

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EM

Version Number 1.0
Revision Date 05/01/2003

Page 1 of 6
Print Date 11/11/2011

1. PRODUCT AND COMPANY IDENTIFICATION
--

POLYONE CORPORATION
33587 Walker Road, Avon Lake, OH 44012

NON-EMERGENCY TELEPHONE : Product Stewardship (440)-930-1395

Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : ES-5500C TC-EM

Product code : EM10003736

Chemical Name : Mixture

CAS-No. : Mixture

Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS
--

Components	CAS-No.	Weight %
Boron oxide (B2O3)	1303-86-2	1 - 5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating or processing. The end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: : Inhalation, Ingestion, Skin contact

Acute exposure

Inhalation : Resin particles, like other inert materials, can be mechanically irritating.

Ingestion : May be harmful if swallowed.

Eyes : Resin particles, like other inert materials, are mechanically irritating to eyes.

Skin : Experience shows no unusual dermatitis hazard from routine handling.

Chronic exposure : Refer to Section 11 for Toxicological Information.

Medical Conditions Aggravated by Exposure: : None known.

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EM

Version Number 1.0
Revision Date 05/01/2003

Page 2 of 6
Print Date 11/11/2011

4. FIRST AID MEASURES

- Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.
- Ingestion : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.
- Eyes : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.
- Skin : Wash off with soap and plenty of water. If skin irritation persists seek medical attention.

5. FIRE-FIGHTING MEASURES

- Flash point : Not applicable
- Flammable Limits
Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
- Autoignition temperature : Not relevant
- Suitable extinguishing media : water, dry powder, foam, carbon dioxide (CO₂).
- Special Fire Fighting Procedures : Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.
- Unusual Fire/Explosion Hazards : None

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.
- Environmental precautions : Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.
- Methods for cleaning up : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 13 of this MSDS for proper disposal methods.

7. HANDLING AND STORAGE

- Handling : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation.
- Storage : Keep containers dry and tightly closed to avoid moisture absorption

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EMVersion Number 1.0
Revision Date 05/01/2003Page 3 of 6
Print Date 11/11/2011

and contamination. Keep in a dry, cool place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye/Face Protection : Safety glasses with side-shields.
- Hand protection : Protective gloves.
- Skin and body protection : Long sleeved clothing.
- Additional Protective Measures : Safety shoes.
- General Hygiene Considerations : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
- Engineering measures : Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.

Exposure limit(s)

Components	Value	Exposure time	Exposure type	List:
Boron oxide (B2O3)	10 mg/m3	Time Weighted Average (TWA):	Dust.	ACGIH
Boron oxide (B2O3)	15 mg/m3	PEL:	Total dust.	OSHA Z1
Boron oxide (B2O3)	10 mg/m3	Time Weighted Average (TWA):		MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):		MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | | | |
|---------------------|------------------|------------------|-------------------|
| Form | : Solid | Evaporation rate | : Not applicable. |
| Appearance | : Pellets, slabs | Specific Gravity | : Not determined |
| Color | : NO PIGMENT | Bulk density | : Not established |
| Odor | : Very faint | Vapor pressure | : Not applicable |
| Melting point/range | : Not determined | Vapor density | : Not applicable |
| Boiling Point: | : Not applicable | pH | : Not applicable |
| Water solubility | : Insoluble | | |

10. STABILITY AND REACTIVITY

- Stability : Stable.
- Hazardous Polymerization : Will not occur.
- Conditions to avoid : To avoid thermal decomposition, do not overheat.

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EM

Version Number 1.0
Revision Date 05/01/2003

Page 4 of 6
Print Date 11/11/2011

Incompatible Materials : Strong acids, oxidizing and reducing agents.

Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), other hazardous materials, and smoke are all possible.

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
1303-86-2	Boron oxide (B ₂ O ₃)	Irritant	Eyes, Skin.

LC₅₀ / LD₅₀

This product contains the following components which in their pure form have the following toxicity data:

CAS-No.	Chemical Name	Route	Value	Species
1303-86-2	Boron oxide (B ₂ O ₃)	Oral LD ₅₀	3,163 mg/kg	mouse

12. ECOLOGICAL INFORMATION

Persistence and degradability : Not readily biodegradable.

Environmental Toxicity : Chemicals are not readily available as they are bound within the matrix of the polymer.

Bioaccumulation Potential : Chemicals are not readily available as they are bound within the matrix of the polymer.

Additional advice : Not applicable

13. DISPOSAL CONSIDERATIONS

Product : Like most thermoplastics the product can be recycled. Where possible, recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

14. TRANSPORT INFORMATION

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EMVersion Number 1.0
Revision Date 05/01/2003Page 5 of 6
Print Date 11/11/2011

U.S. DOT Classification : Not regulated for transportation.
ICAO/IATA : Not regulated for transportation.
IMO / IMDG : Not regulated for transportation.

15. REGULATORY INFORMATION

US Regulations:

OSHA Status : Classified as hazardous based on components.
TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Not applicable

California Proposition 65 : WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

SARA Title III Section 302 Extremely Hazardous Substance

Not applicable

SARA Title III Section 313 Toxic Chemicals:

Not applicable

Canadian Regulations:

WHMIS Classification : D2B

WHMIS Ingredient Disclosure List

CAS-No.
1303-86-2

DSL : All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS : Listed.

MATERIAL SAFETY DATA SHEET

ES-5500C TC-EM

Version Number 1.0
Revision Date 05/01/2003

Page 6 of 6
Print Date 11/11/2011

China IECS : Listed.
Europe EINECS : Not determined.
Japan ENCS : Not determined.
Korea KECI : Not determined.
Philippines PICCS : Listed.

16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.