

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018




ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

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

1.1 Product identifier	
Product Name	M-Bond 200 Catalyst C
Chemical Name	Mixture
CAS No.	Mixture
EINECS No.	Mixture
REACH Registration No.	None assigned.
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified Use(s)	Adhesives.
Uses Advised Against	Anything other than the above.
1.3 Details of the supplier of the safety data sheet	
Company Identification	VISHAY MEASUREMENTS GROUP UK LTD Stroudley Road Basingstoke Hampshire United Kingdom RG24 8FW
Telephone	+44 (0) 1256 462131
Fax	+44 (0) 1256 471441
E-Mail (competent person)	mm.uk@vishaypg.com
1.4 Emergency telephone number	(00-1) 703-527-3887 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Flam. Liq. 2; H225 Eye Irrit. 2; H319 Skin Sens. 1; H317 STOT SE 3; H336 STOT SE 2; H371
2.2 Label elements	
Product Name	According to Regulation (EC) No. 1272/2008 (CLP) M-Bond 200 Catalyst C
Hazard Pictogram(s)	  
Signal Word(s)	Danger
Contains:	Propan-2-ol and n-Phenyldiethanolamine
Hazard Statement(s)	H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation. H317: May cause an allergic skin reaction. H336: May cause drowsiness or dizziness. H371: May cause damage to organs.
Precautionary Statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

P260: Do not breathe vapour.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352: IF ON SKIN: Wash with plenty of water.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.

Additional Information

Not applicable

2.3 Other hazards

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable.

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Propan-2-ol	98	67-63-0	200-661-7	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
n-Phenyldiethanolamine	2	120-07-0	204-368-5	Not yet assigned in the supply chain	Eye Dam .1; H318 Skin Sens. 1; H317 STOT SE 1; H370 Aquatic Chronic 3; H412

For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Do not breathe vapour. Avoid contact with skin and eyes. Contaminated clothing should be laundered before reuse.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

Eye Contact

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.

Ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness. May cause nausea/vomiting. May cause damage to organs.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media**
Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or waterspray.
Unsuitable extinguishing Media Do not use water jet. Direct water jet may spread the fire.
- 5.2 Special hazards arising from the substance or mixture** Highly flammable liquid and vapour. Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide, Nitrogen oxides. Prevent liquid entering sewers, basements and workpits; vapour may create explosive atmosphere. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
- 5.3 Advice for fire-fighters** Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid release to the environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Caution - spillages may be slippery. Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Do not breathe vapour. Avoid contact with skin, eyes or clothing. Wear suitable respiratory protection. Use personal protective equipment as required. See Section: 8. Wash contaminated clothing before reuse. The vapour is heavier than air; beware of pits and confined spaces.
- 6.2 Environmental precautions** Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
- 6.3 Methods and material for containment and cleaning up** Ensure suitable personal protection (including respiratory protection) during removal of spillages. Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do not adsorb onto sawdust or other combustible materials. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste
- 6.4 Reference to other sections** See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Do not breathe vapour. In case of inadequate ventilation wear respiratory protection. Avoid contact with skin and eyes. Do not ingest. Wear protective gloves/eye protection. Take precautionary measures against static discharge. This product should be kept away from naked flames and other sources of ignition. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.
- 7.2 Conditions for safe storage, including any incompatibilities**
Storage temperature Ambient. 5 - 25°C
Storage life Stable under normal conditions.
Incompatible materials Keep away from: Strong oxidising agents, Acids (Nitric acid and Sulphuric acid), Halogens and halogenated compounds.
- 7.3 Specific end use(s)** Adhesives.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
8.1.1 Occupational Exposure Limits

SAFETY DATA SHEET




Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Propan-2-ol	67-63-0	400	999	500	1250	WEL

Note: WEL: Workplace Exposure Limit (UK HSE EH40)

- 8.1.2 Biological limit value** Not established.
- 8.1.3 PNECs and DNELs** Not established.
- 8.2 Exposure controls**
- 8.2.1 Appropriate engineering controls** Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit.
- 8.2.2 Individual protection measures, such as personal protective equipment (PPE)** General hygiene measures for the handling of chemicals are applicable. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place. Wash contaminated clothing before reuse. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- Eye/face protection** Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).
- 
- Skin protection**
- 
- Hand protection** Wear impervious gloves (EN374). The gloves type used must be chosen based on the work activity and duration as well as concentration/quantity of material being handled. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Protective index 6, corresponding > 480 minutes of permeation time according to EN 374. Recommended: Nitrile rubber (Minimum thickness: 0.35mm); Butyl rubber (Minimum thickness: 0.5)
- Body protection** Wear suitable coveralls to prevent exposure to the skin.
- Respiratory protection** Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. For large quantities - A suitable mask with filter type A (EN141 or EN405) may be appropriate.
- 
- Thermal hazards** Not applicable.
- 8.2.3 Environmental Exposure Controls** Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties** Physico-chemical properties of substance Propan-2-ol.
- Appearance Blue Coloured liquid.
- Odour Alcohol-like Odour
- Odour Threshold Not available.
- pH Not established.
- Melting Point/Freezing Point -88.5°C
- Initial boiling point and boiling range 82.3°C (Mixture)

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

Flash point	11.7 °C
Evaporation Rate	2.83 (BuAc = 1)
Flammability (solid, gas)	Not applicable - Liquid
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	6.02 kPa at 25°C
Vapour density	2.1 (Air = 1)
Relative density	0.78 (H2O = 1)
Solubility(ies)	98% (Water)
Partition coefficient: n-octanol/water	0.05 log Pow (25 °C)
Auto-ignition temperature	399 °C
Decomposition Temperature	Not available.
Viscosity	2.038 mPa s (dynamic) 25 °C
Explosive properties	Not available.
Oxidising properties	Not oxidising.

