Material Safety Data Sheet

Product name	TOPAS COC		EMNA/EN
MSDS number	TP01	**Revision Date**	Jun.19.2006
Revision Number	2.03	**Issuing date**	Nov.13.2007

1. Product and company identification

Product name

Topas® Cyclic Olefin Copolymers

End use:
injection molding articles for optical industry, packaging Industry, medical articles

2. Hazards identification

Emergency Overview

This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR1910.1200)

Product Description

Appearance

Form	granules
Odor	almost odourless characteristic
Colour	colourless

Potential health effects

Routes of exposure
Skin, eyes, inhalation.

Immediate effects

Inhalation
No information available May cause respiratory tract irritation Overheating in processing may generate hazardous, irritating vapours

Skin
No information available Hot or molten material has the potential to cause thermal burns Polymer particles may cause mechanical irritation

Eyes
No information available Hot or molten material has the potential to cause thermal burns Resin particles, like other inert materials, are mechanically irritating to eyes

Ingestion
No information available Essentially non-toxic based on biological activity of high molecular weight polymers

Delayed / long-term effects
No information available

3. Composition/information on ingredients

Chemical characterization	contains ethylene-norbornene copolmer (CAS 26007-43-2)
Remarks	The following specific grades of Topas are covered by this MSDS: 5010L-01; 5013L-10; 5013S-04; 6013D-61; 6013D-63; 6013S-04; 6015D-61; 6015S-04; 6017S-04; 8007D-61; 8007S-04; 8007X10; TKX-0001

4. First aid measures

General Information
Wash contaminated clothing before re-use.

Inhalation
Move to fresh air. If symptoms persist, call a physician.

Skin
Cool skin rapidly with cold water after contact with molten polymer. Obtain medical attention. If polymer ist 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.

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. If symptoms persist, call a physician.

Ingestion
If swallowed, seek medical advice immediately and show this container or label. If conscious, drink plenty of water. Do not induce vomiting without medical advice.

Note 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

NFPA: **Health:** 1 **Flammability:** 1 **Instability:** 0

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

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

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
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Environmental precautions
Dike and collect water used to fight fire.

Other Information
Cool containers / tanks with water spray. Keep people away from and upwind of fire.

6. Accidental release measures

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

Methods for cleaning Up
Shovel or sweep up. Like most thermoplastic plastics the product can be recycled. Keep in suitable, closed containers for disposal. 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. .

Protection - fire and explosion:
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge. Avoid dust formation.

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Storage

Technical measures/Storage conditions
Keep away from direct sunlight.

Material storage
Keep in a dry, cool and well-ventilated place.

Incompatible products
No special restrictions on storage with other products

8. Exposure controls / personal protection

OSHA Exposure Limits

Components	TWA
Total Dust	15 mg/m³
Respirable Dust	5 mg/m³

Components	TWA
Total Dust	10 mg/m³
Respirable Dust	3 mg/m³

Exposure controls

Engineering measures
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Protective Equipment
A safety shower and eyebath should be readily available.

General advice
Avoid contact with skin and eyes. Remove and wash contaminated clothing before re-use.

Respiratory protection
Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH.

Skin protection:
Wear impervious clothing and gloves when there is a reasonable chance for skin contact. When thermal or melt processing, wear well insulated gloves

Eye/face protection:
safety glasses with side-shields.

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Comments:
Operations involving grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards

9. Physical and chemical properties

Appearance

Form	granules
Colour	colourless
Odor	almost odourless, characteristic.
Softening point	>60 °C / >140 F
Specific Gravity	1.0 - 1.1
vapor pressure	< 0.001 mm Hg @ 25°C
Water solubility	insoluble
VOC Content(%)	< 0.5 % (wt/wt)

10. Stability and reactivity

Stability
Stable under normal conditions of handling, use and transportation

Conditions to avoid
Avoid temperatures above 350°C / 662F Product decomposes at elevated temperatures

Materials to avoid
oxidizing agents

Hazardous reactions
Hazardous polymerization does not occur

11. Toxicological information

Toxicological data are not available. Observe the usual hygienic measures for handling chemicals.

12. Ecological information

Ecotoxicological data are not available. According to experience, the material has no harmful effect on the environment.

13. Disposal considerations

Disposal Considerations:
Recycling is encouraged Dispose of in accordance with local regulations This product as shipped is not a RCHA hazardous waste under present EPA regulations

14. Transport information

US Department of Transportation Not regulated

ICAO/IATA not restricted

IMDG Not regulated

15. Regulatory Information

U.S. FEDERAL REGULATIONS

This product complies with U.S. Toxic Substance Control Act (TSCA).

SARA 313 Chemicals
Contains no substances at or above the reporting threshold under Section 313.

16. Other information

Prepared By
Product Stewardship Department
OXEA

NFPA:	Health: 1	Flammability: 1	Instability: 0
HMIS:	Health: 0	Flammability: 1	Physical hazard: 0

For more information, consult the Technical Data Sheet (www.topas.com)

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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.

Other Information:

Changes against the previous version are marked by ***

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