SAFETY DATA SHEET

Revision Date	**28-Dec-2022*** **	product code	**TP01**
Version / Revision	**9**	Issuing date	02-Jan-2023
Supersedes Version	8.00***		

TOPAS® Cyclic Olefin Copolymers

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1. Product identifier

Identification of the substance/preparation

TOPAS® Cyclic Olefin Copolymers

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance / Preparation injection molding articles for optical industry, 3-D Printing, packaging Industry, medical articles.

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification

TOPAS Advanced Polymers GmbH
Am Prime Parc 9
65479 Raunheim
Germany

Product Information

email: info@topas.com
Tel: +49 (0) 69 / 945158 000

1.4. Emergency telephone number

Emergency telephone number +49 (0)69-305 6418 available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Based on present data no classification and labelling is required according to Directive 1272/2008/EC and its amendments (CLP Regulation)

2.2. Label elements

Not required.

2.3. Other hazards

Contact with product at elevated temperatures can result in thermal burns

PBT and vPvB assessment Not required***

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Endocrine disrupting assessments

The substances contained in this mixture are not listed on the candidate list according ro Art. 59(1), REACh. The substances contained in this mixture were not assessed as having endocrine disrupting properties according to regulation 2017/2100/EU or 2018/605/EU.***

SECTION 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:

5013L-10; 5013S-04; 6013M-07; 6013S-04; 6015S-04; 6017S-04; 8007S-04; 8007X10

SECTION 4: First aid measures

4.1. Description of 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.

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.

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.

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

Protection of First-aiders
No special protective equipment required.

4.2. Most important symptoms and effects, both acute and delayed

Main symptoms
None known.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
water spray, foam, dry chemical, carbon dioxide (CO2)

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

5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of:
carbon monoxide (CO)
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons

5.3. Advice for firefighters

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

Precautions for firefighting
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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid contact with skin and eyes. Do not breathe dust. Keep people away from and upwind of spill/leak.
For emergency responders: Personal protection see section 8.
For non-emergency personnel. no special precautions needed.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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.

6.4. Reference to other sections

For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe 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.

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

Advice on the protection of the environment
See Section 8: Environmental exposure controls.

Incompatible products
No special restrictions on storage with other products

7.2. Conditions for safe storage, including any incompatibilities

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.

Technical measures/Storage conditions
Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Class (TRGS510)
11: Combustible solids

7.3. Specific end use(s)

see section 1.2

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits European Union

No exposure limits established

Exposure limits UK

EH40 WELs

Component	TWA (mg/m³)	TWA (ppm)	STEL (mg/m³)	STEL (ppm)
Dust, general threshold limit value (inhalable fraction) CAS: -	10***			
Dust, general threshold limit value (respirable fraction) CAS: -	4***			

DNEL & PNEC

Not required.

8.2. Exposure controls

Appropriate Engineering controls
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.

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

Hand protection
Heat resistant gloves.

Suitable material leather gloves

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

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

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

Environmental exposure controls
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. If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	granules***
Colour	colourless
Odour	odourless
Odour threshold	No data available
Melting point/freezing point	approx. 75-185 °C
Flammability (solid, gas)	No data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Flash point	Not applicable
Autoignition temperature	not applicable
Decomposition temperature	No data available
pH	No data available
Viscosity	not applicable
Evaporation rate	No data available
Water solubility	insoluble
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure	< 0.001 mm Hg @25°C (77 F)
Relative vapour density	No data available
Bulk density	550 - 600 g/l
Method	DIN 53466

9.2. Other information

Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
VOC Content(%)	< 0.5 % (wt/wt)

SECTION 10: Stability and Reactivity

10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

10.2. Chemical stability

Stable under normal conditions of handling, use and transportation.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

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

10.5. Incompatible materials

oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

11.2. Information on other hazards

Endocrine disrupting properties
The substances contained in this mixture have not been identified as having endocrine disrupting properties in accordance with section 2.3. The substances contained in this mixture were not assessed as having endocrine disrupting properties according to regulation 2017/2100/EU or 2018/605/EU.***

SECTION 12: Ecological information

12.1. Toxicity
No data available

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12.2. Persistence and degradability
No data available

12.3. Bioaccumulative potential
No data available

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
Not required

12.6. Endocrine disrupting properties

The substances contained in this mixture are not listed on the candidate list according ro Art. 59(1), REACh. The substances contained in this mixture were not assessed as having endocrine disrupting properties according to regulation 2017/2100/EU or 2018/605/EU.***

12.7. Other adverse effects

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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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.

SECTION 14: Transport information

ADR/RID Not restricted

ICAO-TI / IATA-DGR Not restricted

IMDG Not restricted

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable***

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

DI 2012/18/EU (Seveso III)
Category not subject

National Regulatory Information

German storage class
Storage Class (TRGS510) 11: Combustible solids

Water hazard class according to AwSV

KBwS Class	not water endangering
KBwS Number	766
KBwS Classification	§6, AwSV

Maternity Protection Law The employment restrictions for the protection of working mothers (MuschG) must be observed***

Youth Employment Protection Act The employment restrictions for the protection of young people at work (JArbSchG) must be observed***

International Inventories

The products covered by this SDS are permitted under the following inventories:
TSCA (US)
AICS (AU)
KECI (KR)
DSL (CA)
IECSC (CN)
EINECS (EU)
ENCS (JP)
NZIoC (NZ)

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TCSI (TW)

15.2. Chemical safety assessment
Not required

SECTION 16: Other information

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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 OSHA, ANSI or Annex II, Regulation 1907/2006/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). 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

End of Safety Data Sheet