9.2 Other information None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Highly flammable liquid and vapour. The vapour may be invisible, heavier than air and spread along ground.
10.4 Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
10.5 Incompatible materials	Keep away from: Strong oxidising agents, Acids (Nitric acid and Sulphuric acid), Halogens and halogenated compounds.
10.6 Hazardous decomposition product(s)	Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)	
Acute toxicity	
Ingestion	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20 mg/l.
Skin Contact	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Skin corrosion/irritation	Based upon the available data, the classification criteria are not met.
Serious eye damage/irritation	Eye Irrit. 2; Causes serious eye irritation.
Propan-2-ol:	Eye Irrit. 2; H319 Harmonised Classification Irritating to eyes. (rabbit) (OECD 405)
n-Phenyldiethanolamine:	Eye Dam. 1; H318 Corrosive to eyes. (rabbit) (Unnamed, 1974)
Respiratory or skin sensitization	Skin Sens. 1; May cause an allergic skin reaction.
n-Phenyldiethanolamine:	Skin Sens 1; H317 Sensitisation (mouse) - Positive (OECD 442B)
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Based upon the available data, the classification criteria are not met.
STOT - single exposure	STOT SE 3; May cause drowsiness and dizziness.
Propan-2-ol:	STOT SE 2; May cause damage to organs. STOT SE 3; H336 Harmonised Classification Weight of evidence approach: Observations relevant to classification (rat) (OECD 403)

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

n-Phenyldiethanolamine:	STOT SE 1; H370 Weight of evidence approach: Observations relevant to classification (rat) (BASF SE, 1974) Based upon the available data, the classification criteria are not met. Based upon the available data, the classification criteria are not met. None.
STOT - repeated exposure	
Aspiration hazard	
11.2 Other information	

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish) Aquatic Chronic 3; H412 EC50 Aquatic invertebrates: 87.85 mg/l (Unnamed, 1995)
n-Phenyldiethanolamine:	
12.2 Persistence and degradability	No data for the mixture as a whole. Readily biodegradable (according to OECD criteria). Not readily biodegradable (according to OECD criteria).
Propan-2-ol:	
n-Phenyldiethanolamine:	
12.3 Bioaccumulative potential	No data for the mixture as a whole. The substance has low potential for bioaccumulation. Not anticipated to bioaccumulate
Propan-2-ol:	
n-Phenyldiethanolamine:	
12.4 Mobility in soil	No data for the mixture as a whole. The substance is predicted to have high mobility in soil. Miscible with water.
Propan-2-ol:	
n-Phenyldiethanolamine:	The substance is predicted to have high mobility in soil. Soluble in water.
12.5 Results of PBT and VPVB assessment	Not classified as PBT or vPvB.
12.6 Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility.
13.2 Additional Information	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID / IMDG / IATA
14.1 UN number	UN 1219
14.2 UN proper shipping name	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not classified as a Marine Pollutant. / Environmentally hazardous substance
14.6 Special precautions for user	See Section: 2
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
14.8 Additional Information	None.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1 EU regulations	
Substance(s) of Very High Concern (SVHCs)	None.
Authorisations and/or Restrictions On Use	None.
15.1.2 National regulations	None known.
Wassergefährdungsklasse (Germany)	Water hazard class: 1
15.2 Chemical Safety Assessment	A chemical safety assessment is not required under REACH.

SAFETY DATA SHEET

Revision: 3.0 Date: 31.05.2018

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

www.vishaypg.com

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated substance / mixture classification. Update version and date. New format has been issued, all sections have been updated to include new information. Review SDS with care.

References: Existing Safety Data Sheet (SDS), Harmonised Classification(s) for Propan-2-ol (CAS No.1330-20-7), Existing ECHA registration(s) for Propan-2-ol (CAS No. 1330-20-7) n-Phenyldiethanolamine (CAS No. 120-07-0).

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Flam. Liq. 2; H225	Flash Point Test Result/ Boiling Point (°C) Test Result
Eye Irrit. 2; H319	Threshold Calculation
Skin Sens. 1; H317	Threshold Calculation
STOT SE 3; H336	Threshold Calculation
STOT SE 2; H371	Threshold Calculation

LEGEND

LTEL: Long Term Exposure Limit
STEL: Short Term Exposure Limit
DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Hazard classification / Classification code:

Flam. Liq. 2; Flammable Liquid, Category 2
Eye Dam. 1; Eye damage, category 1
Skin Sens. 1; Skin Sensitisation, Category 1
Eye Irrit. 2; Eye Irritation, Category 2
STOT SE 3; Specific target organ toxicity — single exposure, Category 3
STOT SE 1; Specific target organ toxicity — single exposure, Category 1
STOT SE 2; Specific target organ toxicity — single exposure, Category 2
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3

Hazard Statement(s)

H225: Highly flammable liquid and vapour.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H370: Causes damage to organs.
H371: May cause damage to organs.
H412: Harmful to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Vishay Precision Group gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Vishay Precision Group accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.