific safety measures and conditions on transport :
Covering is necessary for shutting off sunlight and rain.
Handle gently to avoid damaging bags.
Caution for slipping by the scattered pellets.
Plastics pellets easily generates static electricity, so take countermeasures to eliminate static electricity if necessary.

15. Regulatory Information

Other regulatory information :
We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other Information/References

Other information :
The information relates to this specific material. It may not be valid for this material, if used in

combination with any other materials or in any process. It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own particular use.
The information herein is given in good faith, but no warranty, express or implied, is made. Please consult us for further information.
This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.
Resin is usually safe itself, so as for the calculation of division, acute toxicity(oral) is calculated by LD50 as more than 10000.

References :

JIS Z7250(2005);Material Safety Data Sheet-Part1 ;Contents and the order of the item
JIS Z7251(2006);The indication such as chemical substances based on GHS