medac

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Spezialpräparate mbH

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Information about Compilation of Safety Data Sheets

Product: PermaBlue/HRP, Ready To Use 30 ml
Company: Diagnostic BioSystems, Inc.
Article number: K063-110

All components of the aforementioned kit had been classified according to Regulation (EC) No. 1907/2006 (REACH) and to Regulation (EC) No. 1272/2008 (GHS/CLP).

For the kit components PermaBlue/HRP Substrate Buffer (Component 2, article number: K063B) and PermaBlue/HRP Chromogen (Component 1, article number: K063C), Safety Data Sheets had been compiled (enclosure).

When handling the kit components, the general and specific safety precautions for laboratories and the corresponding directives have to be followed.

Date of issue: August 2018

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Theaterstrasse 6
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Attachment

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.08.2017 Version number 1 Revision: 18.08.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: PermaBlue™/HRP Component 1

Article number: K063C Comp1
Registration number
This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses:
For in vitro diagnosis.
Uses advised against:
No further relevant information available.
Sector of Use SU20 Health services
Product category PC21 Laboratory chemicals
Process category PROC15 Use as laboratory reagent
Application of the substance / the mixture Immunochemical reagent for detection / auxiliary reagent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor:
Manufacturer:
Diagnostic BioSystems, Inc.
6616 Owens Drive
Pleasanton, CA 94588, USA phone: 001 925 484-3350
Distributor:
medac GmbH
Theaterstr. 6
22880 Wedel Germany
Phone: +49 4103 8006-0
Informing department:
Product Safety
productsafety@medac.de

1.4 Emergency telephone number:

Giftinformationszentrum-Nord, Phone: ++49 551 19 240 (service in German and English, 24 hours permanently accessible).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3	H226	Flammable liquid and vapour.
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 4	H332	Harmful if inhaled.
Repr. 1B	H360FD	May damage fertility. May damage the unborn child.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labeled in accordance with Regulation (EC) No 1272/2008 (GHS/CLP).

Hazard pictograms

GHS02 GHS07 GHS08

Signal word Danger

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Trade name: PermaBlue™/HRP Component 1

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Hazard-determining components of labelling:
2-methoxyethanol

Hazard statements
H226 Flammable liquid and vapour.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H360FD May damage fertility. May damage the unborn child.

Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat. - No smoking.
P280 Wear protective gloves / protective clothing / eye protection
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
Labelling of packages where the contents do not exceed 125 ml
Hazard pictograms

GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:
2-methoxyethanol
Hazard statements
H360FD May damage fertility. May damage the unborn child.
Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.
vPvB: Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures Not applicable. Product is a substance.
Description: Immunochemical reagent / auxiliary reagent

Dangerous components:		
CAS: 109-86-4 EINECS: 203-713-7 Index number: 603-011-00-4 RTECS: KL 5775000	2-methoxyethanol Flam. Liq. 3, H226 Repr. 1B, H360FD Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	50-100%

SVHC	
109-86-4	2-methoxyethanol

Additional information For the wording of the listed H-phrases please refer to Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information First aider: Take care of self-protection.
After inhalation Supply fresh air; consult doctor in case of symptoms.

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Trade name: PermaBlue™/HRP Component 1

(Contd. of page 2)

After skin contact
Remove contaminated clothes.
Instantly wash with cupious amounts of water.
In case of symptoms call a physician.
After eye contact
Rinse eyes cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Instantly consult ophthalmologist.
After swallowing
Let rinse out mouth and then drink plenty of water.
Call doctor.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge both acute and delayed symptoms and effects due to improper handling of this preparation have not been investigated.
Information for doctor
Show Safety Data Sheet.
Treatment according to symptoms.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents CO_2, foam or extinguishing powder.
For safety reasons unsuitable extinguishing agents For this mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
In the event of fire development of dangerous fumes or vapours possible.
In the event of fire may develop:
Carbon monoxide (CO)
Carbon dioxide (CO_2)
Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment:
In case of burning of a larger amount:
Stay in the danger area only with self-contained breathing apparatus.
Prevent skin and eye contact by keeping a safe distance or by wearing suitable protective clothing.
Additional information
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel:
Do not inhale vapours/aerosols.
Avoid reagent contact with eyes and skin.
Provide sufficient ventilation.
Advice for emergency responders: Protective equipment: see Section 8.

