

SAFETY DATA SHEET

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 >=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

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.

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 upTake 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

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

(RMM)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	EU	United Kingdom	France	Spain	Germany
Phthalic anhydride	-	STEL: 12 mg/m ³	STEL: 6 mg/m ³	TWA: 1 ppm	-
85-44-9		TWA: 4 mg/m ³	_	TWA: 6 mg/m ³	
Ethylene glycol	S*	STEL: 40 ppm	TWA: 20 ppm	vía dérmica*	TWA: 10 ppm
107-21-1	TWA 20 ppm	STEL: 104 mg/m ³	TWA: 52 mg/m ³	STEL: 40 ppm	TWA: 26 mg/m ³
	TWA 52 mg/m ³	STEL: 30 mg/m ³	*	STEL: 104 mg/m ³	S*
	STEL 40 ppm	TWA: 10 mg/m ³	STEL: 40 ppm	TWA: 20 ppm	
	STEL 104 mg/m ³	TWA: 20 ppm	STEL: 104 mg/m ³	TWA: 52 mg/m ³	
		TWA: 52 mg/m ³			
		Sk*			
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Phthalic anhydride	-	TWA: 1 ppm	-	TWA: 0.2 mg/m ³	TWA: 1 mg/m ³
85-44-9					
Ethylene glycol	TWA: 20 ppm	Ceiling: 100	H*	TWA: 20 ppm	TWA: 10 ppm
107-21-1	TWA: 52 mg/m ³	mg/m³	STEL: 104 mg/m ³	TWA: 50 mg/m ³	TWA: 26 mg/m ³
	STEL: 40 ppm		TWA: 52 mg/m ³	STEL: 40 ppm	TWA: 10 mg/m ³
	STEL: 104 mg/m ³		TWA: 10 mg/m ³	STEL: 100 mg/m ³	H*
	pelle*			iho*	
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Phthalic anhydride	STEL 2 mg/m ³	STEL: 1 mg/m ³	STEL: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 4 mg/m ³
85-44-9	TWA: 1 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³	STEL: 4 mg/m ³	STEL: 12 mg/m ³
Ethylene glycol	H*	H*	P*	TWA: 10 mg/m ³	TWA: 10 mg/m ³
107-21-1	STEL 20 ppm	STEL: 20 ppm	STEL: 50 mg/m ³	TWA: 20 ppm	TWA: 20 ppm
	STEL 52 mg/m ³	STEL: 52 mg/m ³	TWA: 15 mg/m ³	TWA: 52 mg/m ³	TWA: 52 mg/m ³
	TWA: 10 ppm	TWA: 10 ppm		H*	STEL: 40 ppm



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

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 stateSolidAppearanceTransparentOdorOdorless

ColorNo information availableOdor ThresholdNo information available

Remarks Method **Property** Values No data available None known Melting / freezing point 43 - 48 °C None known > 100 °C Boiling point / boiling range 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 pressureNo data availableNone knownVapor density> 1None knownRelative density1.31 g/ccNone 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 DensityNo information availableBulk DensityNo information availableParticle SizeNo information availableParticle Size DistributionNo 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 affects 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/m³ (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)	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/IMONOT REGULATED14.1 UN-No.Not Regulated14.2 Proper Shipping NameNOT REGULATED14.3 Hazard ClassNOT REGULATED14.4 Packing GroupNOT REGULATED14.5 Marine PollutantNot applicable

14.6 Special Provisions None

14.7 Transport in bulkNo information available

according to Annex II of MARPOL and the IBC Code

RIDNOT REGULATED14.1 UN-No.NOT REGULATED14.2 Proper Shipping NameNOT REGULATED14.3 Hazard ClassNOT REGULATED14.4 Packing GroupNOT REGULATED14.5 Environmental hazardNot applicable

14.6 Special Provisions None

ADR
14.1 UN-No.
14.2 Proper Shipping Name
14.3 Hazard Class
14.4 Packing Group
14.5 Environmental hazard
NOT REGULATED
NOT REGULATED
NOT REGULATED
NOT REGULATED
NOT REGULATED
NOT REGULATED

14.6 Special Provisions None

IATANOT REGULATED14.1 UN-No.NOT REGULATED14.2 Proper Shipping NameNON REGULATED14.3 Hazard ClassNOT REGULATED14.4 Packing GroupNOT REGULATED14.5 Environmental hazardNot applicable14.6 Special ProvisionsNone

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

14.0 Special Provisions None

14.7 Transport in bulk No information available

according to Annex II of MARPOL and the IBC Code

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

14.6 Special Provisions None

<u>ADR</u>	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	Nono

14.6 Special Provisions None

IATANOT REGULATED14.1 UN-No.NOT REGULATED14.2 Proper Shipping NameNON REGULATED14.3 Hazard ClassNOT REGULATED14.4 Packing GroupNOT REGULATED14.5 Environmental hazardNot 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

Contact supplier for inventory compliance status. **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 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.



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End of Safety Data Sheet

