

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product Name** Crystalbond Mounting Wax**Product Code(s)** 40-8150**(M)SDS Number** 1341381_A**Other means of identification****Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** Laboratory Use Only**Uses advised against** No information available**Details of the supplier of the safety data sheet****Manufacturer** Buehler**Manufacturer Address** 41 Waukegan Rd
Lake Bluff, IL 60044
www.buehler.com**Phone number** +1 847 295 6500**E-mail Address** custserv@buehler.com**Emergency telephone number**

Global Access Code: 334545

Americas: +1 760 476 3962

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Europe: +1 760 476 3961


2. HAZARDS IDENTIFICATION**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 5
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Warning	
Hazard Statements May be harmful if swallowed Causes skin irritation Causes eye irritation		
		
Appearance Transparent	Physical state Solid	Odor Odorless

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

None

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Other information

No information available

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Trade Secret
Phthalic anhydride	85-44-9	60 - 90%	*
Ethylene glycol	107-21-1	10 - 40%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Call a physician if irritation persists.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Inhalation

Remove to fresh air.

Ingestion

Rinse mouth immediately and drink plenty of water.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects

Burning sensation. Itching. Rashes. Hives. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Product is or contains a sensitizer. May cause sensitization by skin contact. May cause sensitization by inhalation and skin contact.

Uniform Fire Code Sensitizer: Solid

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible Products Strong acids. Strong oxidizing agents. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phthalic anhydride 85-44-9	TWA: 1 ppm	TWA: 2 ppm TWA: 12 mg/m ³ (vacated) TWA: 1 ppm (vacated) TWA: 6 mg/m ³	IDLH: 60 mg/m ³ TWA: 1 ppm TWA: 6 mg/m ³
Ethylene glycol 107-21-1	Ceiling: 100 mg/m ³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid	Odor	Odorless
Appearance	Transparent	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No data available	None known	
Melting / freezing point	43 - 48 °C	None known	
Boiling point / boiling range	> 100 °C	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	> 1	None known	
Specific Gravity	1.31 g/cc	None known	
Water Solubility	Insoluble		
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing properties	No data available		

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization in susceptible persons. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. (based on components). Causes serious eye damage. Severely irritating to eyes. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). Prolonged contact may cause redness and irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components). May cause additional affects as listed under "Inhalation".

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Phthalic anhydride 85-44-9	= 1530 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 210 mg/m ³ (Rat) 1 h
Ethylene glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-

Information on toxicological effects

Symptoms	Erythema (skin redness). May cause redness and tearing of the eyes. May cause blindness. Burning. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	May cause sensitization in susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive toxicity	No information available.
STOT - single exposure	Respiratory system.
STOT - repeated exposure	No information available.
Chronic Toxicity	Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. May cause adverse liver effects.

Target Organ Effects

Respiratory system. Eyes. Skin. Central nervous system (CNS). Kidney. Liver. Heart.

Aspiration Hazard

No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

946.00 mg/kg

ATEmix (dermal)

35,333.00 mg/kg (ATE)

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethylene glycol 107-21-1	96h EC50: 6500 - 13000 mg/L (Pseudokirchneriella subcapitata)	96h LC50: = 41000 mg/L (Oncorhynchus mykiss) 96h LC50: 14 - 18 mL/L (Oncorhynchus mykiss) 96h LC50: = 40761 mg/L (Oncorhynchus mykiss) 96h LC50: 40000 - 60000 mg/L (Pimephales promelas) 96h LC50: = 27540 mg/L (Lepomis macrochirus) 96h LC50: = 16000 mg/L (Poecilia reticulata)	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	48h EC50: = 46300 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Log Pow
Phthalic anhydride 85-44-9	0.73
Ethylene glycol 107-21-1	-1.93

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Dispose of contents/containers in accordance with local regulations.
US EPA Waste Number	U190

14. TRANSPORT INFORMATION

DOT	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
TDG	NOT REGULATED
MEX	NOT REGULATED
ICAO	NOT REGULATED
IATA	NOT REGULATED
Proper Shipping Name	NON REGULATED
IMDG/IMO	NOT REGULATED
RID	NOT REGULATED
ADR	NOT REGULATED
ADN	NOT REGULATED

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Phthalic anhydride - 85-44-9	85-44-9	60 - 90%	1.0
Ethylene glycol - 107-21-1	107-21-1	10 - 40%	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Phthalic anhydride 85-44-9	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical name	California Proposition 65
Ethylene glycol - 107-21-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Phthalic anhydride 85-44-9	X	X	X	X	X
Ethylene glycol 107-21-1	X	X	X	X	X

International Regulations**Mexico****National occupational exposure limits**

Component	Carcinogen Status	Exposure Limits
Phthalic anhydride 85-44-9 (60 - 90%)		Mexico: TWA 1 ppm Mexico: TWA 6 mg/m ³ Mexico: STEL 4 ppm Mexico: STEL 24 mg/m ³
Ethylene glycol 107-21-1 (10 - 40%)		Mexico: Ceiling 100 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada**WHMIS Hazard Class**

Not determined

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 1	Flammability 1	Physical Hazard 0	

Chronic Hazard Star Legend * = Chronic Health Hazard

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Disclaimer

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End of Safety Data Sheet