6.2 Environmental precautions: Do not empty into drains.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Afterwards clean with water and cleansing agent.
Dispose of the material collected according to respective national regulations.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling

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Trade name: PermaBlue™/HRP Component 1

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See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Open and handle container with care.
Prevent formation of vapour / aerosols.
Information about protection against explosions and fires:
Protect from heat.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities No further relevant information available.
Storage
Requirements to be met by storerooms and containers:
Store tightly closed.
Store at +2 °C to +8 °C.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Store in a locked cabinet or with access restricted to technical experts or their assistants.
Storage class 10 (VCI) Flammable liquids.

7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see Section 7.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:	
109-86-4 2-methoxyethanol	
WEL	Long-term value: 3 mg/m³, 1 ppm Sk

DNELs No further relevant information available.
PNECs No further relevant information available.
Additional information: The official lists that were valid during the compilation were used as basis.

8.2 Exposure controls
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See Section 7.
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals.
Do not inhale vapours/aerosols.
Remove contaminated clothing immediately.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Wash hands during breaks and at the end of the work.
Breathing equipment:
Essential if vapours/aerosols develop.
Filter A (according to standard EN 3181) for vapours of organic compounds..
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Protection of hands:
Protective gloves (AQL 1.5).
The breakthrough times stated below base on laboratory test methods which cannot fully simulate working conditions. It is the responsibility of the enduser to choose the appropriate gloves for his application. If working with substances or mixtures harmful in contact with skin, check the gloves beforehand for holes and fissures.

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Trade name: PermaBlue™/HRP Component 1

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Material of gloves
Nitrile rubber, NBR
Natural rubber, NR
Thickness 0.11 mm.
The product quality has to comply with DIN EN 455.
Penetration time of glove material Penetration time > 120 min.
For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:
Product has not been designed for permanent contact.
For the permanent contact gloves made of the following materials are suitable:
Product has not been designed for permanent contact.
For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
Product has not been designed for permanent contact.
As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR
Natural rubber, NR
Thickness: 0.11 mm.
Penetration time > 120 min.
Eye protection: Safety glasses (standard EN 166).
Body protection: Protective work clothing.
Limitation and supervision of exposure into the environment Do not empty into drains.
Risk management measures Void.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	liquid
Colour:	Colourless
Smell:	Sweetish, ether-like
Odour threshold:	No information available.
Important information on protection of health and environment, and on safety.	No further relevant information available.
pH-value at 20 °C:	7
Change in condition	Not applicable.
Melting point/freezing point:	-85.1 °C Ca. 0 °C
Initial boiling point and boiling range:	123 °C Ca. 100 °C
Flash point:	37 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	310 °C
Decomposition temperature:	No information available.
Self-inflammability:	Not self-inflammable.
Explosive properties:	Product is not explosive. However, formation of explosive air/ steam mixtures is possible.
Critical values for explosion:	
Lower:	2.4 Vol %
Upper:	20.6 Vol %
Oxidising properties	Not applicable.
Steam pressure at 20 °C:	8 hPa
Density at 20 °C	0.964-0.966 g/cm³
Relative density	No information available.
Vapour density at 20 °C	33 g/cm³
Evaporation rate	No information available.

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Trade name: PermaBlue™/HRP Component 1

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Solubility in / Miscibility with	
Water:	Soluble
Partition coefficient: n-octanol/water:	-0.77 log POW
Viscosity:	
dynamic:	No information available.
kinematic at 20 °C:	1.6 mm² s (DIN 53211/4)
Solvent content:	
Organic solvents:	99.0 %
Solids content:	0.0 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability The product is chemically stable under the indicated storage conditions.
Thernak decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions No further relevant information available.

10.4 Conditions to avoid: Heating.

10.5 Incompatible materials:
Aluminium.
Various plastic materials.

10.6 Hazardous decomposition products:
Peroxides.
In case of burning of larger amounts: See Section 5.
Additional information: No further relevant information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed, in contact with skin or if inhaled.

LD/LC50 values that are relevant for classification:

109-86-4 2-methoxyethanol

Oral	LD50	3400 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	1500 mg/l (rat)

Specific symptoms in biological assay: No further relevant information available.
Primary irritant effect:
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/irritation Based on available data, the classification criteria are not met.
after swallowing: Harmful if swallowed.
after inhalation: Harmful if inhaled.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Other information (about experimental toxicology): No further relevant information available.
Subacute to chronic toxicity: No further relevant information available.
Additional toxicological information: No further relevant information available.
Toxicokinetics, metabolism and distribution No relevant information available.
Acute effects (acute toxicity, irritation and corrosivity) No acute toxicity information available for this product.
Sensitisation No sensitising effect known.
Repeated dose toxicity No further relevant information available.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.

