

MATERIAL SAFETY DATA SHEET**CHEMICAL IDENTITY** 3,3',5,5'-Tetramethylbenzidine (TMB) solution**1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER**

PRODUCT NAME: TMB solution (1 reagents type) (BCL-TMB-01)
TMB solution (2 reagents type) (BCL-TMB-21)
and as a component of below ELISA kits;
Easy ELISA Constructor (BCL-EEC-01)
HB S-Antigen Quantitative ELISA Kit, Rapid-II (BCL-SHP-21)
HB Pre-S1 antigen Quantitative ELISA kit, Rapid (BCL-S1HP-01)
HB Pre-S2 antigen Quantitative ELISA kit, Rapid (BCL-S2HP-01)

PRODUCT CODE: BCL-TMB-01, BCL-TMB-21, BCL-ECB-01, BCL-RBT, BCL-SCB2

CHEMICAL IDENTIFICATION: 3,3',5,5'-Tetramethylbenzidine (TMB)

CONTENT IN THE PRODUCT: below 0.05%

RECOMMENDED USE: ELISA

MANUFACTURER : Beacle Inc.

SUPPLIER : Beacle Inc.

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(THE BELOW DESCRIPTION IS BASICALLY APPLIED TO TMB SOLUTION)

2. HAZARDS IDENTIFICATION

EC CLASSIFICATION: Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC

GHS CLASSIFICATION : Not a hazardous substance or mixture according to the Globally Harmonized System (GSH)

HAZARD SYMBOL : Not applicable

HAZARD STATEMENTS : Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

PRECAUTIONARY STATEMENTS : Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY : 3,3',5,5'-Tetramethylbenzidine (TMB)

FORMULA : C₁₆H₂₀N₂

MOLECULAR WEIGHT : 240.343

CAS NUMBER : 54827-17-7

4. FIRST AID MEASURES

GENERAL ADVICE : Consult a physician. Show this safety data sheet to the doctor in attendance.

INHALATION : If breathed in, move person into fresh air. If not breathing, give artificial respiration.

SKIN CONTACT : Wash off with soap and plenty of water.

EYE CONTACT : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

INGESTION : Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards arising from the substance or mixture : Carbon oxides, nitrogen oxides (NO_x)
Nature of decomposition products not known.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS : Wear self contained breathing apparatus for fire fighting if necessary

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS : Avoid breathing vapours, mist or gas.
For personal protection see section 8.

ENVIRONMENTAL PRECAUTIONS : No special environmental precautions required

METHODS FOR CLEANING UP : Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING : Avoid contact with skin and eyes. Avoid formation of aerosols.

CONDITIONS FOR SAFE STORAGE : Store in cool place.
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: 2 -8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

INDIVIDUAL PROTECTION MEASURES ;
Respiratory protection : Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Body Protection	impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Eye protection :	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection :	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands
CONTROL PARAMETER :	Components with workplace control parameters

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE :	Form: liquid Colour: colourless
ODOUR :	no data available
pH :	3,5 - 3,8
MELTING POINT :	no data available
INITIAL BOILING POINT :	no data available
FLASH POINT :	no data available
FLAMMABILITY (solid, gas) :	no data available
EXPLOSIVE LIMITS :	no data available
VAPOR PRESSURE :	no data available
SPECIFIC GRAVITY :	no data available
WATER SOLUBILITY:	no data available
PARTITION COEFFICIENT :	no data available
AUTOIGNITION TEMPERATURE :	no data available
DECOMPOSITION TEMPERATURE :	no data available
OXIDATIVE PROPERTY	no data available
EXPLOSIVE PROPERTY	no data available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY :	no data available
POSSIBILITY OF HAZARDOUS CONDITIONS TO AVOID :	no data available
INCOMPATIBLE MATERIALS :	no data available
HAZARDOUS DECOMPOSITION	no data available

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY(oral/dermal/inhalation) :	no data available
SKIN CORROSION/IRRITATION :	no data available
EYE DAMAGE/EYE IRRITATION :	no data available
RESPIRATORY OR SKIN SENSITIZATION :	no data available
GERM CELL MUTAGENICITY :	no data available
TOXIC TO REPRODUCTION :	no data available
CARCINOGENICITY :	no data available
ADDITIONAL INFORMATION ;	
RTECS:	not available

12. ECOLOGICAL INFORMATION

ECOTOXICITY :	no data available
PERSISTENCE AND DEGRADABILITY :	no data available
BIOACCUMULATION POTENTIAL :	no data available
MOBILITY IN SOIL :	no data available
OTHER ADVERSE EFFECTS :	no data available

13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)

Product: Offer surplus and non-recyclable solutions to a licensed disposal company.
 Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

UN NUMBER :	ADR/RID: - IMDG: - IATA: -
UN PROPER SHIPPING NAME :	ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
CLASS or DIVISION :	ADR/RID: - IMDG: - IATA: -
PACKING GROUP :	ADR/RID: - IMDG: - IATA: -

ENVIRONMENTAL HAZARDS : ADR/RID: no
 IMDG Marine pollutant: no
 IATA: no

15. REGULATORY INFORMATION

US REGULATIONS ;

EU REGULATIONS:

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

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

 no data available

Chemical Safety Assessment

 no data available

16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

No specific notes

The information described above is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. The product should be used by expert persons having knowledge and skill with their own risk. Beacle shall not be held liable for any damageresulting from handling or from contact with the above material.