

## 1. Chemical Product and Company Identification

### 1.1 Product name

# TORAYCON 1200MF PBT RESIN

### 1.2 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 device.

For use of the product for medical purposes or food containers purposes, please kindly contact us in advance on the specific usage.

### 1.3 Supplier's detail

Name of Supplier : Toray Plastics (Malaysia) Sdn. Bhd.  
Address : 2628 MK.1, SPT., Lorong Perusahaan 4, Prai Free Industrial Zone,  
13600 Prai, Penang, Malaysia.  
Telephone No. : +60-4-3988-088  
Fax No. : +60-4-3908-975, +60-4-3977-264

Sales  
Department : Sales & Marketing Department  
Manager : General Manager

Technical  
Department : Technology Centre  
Manager : Technology Centre Manager

### 1.4 Emergency phone number

+60-4-3988-088

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## 2. Hazards Identification

### 2.1 GHS classification

GHS Classification: Classification not possible

### 2.2 Other hazards which are not covered by GHS

Refer to the Material Safety Data Sheet for this product before use.  
This product may release small amount of volatile gases which may cause irritation to eyes, nose and throat.  
Use adequate local exhaust ventilation during drying and molding of the product.  
Sweep up and dispose any spilled product to eliminate slipping hazards.  
Keep away from heat source, steam pipe and direct sunlight. Store in cool place.  
Follow the local law and regulations of storage.  
Do not pile up the product too high to avoid any injuries caused by falling of the product.  
Follow the local law and regulations concerning disposal.

Toray Industries, Inc. Safety data sheet

MSDS No. : TPM/PBT004/EN/01  
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Revised : 2011-11-01Product: **TORAYCON 1200MF NATURAL PBT RESIN**

### 3. Composition/information on ingredients

Substance / Mixture : Mixture  
Chemical Name : Polytetramethylene Terephthalate Resin  
Synonyms : Polybutylene Terephthalate Resin, PBT Resin  
Common Chemical Name: Polytetramethylene Terephthalate

	Common chemical name	Chemical formula	CAS No.	ENCS No.	ISHL No.	TSCA
1	Polytetramethylene Terephthalate	[OC4H8OCO(C6H4)CO] <sub>n</sub> -	26062-94-2	7-1039	7-1039	Regd.

### 4. First-aid measures

#### 4.1 Inhalation

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

#### 4.2 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.

#### 4.3 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 physician as soon as possible.  
If the casualty wears contact lenses, have them removed and continue rinsing.  
Avoid the casualty from rubbing eyes.

#### 4.4 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 (show the label where possible).  
Seek medical advice, if victim feels unwell after vomit.

#### 4.5 Protective measures for a first-aid person

Wear protective gloves when removing melting polymer or high temperature polymer.

### 5. Fire-fighting measures

#### 5.1 Extinguishing media

S43–In case of fire, use water mist, water jet, foam, dry powder or carbon dioxide.

#### 5.2 Specific hazards under fire

S41–In case of fire and / or explosion, do not breathe in fumes.  
Toxic gases such as carbon monoxide, carbon dioxide, nitrogen oxide will form upon combustion of this product.  
Fires involving this material may produce large amounts of sooty smoke.  
During a fire, irritating and high toxic gases may be generated by thermal decomposition or combustion.

### 5.3 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.

### 5.4 Protection of fire fighters

Fire fighters should wear proper protective equipment.

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## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Sweep up spilled resin pellets on road or floor to avoid slipping.

### 6.2 Measures for environmental effects

Do not flush into sewer or drain.  
If pellets got released in environment, take adequate steps to prevent aquatic animals and birds dying from eating pellets.

### 6.3 Methods and materials for containment and cleaning up

Sweep up, place in bag and hold for waste disposal.

### 6.4 Preventive measures for secondary accident

Shut off all sources of ignition. No flares, smoking or flames in area.

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## 7. Handling and storage

### 7.1 Handling

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:

Use adequate local ventilation to remove fumes generated from molten resin during processing with molding machine or extruder. Use total ventilation with ventilation fans if above work are carried out in a building.

#### 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 usually generates static-electricity, thus 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 ingredient if powder-dust occurs.

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## 7.2 Storage

#### Recommendation for storage:

This product is a flammable material.  
Follow fire defense law and local regulations for storage and handling.  
Keep the product away from direct sunlight, water leak, moisture and any source of heat and ignition.  
Store it in a well-ventilated and locked up place.

#### 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 place.

#### Recommendation on container and packaging materials:

Use unbreakable containers and packaging materials that satisfy the storage condition.

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## 8. Exposure controls and personal protection

### 8.1 Engineering measures

Partial ventilation is desirable to eliminate generated gas and powder-dust.

### 8.2 Adopted value

Japan Society for Occupational Health and ACGIH do not determine the adopted value of powder-dust.  
Generally, data shown below is known about dusts.

Recommended value of Japan Society for Occupational Health (2006) – Class 3 dust:  
The weighted average per hour: inhaled dusts 2 mg/m<sup>3</sup>, total dusts 8 mg/m<sup>3</sup>

Recommended value of ACGIH (2006) – General dust:  
The weighted average per hour: inhaled dust 3 mg/m<sup>3</sup>, total dusts 10 mg/m<sup>3</sup>

### 8.3 Personal protective equipment

Respiratory protection:

S38–In case of insufficient ventilation, wear suitable respiratory equipment.  
Wear powder-dust protective mask to avoid from inhaling dust generated.  
Wear respirator for organic gases to avoid from inhaling fumes generated during processing of the resin.

Hand protection:

S37–Wear suitable gloves.  
Wear heat resistant protection gloves during handling of melting polymer or high temperature polymer.

Eye protection:

Wear protective eye glasses with side shields or chemical safety goggles.

Skin and body protection:

S36–Wear suitable protective clothing.  
It is desirable to wear long sleeve clothing so as not to touch skin directly.  
Wear protection clothing of heat-resistance when handling melting polymer.

### 8.4 Safety and health measures

Wash hands before break time and after work.  
Do not eat, drink or smoke during when handling this product.

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## 9. Physical and chemical properties

Physical properties:

Appearance : Pellet shaped solid  
Color : White  
Odor : None

Phase change temperature:

Boiling point : None  
Melting point : 224°C  
Flash point : N/A  
Ignition temperature : > 400°C  
Explosion : N/A  
Vapor pressure : None  
Vapor density : None  
Density : 1315kg/m<sup>3</sup>

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## 10. Stability and reactivity

### 10.1 Stability

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

### 10.2 Possibility of hazardous reactions

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

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### 10.3 Conditions to avoid

Direct sunlight, fire, sources of heat etc.

### 10.4 Incompatible materials

None

### 10.5 Decomposition products

Black smoke, carbon monoxide, carbon dioxide, nitrogen oxides maybe generated in the case combustion of this product.

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## 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.

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## 12. Ecological information

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)

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## 13. Disposal considerations

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.

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## 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, thus 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. Regulatory information with regard to this product in your country or in your region should be examined by your own responsibility. Ensure this product in compliance with federal requirements and ensure conformity to local regulations

## 16. 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 himself 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. To the best of our knowledge, the information contained herein is accurate. However, we assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of user. All materials may present unknown hazards and should be used in caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. 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 is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes

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