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Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity
May damage fertility. May damage the unborn child.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.
Other information: No further relevant information available.
Behaviour in environmental systems:
Components: No relevant information available.

12.3 Bioaccumulative potential Bioaccumulation is not to be expected.

12.4 Mobility in soil Mobility in soil due to the liquid status.
Additional ecological information:
General notes: Void.

12.5 Results of PBT and vPvB assessment
PBT: Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.
vPvB: Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects No relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product residues have to disposed of according to the Waste Framework Directive as well as national and regional regulations in each the latest versions.

Uncleaned packagings:
Recommendation: Uncleaned packagings have to be disposed of in the same manner as the product residues.

SECTION 14: Transport information

14.1 UN-Number	
ADR, IMDG, IATA	UN1188
14.2 UN proper shipping name	
ADR	1188 ETHYLENE GLYCOL MONOMETHYL ETHER solution
IMDG, IATA	ETHYLENE GLYCOL MONOMETHYL ETHER solution
14.3 Transport hazard class(es)	
ADR	

Class	3 (F1) Flammable liquids.
Label	3

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Trade name: PermaBlue™/HRP Component 1

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IMDG, IATA

Class	3 Flammable liquids.
Label	3
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable liquids.
Kemler Number:	30
EMS Number:	F-E,S-D
Stowage Category	A
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered. THESE TRANSPORT REGULATIONS APPLY TO THE WHOLE PACKAGE!
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1188 ETHYLENE GLYCOL MONOMETHYL ETHER SOLUTION, 3, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008 See Section 2.
Hazard pictograms See Section 2.
Signal word See Section 2.

Hazard-determining components of labelling: See Section 2.
Hazard statements See Section 2.
Precautionary statements See Section 2.
Chemical safety assessment A chemical safety assessment was not carried out.

Directive 2012/18/EU
Named dangerous substances - ANNEX I Contains none of the listed substances.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

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Trade name: PermaBlue™/HRP Component 1

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Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 30

National regulations

Information about limitation of use:
Take note of the directive on the protection of young people at work in the latest version.
Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Class	Share in %
NK	99.0

Water hazard class: Void.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57	
109-86-4	2-methoxyethanol

15.2 Chemical safety assessment: A chemical safety assessment has not been carried out.

SECTION 16: Other information

All information and recommodations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

Relevant phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H360FD May damage fertility. May damage the unborn child.

Department issuing data specification sheet: Product Safety
Contact: productsafety@medac.de
Replaces version from: -
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Repr. 1B: Reproductive toxicity – Category 1B

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.08.2018 Version number 2 Revision: 01.08.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: PermaBlue™/HRP Component 2

Article number: K063B Comp2
Registration number
This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses:
For in vitro diagnosis.
Uses advised against:
No further relevant information available.
Sector of Use SU20 Health services
Product category PC21 Laboratory chemicals
Process category PROC15 Use as laboratory reagent
Application of the substance / the mixture Immunochemical reagent for detection / auxiliary reagent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor:
Manufacturer:
Diagnostic BioSystems
6616 Owens Drive
Pleasanton, CA 94588, USA phone: +1 925 484-3350

Distributor:
medac GmbH
Theaterstrasse 6
22880 Wedel, Germany phone: +49 4103 8006-0
Informing department:
Product Safety
productsafety@medac.de

1.4 Emergency telephone number:

Giftinformationszentrum-Nord, Phone: +49 551 19 240 (service in German and English, 24 hours permanently accessible).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Repr. 1B H360FD May damage fertility. May damage the unborn child.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labeled in accordance with Regulation (EC) No 1272/2008 (GHS/CLP).

Hazard pictograms

GHS08

Signal word Danger

Hazard-determining components of labelling:
2-methoxyethanol

Hazard statements
H360FD May damage fertility. May damage the unborn child.

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Trade name: PermaBlue™/HRP Component 2

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Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.

