

Document number:	AR/TH-MS-002	Next Updated:	A/2
Updated number:	A/1	Updated by:	Wenjie
Date of updated:	May,15 th ,2013	Approved by:	Jenny He
Date of approval:	Jan,1 st ,2010		

1. Product and Company Identification

Company Name: Astar Orthodontics Inc.	Material Grade/Name: Polyurethane polyester
Address: Suite1503, Lidu#1 Mansion, Lane#500, South Zhongshan Rd.	Material Use : Orthodontic Elastics (Ligature Elastic, Separating Elastic, Elastic Chain)
City: Shanghai	
Country: China	
Telephone: +86-21-6303 1017	
E-mail: service@astar-ortho.com.cn	Indication of use: For Professional Orthodontic treatment only.

2. Composition/Information on Ingredients

Chemical nature Polymer based on : polyurethane, stabilizing agents, additives

3. Hazard Identification

No particular hazards known.
Potential Environmental Effects : NA

4. First Aid Measures

Routes of Exposure	First Aid Measures
Eye contact	Flush well with running water to remove particulates and get medical attention.
Skin contact	Wash affected area with soap and water.
Inhalation	Remove to fresh air, if condition continues, consult physician.
Ingestion	Seek medical help if large quantities of material have been ingested.

5. Fire Fighting Measures

Flashpoint & Method: ° C/° F N/A	Flammable(Explosive)Limits in air LEL: N/E UEL: N/E	Auto ignition Temperature NA
Flame Propagation or Burning NA	Properties contributing to fire intensity NA	Flammability classification Health-, Flammability-, Reactivity
Extinguishing Media Water, dry chemical, carbon dioxide, foam	Extinguishing media to avoid NA	
Protection and procedures for firefighters None	Unusual fire and explosion NA	

6. Accidental Release Measures

Containment Techniques: N/A

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Spill/Leak Clean-up procedures and equipment Sweep up with mechanical means.
Evacuation Procedures N/A
Special Instructions N/A

7. Handling and Storage

Handling Provide suitable exhaust ventilation at drying process and in the surrounding of the melt outlet of processing machines.
Protection against fire and explosion: No special precautions necessary.
Storage Segregate from foods and animal feeds. Further information on storage conditions: keep container tightly closed. Protect against moisture.

8. Exposure Control/Personal Protection

Components with workplace control parameters			
The substances mentioned are contained only in traces in the product.			
Material	CAS No.	ACGIH-TLV	OSHA-PEL
Diphenylmethane-4, 4'-diisocyanate (Methylene bisphenyl isocyanate(MDI))	101-68-8	0.005 ppm(TWA)	0.02 ppm
Personal Protective Equipment: Respiratory Protection: Breathing protection if breathable aerosols/dust are formed.			
General safety and hygiene measures: Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.			

9. Physical and Chemical Characteristics

Appearance:	Granules
Colour:	Transparent to opaque
Odour:	Odourless
Softening temperature:	>120 °C
Flash point:	>400 °C
Bulk density:	500-700 kg/m ³ (20 °C)
Solubility in water:	Insoluble

10. Stability and Reactivity

Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Thermal decomposition:	>230 °C The thermal decomposition above the indicated temperature is

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possible.
Gaseous products of degradation can be given off if the products is greatly overheated.
Possible thermal decomposition products: Carbon monoxide, carbon dioxide, hydrogen cyanide, isocyanates, nitrogen oxides

11.Toxicological Information
No toxic can be found in exposure to the solid form of the products under normal circumstance. Prolonged, repeated exposure to fumes or dust generated during subsequent operation may or may cause adverse health effects associated with the listed constituents in excess of OSHA permissible exposure limits.
Other relevant toxicity information The product has not been tested. The statement has been derived from products of a similar structure and composition.

12.Ecological Information
Persistence and degradability Elimination information: poor biodegradable. Other adverse effects Absorbable organically-bond halogen (AOX): this product contains no organically-bound halogen.
Additional information Other ecotoxicological advice: The ecotoxic effect of the product has not been tested. The information on this was derived from products of similar structure or composition.

13.Disposal Considerations
Can be used without re-conditioning.
May be disposed of or combusted with domestic refuse according to local regulations.
Waste key: 07 02 13 waste plastic
Contaminated packaging: Completely emptied package can be recycled.

14.Transport Information
Technical Shipping Name: Not regulated
Freight Class Bulk: N/A
Freight Class Package: N/A
Hazard Class or Division: Non-Hazardous
Not classified as a dangerous good under transport regulations(ADR RID ADNR IMDG ICAO/IATA)

15.Regulatory Information
European Community: assigned to Class I a by Medical Device Directive 93/42 EEC
Label information follow the EN980: 2008 《Symbols for use in the labelling of medical devices》
The product does not require a hazard warning label in accordance with 93/42 EEC.

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16.Other Information

Attention:

1. The product should be sterilized before used. 75% alcohol is recommended.
2. There should be no change on the color and the shape of the products after sterilization, as well as no impact to the treatment.
3. Disposable only.
4. For professional use only.
5. Single use to the correspondent tooth only. Please follow the advice on the product label and instruction for use.

N/A=not applicable NA= not available N/D= not determined N/E=not established

mg/m³= milligrams per cubic meter ppm = parts per million

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties(product specification). Neither should any agreed property nor the suitable of the product for any specific purpose be deduced from the data contained in the safety data sheet.