



POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

PX233 CLEAR- #1

Version Number 1.0
Revision Date 07/14/2004

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION
8155 Cobb Center Drive, Kennesaw, GA 30152

Telephone : Product Stewardship (770) 590-3500 x.3563
Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : PX233 CLEAR- #1
Product code : FO00003125
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

Components	CAS-No.	Weight %
Propylene oxide	75-56-9	1 - 5
Toluene	108-88-3	10 - 30
Methyl isobutyl ketone	108-10-1	10 - 30
Methyl ethyl ketone	78-93-3	30 - 60

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants may be released upon heating and 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, Skin contact, Ingestion

Acute exposure

Inhalation : Inhalation of airborne droplets may cause irritation of the respiratory tract.
Ingestion : May be harmful if swallowed.
Eyes : May cause eye/skin irritation.
Skin : Experience shows no unusual dermatitis hazard from routine handling.

Chronic exposure : Refer to Section 11 for Toxicological Information.

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Aggravated by Exposure:**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 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 : No data available

Flammable Limits
Upper explosion limit : No data available
Lower explosion limit : No data available

Autoignition temperature : Not applicable

Suitable extinguishing media : Carbon dioxide blanket, water spray, dry powder, foam.

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 : May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), other hazardous materials, and smoke are all possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment.

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods.

7. HANDLING AND STORAGE

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- Handling : Heat only in areas with appropriate exhaust ventilation. Processing fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials.
- Storage : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store in a cool dry 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)

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Components	Value	Exposure time	Exposure type	List:
Toluene	50 ppm	Time Weighted Average (TWA):		ACGIH
	200 ppm	Time Weighted Average (TWA):		OSHA Z2
	300 ppm	Ceiling Limit Value:		OSHA Z2
	500 ppm	Maximum concentration:		OSHA Z2
Methyl isobutyl ketone	50 ppm 205 mg/m3	Time Weighted Average (TWA):	Vapor.	ACGIH
	75 ppm 307 mg/m3	Short Term Exposure Limit (STEL):	Vapor.	ACGIH
	100 ppm 410 mg/m3	PEL:	Vapor.	OSHA Z1
Propylene oxide	2 ppm	Time Weighted Average (TWA):		ACGIH
	100 ppm 240 mg/m3	PEL:		OSHA Z1
Methyl ethyl ketone	200 ppm	Time Weighted Average (TWA):		ACGIH
	300 ppm	Short Term Exposure Limit (STEL):		ACGIH
	200 ppm 590 mg/m3	PEL:		OSHA Z1

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid	Evaporation rate	: Not established
Appearance	: Viscous, liquid	Specific Gravity:	: Not determined
Color	: NOT APPLICABLE	Bulk density	: Not applicable
Odor	: Very faint	Vapor pressure	: Not determined
Melting point/range	: Not applicable	Vapour density	: Not determined
Boiling Point:	: Not applicable	pH	: Not applicable
Water solubility	: Immiscible		

10. STABILITY AND REACTIVITY

Stability	: Stable.
Hazardous Polymerization	: Will not occur.
Conditions to avoid	: Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.
Incompatible Materials	: Incompatible with strong acids and oxidizing agents., Avoid contact with acetal homopolymers and acetal copolymers during processing.
Hazardous decomposition products	: Carbon dioxide (CO ₂), carbon monoxide (CO), oxides of nitrogen (NO _x), hydrogen chloride (HCl), other hazardous materials, and smoke are all possible. Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur

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after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F).

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
75-56-9	Propylene oxide	Corrosive	Eyes, Skin.
		Systemic effects	central nervous system (CNS), Liver.
		toxic	Refer to LC50 / LD50 Data on MSDS..
108-88-3	Toluene	Systemic effects	central nervous system (CNS), Liver, Kidney, urinary system.
		Irritant	Skin, Eyes.
108-10-1	Methyl isobutyl ketone	Systemic effects	central nervous system (CNS), reproductive system.
		Irritant	Eyes.
78-93-3	Methyl ethyl ketone	Irritant	Eyes, Skin, Respiratory system.
		Systemic effects	central nervous system (CNS).

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
75-56-9	Propylene oxide	LC50	1740 ppm	mouse
		Oral LD50	380 mg/kg	rat
		Dermal LD50	1500 ul/kg	rabbit
108-88-3	Toluene	LC50	49 gm/m3	rat
		Oral LD50	636 mg/kg	rat
		Dermal LD50	14100 ul/kg	rabbit
108-10-1	Methyl isobutyl ketone	LC50	100 gm/m3	rat
		Oral LD50	2,080 mg/kg	rat
78-93-3	Methyl ethyl ketone	LC50	32 gm/m3	mouse
		Oral LD50	4,050 mg/kg	mouse
		Dermal LD50	6,480 mg/kg	rabbit

Carcinogenicity

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
75-56-9	Propylene oxide	no	2B	no

IARC Carcinogen Classifications:

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- 1 - The component is carcinogenic to humans.
2A - The component is probably carcinogenic to humans.
2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

- 1 - The component is known to be a human carcinogen.
2 - The component is reasonably anticipated to be a human carcinogen.

12. ECOLOGICAL INFORMATION

- Persistence and degradability : Not readily biodegradable.
- Environmental Toxicity : Environmental toxicity has not been established for this mixture as a whole.
- Bioaccumulation Potential : No data available
- Additional advice : No data available

13. DISPOSAL CONSIDERATIONS

- Product : 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

- U.S. DOT Classification
- Proper Shipping Name: Flammable liquids, n.o.s.
- Technical Name: Methyl ethyl ketone, Methyl isobutyl ketone
- Hazard Class / Division 3
- UN Number UN1993
- Packing Group II
- Label Required 3
- Hazardous Substance Not applicable
- Reportable quantity: 6,933 LB
- ICAO/IATA (air) Refer to specific regulation.
- IMO / IMDG (maritime) Refer to specific regulation.

15. REGULATORY INFORMATION

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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)

Chemical Name	CAS-No.	% in Product	RQ for component	RQ for Mixture/Product
Toluene	108-88-3	14.4246	1,000 lbs	6,933 LB

California Proposition 65 : WARNING! This product contains a chemical known to the State of California to cause cancer., 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:

Chemical Name	CAS-No.	Weight %
TOLUENE	108-88-3	14.42
METHYL ISOBUTYL KETONE	108-10-1	25.24
PROPYLENE OXIDE	75-56-9	1.44
METHYL ETHYL KETONE	78-93-3	42.55

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight %	NPRI ID#
2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	0.16	161
Toluene	108-88-3	14.42	225
Methyl isobutyl ketone	108-10-1	25.24	160
Propylene oxide	75-56-9	1.44	205
Methyl ethyl ketone	78-93-3	42.55	158

WHMIS Classification : D1B

WHMIS Ingredient Disclosure List

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CAS-No.
108-88-3
108-10-1
75-56-9
78-93-3

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

National Inventories:

- Australia AICS : Not determined
- China IECS : Not determined
- Europe EINECS : Not determined
- Japan ENCS : Not determined
- Korea KECI : Not determined
- Philippines PICCS : Not determined

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 when used in combination with any other materials and/or in any particular process or processing conditions.