Additional information: Restricted to professional users.
Labelling of packages where the contents do not exceed 125 ml
Hazard pictograms

GHS08

Signal word Danger

Hazard-determining components of labelling:
2-methoxyethanol
Hazard statements
H360FD May damage fertility. May damage the unborn child.
Precautionary statements
Restricted to professional users.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.
vPvB: Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures Not applicable. Product is a substance.
Description: Immunochemical reagent / auxiliary reagent

Dangerous components:		
CAS: 109-86-4 EINECS: 203-713-7 Index number: 603-011-00-4 RTECS: KL 5775000	2-methoxyethanol Flam. Liq. 3, H226 Repr. 1B, H360FD Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	< 20%

SVHC	
109-86-4	2-methoxyethanol

Additional information For the wording of the listed H-phrases please refer to Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information First aider: Take care of self-protection.
After inhalation Supply fresh air; consult doctor in case of symptoms.
After skin contact
Remove contaminated clothes.
Instantly wash with cupious amounts of water.
In case of symptoms call a physician.
After eye contact
Rinse eyes cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
In case of onset of symptoms consult ophthalmologist.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.08.2018 Version number 2 Revision: 01.08.2018

Trade name: PermaBlue™/HRP Component 2

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After swallowing
Let rinse out mouth and then drink plenty of water.
In case of symptoms call a physician.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge both acute and delayed symptoms and effects due to improper handling of this preparation have not been investigated.
Information for doctor
Show Safety Data Sheet.
Treatment according to symptoms.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents Product itself does not burn. Use fire fighting measures that suit the environment.
For safety reasons unsuitable extinguishing agents For this mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
In the event of fire, development of dangerous fumes or vapours is possible.
In the event of fire may develop:
Carbon monoxide (CO)
Carbon dioxide (CO_2)
Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment:
In case of fire of large quantities:
Stay in the danger area only with self-contained breathing apparatus.
Prevent skin and eye contact by keeping a safe distance or by wearing suitable protective clothing/safety glasses.
Additional information
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel:
Avoid reagent contact with eyes and skin.
Provide sufficient ventilation.
Advice for emergency responders: Protective equipment: see Section 8.

6.2 Environmental precautions: Do not empty into drains.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Afterwards clean with water and cleansing agent.
Dispose of the material collected according to respective national regulations.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Open and handle container with care.
Information about protection against explosions and fires: No special measures required.

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7.2 Conditions for safe storage, including any incompatibilities No further relevant information available.
Storage
Requirements to be met by storerooms and containers:
Store container tightly closed.
Store at +2 °C to +8 °C.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Store in a locked cabinet or with access restricted to technical experts or their assistants.
Storage class See the respective national guidelines.

7.3 Specific end use(s) Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see Section 7.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:	
109-86-4 2-methoxyethanol	
WEL	Long-term value: 3 mg/m³, 1 ppm Sk

DNELs No further relevant information available.
PNECs No further relevant information available.
Additional information: The official lists that were valid during the compilation were used as basis.

8.2 Exposure controls
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See Section 7.
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals.
Avoid contact with the eyes and skin.
Remove contaminated clothing immediately.
Do not eat or drink while working.
Keep away from food and beverages.
Wash hands during breaks and at the end of the work.
Breathing equipment:
Essential if vapours/aerosols develop.
Filter A (according to standard EN 141) for gases and vapours of organic compounds.
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Protection of hands:
Protective gloves (AQL 1.5).
The breakthrough times stated below base on laboratory test methods which cannot fully simulate working conditions. It is the responsibility of the end user to choose the appropriate gloves for his application. If working with substances or mixtures harmful in contact with skin, check the gloves beforehand for holes and fissures.
Material of gloves
Nitrile rubber, NBR
Natural rubber, NR
Thickness 0.11 mm.
The product quality has to comply with DIN EN 455.
Penetration time of glove material Penetration time > 120 min.
For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:
Product has not been designed for permanent contact.
For the permanent contact gloves made of the following materials are suitable:
Product has not been designed for permanent contact.

