

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 05-Aug-2016

Revision Date 13-Apr-2017

Revision Number 2

EGHS / English

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name Crystalbond Mounting Wax

Product Code(s) 40-8150

(M)SDS Number 1341381_E

Chemical name

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

Recommended Use Laboratory Use Only.

Uses advised against No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer ITW Test & Measurement GmbH

Manufacturer Address Boschstraße 10
73734 Esslingen am Neckar / GERMANY
www.buehler-met.de www.buehler.fr www.buehler.co.uk

Phone number +49 (0) 711 4904690-0

E-mail Address lab.eu@buehler.com

1.4. Emergency telephone number

Global Access Code: 334545

Americas: +1 760 476 3962

Middle East/Africa: +1 760 476 3959

UK: +44 8 08 189 0979

Europe: +1 760 476 3961

Asia Pacific: +1 760 476 3960

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Respiratory sensitization	Category 1 - (H334)
Skin sensitization	Category 1 - (H317)
Specific target organ toxicity (single exposure)	Category 3 - (H335)

2.2. Label elements**Signal word****Danger****Hazard Statements**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P264 - Wash hands thoroughly after handling

P280 - Wear protective gloves and eye/face protection

P284 - In case of inadequate ventilation wear respiratory protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Not applicable.

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Phthalic anhydride	201-607-5	85-44-9	60 - 90%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) STOT SE 3 (H335) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1 (H317)	
Ethylene glycol	EEC No. 203-473-3	107-21-1	10 - 40%	Acute Tox. 4 (H302)	

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
Phthalic anhydride	85-44-9	-
Ethylene glycol	107-21-1	-

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.
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.
Eye contact	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. May produce an allergic reaction. Get immediate medical advice/attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

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

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

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

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

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

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. 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.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

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

6.3. 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 Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling**Advice on safe 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. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

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

7.3. Specific end use(s)**Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Exposure Limits**

Chemical name	EU	United Kingdom	France	Spain	Germany
Phthalic anhydride 85-44-9	-	STEL: 12 mg/m ³ TWA: 4 mg/m ³	STEL: 6 mg/m ³	TWA: 1 ppm TWA: 6 mg/m ³	-
Ethylene glycol 107-21-1	S* TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³	STEL: 40 ppm STEL: 104 mg/m ³ STEL: 30 mg/m ³ TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ Sk*	TWA: 20 ppm TWA: 52 mg/m ³ * STEL: 40 ppm STEL: 104 mg/m ³	vía dérmica* STEL: 40 ppm STEL: 104 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³	TWA: 10 ppm TWA: 26 mg/m ³ S*
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Phthalic anhydride 85-44-9	-	TWA: 1 ppm	-	TWA: 0.2 mg/m ³	TWA: 1 mg/m ³
Ethylene glycol 107-21-1	TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm STEL: 104 mg/m ³ pelle*	Ceiling: 100 mg/m ³	H* STEL: 104 mg/m ³ TWA: 52 mg/m ³ TWA: 10 mg/m ³	TWA: 20 ppm TWA: 50 mg/m ³ STEL: 40 ppm STEL: 100 mg/m ³ iho*	TWA: 10 ppm TWA: 26 mg/m ³ TWA: 10 mg/m ³ H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Phthalic anhydride 85-44-9	STEL 2 mg/m ³ TWA: 1 mg/m ³	STEL: 1 mg/m ³ TWA: 1 mg/m ³	STEL: 2 mg/m ³ TWA: 1 mg/m ³	TWA: 2 mg/m ³ STEL: 4 mg/m ³	TWA: 4 mg/m ³ STEL: 12 mg/m ³
Ethylene glycol 107-21-1	H* STEL 20 ppm STEL 52 mg/m ³ TWA: 10 ppm	H* STEL: 20 ppm STEL: 52 mg/m ³ TWA: 10 ppm	P* STEL: 50 mg/m ³ TWA: 15 mg/m ³	TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ H*	TWA: 10 mg/m ³ TWA: 20 ppm TWA: 52 mg/m ³ STEL: 40 ppm

	TWA: 26 mg/m ³	TWA: 26 mg/m ³		Ceiling: 25 ppm STEL: 104 mg/m ³ STEL: 40 ppm	STEL: 104 mg/m ³ Sk*
--	---------------------------	---------------------------	--	----------------------------------------------------------------	------------------------------------

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Personal protective equipment

- Eye/face protection** Tight sealing safety goggles.
- Hand Protection** Wear suitable gloves. Impervious gloves.
- Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Solid
Appearance Transparent
Odor Odorless
Color No information available
Odor Threshold 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		None known	
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	> 1	None known	
Relative density	1.31 g/cc	None known	
Water Solubility	Insoluble		
Solubility(ies)	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	
Viscosity	No data available	None known	

9.2. Other information

Softening Point No information available
Molecular Weight No information available

VOC Content (%)	Not applicable
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions	None under normal processing.
-------------------------------------------	-------------------------------

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

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 sensitization in susceptible persons. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes. (based on components).
Skin contact	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional effects as listed under "Inhalation". Harmful if swallowed. (based on components).

Information on toxicological effects**Symptoms**

Redness. Burning. May cause blindness. 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. Itching. Rashes. Hives. May cause redness and tearing of the eyes.

Numerical measures of toxicity**Acute Toxicity**

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

ATEmix (oral) 946.00 mg/kg

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

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

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Respiratory or skin sensitization May cause sensitization by inhalation. May cause sensitization by skin contact.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive Toxicity

No information available.

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethylene glycol	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

12.2. Persistence and degradability

Persistence and Degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Chemical name	Log Pow
Phthalic anhydride	0.73
Ethylene glycol	-1.93

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Phthalic anhydride	
Ethylene glycol	

12.6. Other adverse effects

Other adverse effects No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	No information available.

Section 14: TRANSPORT INFORMATION

IMDG/IMO	NOT REGULATED
14.1 UN-No.	Not Regulated
14.2 Proper Shipping Name	NOT REGULATED
14.3 Hazard Class	NOT REGULATED
14.4 Packing Group	NOT REGULATED
14.5 Marine Pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

RID	NOT REGULATED
14.1 UN-No.	NOT REGULATED
14.2 Proper Shipping Name	NOT REGULATED
14.3 Hazard Class	NOT REGULATED
14.4 Packing Group	NOT REGULATED
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ADR	NOT REGULATED
14.1 UN-No.	NOT REGULATED
14.2 Proper Shipping Name	NOT REGULATED
14.3 Hazard Class	NOT REGULATED
14.4 Packing Group	NOT REGULATED
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

IATA	NOT REGULATED
14.1 UN-No.	NOT REGULATED
14.2 Proper Shipping Name	NON REGULATED
14.3 Hazard Class	NOT REGULATED
14.4 Packing Group	NOT REGULATED
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

Section 14: TRANSPORT INFORMATION

IMDG/IMO NOT REGULATED
14.1 UN-No. Not Regulated
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Marine Pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NON REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Phthalic anhydride 85-44-9	RG 66, RG 66bis	-
Ethylene glycol 107-21-1	RG 84 RG 5, RG 14, RG 15, RG 15bis, RG 20bis	-

Water hazard class (WGK) Not Applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants

Not applicable.

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable.

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H315 - Causes skin irritation

H335 - May cause respiratory irritation

H318 - Causes serious eye damage

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

Legend

SVHC: Substances of Very High Concern for Authorization:

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	-	Skin designation

Key literature references and sources for data

www.ChemADVISOR.com/

Issuing Date 01-Mar-2017

Revision Date 13-Apr-2017

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

Disclaimer

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.



The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publicly available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

End of Safety Data Sheet