

# Material Safety Data Sheet



Revision Date  
Revision Number

02-Jan-2010  
4.00

product code TP03

## Topas® Cyclic Olefin Copolymers

### 1. PRODUCT AND COMPANY IDENTIFICATION

Identification of the substance/preparation

## Topas® Cyclic Olefin Copolymers

<b>Product Information</b>	+49 (0)1805-1-86727
<b>Emergency telephone number</b>	+49 (0)69-305 6418
<b>Use of the Substance /Preparation</b>	injection molding articles for optical industry, packaging Industry, medical articles.

### 2. HAZARDS IDENTIFICATION

#### Globally Harmonized System

##### **Basis for Classification**

Based on present data no classification and labelling is required according to GHS, taking into account the national implementation (United Nations version 2007)

##### **Other Hazards**

Contact with product at elevated temperatures can result in thermal burns

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

##### **Chemical characterization**

contains ethylene-norbornene copolymer (CAS 26007-43-2)

##### **Remarks**

The following specific grades of Topas are covered by this MSDS:

5013X6; 5013X10; 5013X14; 5013X15; 6013D-50; 6013L-17; 6013X20; 6015X13; 6018X1; 7010X1; 8007D-50; 8007X2; 8007X4; 8007X23; 9506X5; 9506X6

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### 4. FIRST AID MEASURES

#### General advice

Remove/Take off immediately all contaminated clothing. Wash/Decontaminate removed clothing before reuse.

#### Inhalation

Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

#### Skin

Cool skin rapidly with cold water after contact with molten polymer. If polymer is stuck to skin, do not remove. Allow adhered polymer to come off naturally. Removal of adhered polymer may result in more tissue damages than if polymer is allowed to come off over time. When symptoms persist or in all cases of doubt seek medical advice.

#### Eyes

Resin particles, like other inert materials, are mechanically irritating to eyes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

#### Ingestion

Do not induce vomiting without medical advice. Obtain medical attention.

#### Eyes

- Resin particles, like other inert materials, are mechanically irritating to eyes
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Obtain medical attention

#### Main symptoms

None known.

#### Notes to physician

This product is essentially inert and non-toxic. Under conditions of thermal decomposition irritant gases may be formed. Exposed patients may need to have their arterial blood gases and carboxyhemoglobin levels checked

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

water spray. foam. dry chemical. carbon dioxide (CO<sub>2</sub>).

#### Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

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## Topas® Cyclic Olefin Copolymers

### Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases

Under conditions giving incomplete combustion, hazardous gases produced may consist of:  
carbon monoxide (CO)  
carbon dioxide (CO<sub>2</sub>)  
Combustion gases of organic materials must in principle be graded as inhalation poisons

### Special protective equipment for fire-fighters

Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

### Precautions for fire-fighting

Cool closed containers exposed to fire with water spray. Keep people away from and upwind of fire. Dike and collect water used to fight fire.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Avoid contact with skin and eyes. Do not breathe dust. Keep people away from and upwind of spill/leak.

### Environmental precautions

Not readily biodegradable. Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

### Methods for containment

Stop the flow of material, if possible without risk.

### Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Like most thermoplastic plastics the product can be recycled. Dispose of in accordance with local regulations.

## 7. HANDLING AND STORAGE

### Handling

#### Advice on safe handling

Do not handle hot or molten material without appropriate protective equipment. Do not exceed recommended process temperatures to minimize release of decomposition products.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Dust can form an explosive mixture in air. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

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## Topas® Cyclic Olefin Copolymers

### Storage

#### Technical measures/Storage conditions

Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

#### Advice on common storage

No special restrictions on storage with other products

#### VCI Storage Class

11: Combustible solids

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure limits United States of America

Component	TWA (mg/m <sup>3</sup> )	TWA (ppm)	STEL (mg/m <sup>3</sup> )	STEL (ppm)	Ceiling (mg/m <sup>3</sup> )	Ceiling (ppm)
Dust, general threshold limit value (inhalable fraction) None	10					
Dust, general threshold limit value (respirable fraction) None	3					