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For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
Product has not been designed for permanent contact.
As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR
Natural rubber, NR
Thickness: 0.11 mm.
Penetration time > 120 min.
Eye protection: Safety glasses (standard EN 166).
Body protection: Protective work clothing.
Limitation and supervision of exposure into the environment Do not empty into drains.
Risk management measures Void.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information

Appearance:	
Form:	liquid
Colour:	colourless
Smell:	sweetish, ether-like
Odour threshold:	No information available.
Important information on protection of health and environment, and on safety.	No further relevant information available.
pH-value at 20 °C:	7
Change in condition	Not applicable.
Melting point/freezing point:	ca. 0 °C
Initial boiling point and boiling range:	123 °C ca. 100 °C
Flash point:	23 - 60 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	310 °C
Decomposition temperature:	No information available.
Self-inflammability:	Not self-inflammable.
Explosive properties:	Product is not explosive. However, the formation of explosive vapour/air mixtures is possible.
Critical values for explosion:	
Lower:	2.4 Vol %
Upper:	20.6 Vol %
Oxidising properties	Not applicable.
Steam pressure at 20 °C:	8 hPa
Density	Not determined.
Relative density	No information available.
Vapour density	Not determined.
Evaporation rate	No information available.
Solubility in / Miscibility with	
Water:	soluble
Partition coefficient: n-octanol/water:	-0.77 log POW
Viscosity:	
dynamic:	No information available.
kinematic at 20 °C:	1.6 mm² s (DIN 53211/4)
Solvent content:	
Organic solvents:	< 20 %
Water:	> 75 %
Solids content:	< 0.1 %

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9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability The product is chemically stable under the indicated storage conditions.
Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to the specifications.

10.3 Possibility of hazardous reactions No further relevant information available.

10.4 Conditions to avoid: Heating.

10.5 Incompatible materials: For these concentrations no further relevant information available.

10.6 Hazardous decomposition products:
Peroxides.
In case of fire of large quantities: See Section 5.
Additional information: No further relevant information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC_{50} values that are relevant for classification:		
109-86-4 2-methoxyethanol		
Oral	LD_{50}	3400 mg/kg (rat)
Dermal	LD_{50}	2000 mg/kg (rabbit)
Inhalative	LC_{50}/4 h	1500 mg/l (rat)

Specific symptoms in biological assay: No further relevant information available.
Primary irritant effect:
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/irritation Based on available data, the classification criteria are not met.
after swallowing: Harmful if swallowed.
after inhalation: Harmful if inhaled.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Other information (about experimental toxicology): No further relevant information available.
Subacute to chronic toxicity: No further relevant information available.
Additional toxicological information: No further relevant information available.
Toxicokinetics, metabolism and distribution No relevant information available.
Acute effects (acute toxicity, irritation and corrosivity) No acute toxicity information available for this product.
Sensitisation No sensitising effect known.
Repeated dose toxicity No further relevant information available.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity
May damage fertility. May damage the unborn child.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.
Other information: No further relevant information available.
Behaviour in environmental systems:
Components: No relevant information available.

12.3 Bioaccumulative potential
Bioaccumulation is not to be expected.
log Pow: -0,77

12.4 Mobility in soil No relevant information available.
Additional ecological information:
General notes: Void.

12.5 Results of PBT and vPvB assessment
PBT: PBT assessment not available as chemical safety assessment not required/not conducted.
vPvB: vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects No relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product residues have to be disposed of according to the Waste Framework Directive as well as national and regional regulations in each the latest versions.

Uncleaned packagings:
Recommendation: Uncleaned packagings have to be disposed of in the same manner as the product residues.

SECTION 14: Transport information

14.1 UN-Number **ADR, ADN, IMDG, IATA**	-
14.2 UN proper shipping name **ADR, ADN, IMDG, IATA**	-
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA **Class**	-
14.4 Packing group **ADR, IMDG, IATA**	-
14.5 Environmental hazards: **Marine pollutant:**	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	Not classified as dangerous in the meaning of transport regulations as issued in the latest version. The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.

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UN "Model Regulation": -

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008 See Section 2.

Directive 2012/18/EU
Named dangerous substances - ANNEX I Contains none of the listed substances.
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 30

National regulations

Information about limitation of use:
Take note of the directive on the protection of young people at work in the latest version.
Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Class	Share in %
NK	20.0

Water hazard class: Void.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57	
109-86-4	2-methoxyethanol

15.2 Chemical safety assessment: A chemical safety assessment has not been carried out.

SECTION 16: Other information

All information and recommodations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

Relevant phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H360FD May damage fertility. May damage the unborn child.

Department issuing data specification sheet: Product Safety
Contact: productsafety@medac.de
Replaces version from: 18.08.2017
Reason for alteration: General editorial revision.
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern

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vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Repr. 1B: Reproductive toxicity – Category 1B