### Exposure limits European Union

No exposure limits established

### Exposure limits Germany

#### TRGS 900

Component	AGW (mg/m <sup>3</sup> )	AGW (ppm)	Ceiling Limit Value	Peak-limit category	Note
Dust, general threshold limit value (inhalable fraction) None	10		2	II	
Dust, general threshold limit value (respirable fraction) None	3		2	II	

### MAK-values from the DFG

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Component	MAK (ppm)	MAK (mg/m <sup>3</sup> )	listed w/o limits	Ceiling limit value	H;S
Dust, general threshold limit value (inhalable fraction) None		4			
Dust, general threshold limit value (respirable fraction) None		1,5			

### Occupational exposure controls

#### Engineering measures

Ensure adequate ventilation. Provide for appropriate exhaust ventilation and dust collection at machinery.

#### Personal protective equipment

##### **General industrial hygiene practice**

Avoid contact with skin, eyes and clothing. Do not breathe dust or mist. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Hygiene measures**

Wash hands before breaks and immediately after handling the product. Take off all contaminated clothing immediately.

##### **Respiratory protection**

If the dust exposure limit is exceeded, wear dust mask or respirator with particle filter.

##### **Hand protection**

Heat resistant gloves.

##### **Eye protection**

Tightly fitting safety goggles. Equipment should conform to EN 166.

##### **Skin and body protection**

Wear face-shield and protective suit for abnormal processing problems.

##### **Thermal Hazard**

When handling hot material, use heat resistant gloves. Heat only in areas with appropriate exhaust ventilation.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

granules

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Colour</b>	colourless
<b>Odour</b>	odourless
<b>Softening point</b>	>60 °C/ >140 F
<b>Bulk density</b>	550 - 600 g/l
<b>Method</b>	DIN 53466
<b>Vapour pressure</b>	< 0.001 mm Hg @25°C (77 F)
<b>Water solubility</b>	insoluble
<b>VOC Content(%)</b>	< 0.5 % (wt/wt)

### 10. STABILITY AND REACTIVITY

#### Stability

Stable under normal conditions of handling, use and transportation.

#### Hazardous reactions

Hazardous polymerisation does not occur.

#### Conditions to avoid

Avoid temperatures above 350 °C / 662F. Risk of decomposition.

#### Materials to avoid

oxidizing agents.

### 11. TOXICOLOGICAL INFORMATION

#### Principle Routes of Exposure

Inhalation, Eye contact, Skin contact

#### Note

No toxicology information is available. Handle in accordance with good industrial hygiene and safety practice.

### 12. ECOLOGICAL INFORMATION

#### Note

No information on ecology is available. According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

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## Topas® Cyclic Olefin Copolymers

### 13. DISPOSAL CONSIDERATIONS

#### Product Information

Where possible recycling is preferred to disposal or incineration. May be taken to waste disposal site or incineration plant, with household waste. Rules of the local authorities must be observed.

#### Uncleaned empty packaging

Regulations concerning reuse or disposal of used packaging materials must be observed.

### 14. TRANSPORT INFORMATION

<u>IMDG</u>	Not restricted
<u>ICAO/IATA</u>	Not restricted
<u>ADR/RID</u>	Not restricted
<u>D.O.T. (49CFR)</u>	Not restricted

### 15. REGULATORY INFORMATION

#### Globally Harmonized System

##### Basis for Classification

Based on present data no classification and labelling is required according to GHS, taking into account the national implementation (United Nations version 2007)

#### Labelling according to EC Directives

##### Basis for Classification

According to present data no classification and labelling is required according to Directives 67/548/EEC or 1999/45/EC

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## Topas® Cyclic Olefin Copolymers

### 16. OTHER INFORMATION

**Revision Date**                      02-Jan-2010  
**Issuing date**                        24-Jan-2010

#### **Training advice**

For effective first-aid, special training / education is needed.

#### **Sources of key data used to compile the datasheet**

Information contained in this safety data sheet is based on Topas owned data and public sources deemed valid or acceptable. The absence of data elements required by ANSI or 2001/58/EC indicates, that no data meeting these requirements is available.

#### **Further information for the safety data sheet**

For more information, consult the Technical Data Sheet ([www.topas.com](http://www.topas.com)). Changes against the previous version are marked by \*\*\*.

#### **Disclaimer**

This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality