

MATERIAL SAFETY DATA SHEET

(According to Regulation (EC) No 1907/2006 of the European Parliament as amended by Regulation (EU) No 830/2015)

Date of issue: 11th February 2015

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Date of revision: 5 October 2015

Previous date:

Version: 1.0

Product name:

Bochemit Plus I

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

1.1 Product identifier

Trade name: **Bochemit Plus I**

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

Intended or recommended use of the mixture: A concentrated mixture for wood preservative suitable for treating timber infested with wood decaying insects and providing subsequent preventive protection by wood decaying insects. It is a insecticidal concentrate.

Uses advised against: The product may not be used for protection of wood which should be in direct contact with skin, drinking water, food, feeding and for treatment of wood intended for production of children's furniture and toys.

1.3 Details of the supplier of the safety data sheet

Supplier trade name: BOCHEMIE a.s.
Supplier address: Lidická 326, 735 81 Bohumín, Czech Republic
Company ID: 293 96 824
Phone number / Fax: +420 596 091 111 / +420 596 013 462
e-mail: bochemie@bochemie.cz
e-mail of person responsible for the Safety Data Sheet: MSDS@bochemie.cz

1.4 Emergency telephone number: 224 91 92 93; 224 91 54 02; 224 91 45 71

Toxikologické informační středisko, Na Bojišti 1, 128 08 Praha 2, Czech Republic

SECTION 2: HAZARDS IDENTIFICATION

The product is classified according to Regulation 1272/2008/EC.

2.1 Classification of the substance or mixture

According to Regulation 1272/2008/EC Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

For the full wording of hazard statements see section 16.

The most important adverse physicochemical, human health and environmental effects: The mixture causes serious eye damage, very toxic to aquatic organisms with long lasting effects.

2.2 Label elements

Hazard pictograms:



Signal word: **Danger**

Hazard statements:

H318

Causes serious eye damage.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P102

Keep out of reach of children.

P273

Avoid release to the environment.

P280

Wear protective rubber gloves/protective clothing/eye protection/face protection.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

P501

Dispose of contents/container to danger waste.

Supplemental label elements: EUH208

Contains Permethrine. May produce an allergic reaction.

2.3 Other hazards

The product does not meet the PBT/vPvB criteria according to REACH, annex XIII.

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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not relevant – it is not substance.

3.2 Mixtures

3.2.1 Substances in the mixture

The insecticidal product contains active substance Cypermethrin, Permethrin and other dangerous substances:

Substance name	(%)	CAS ES Index.num. REACH num.	Classification acc. to 1272/2008/EC, CLP
2-(2-butoxyethoxy)ethanol	< 15	112-34-5 203-961-6 603-096-00-8 01-2119475104-44	Eye Irrit. 2; H319
Alcohols, C12-15, branched and linear, ethoxylated	< 15	106232-83-1 - - -	Acute Tox. 4, Eye Dam.1, Aquatic Chronic 3; H302-H318-H412
Cypermethrin	1	52315-07-8 257-842-9 607-421-00-4 -	Acute Tox.4, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H302-H332-H335-H400-H410
Permethrin	0,1	52645-53-1 258-067-9 613-058-00-2 -	Acute Tox.4, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H302-H332-H317-H400-H410
Phosphoric acid	< 1	7664-38-2 231-633-2 015-011-00-6 01-2119485924-24	Met. Corr. 1, Skin Corr.1B H290-H314

For the full wording of hazard statements see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: remove the source of exposure, bring the victim to the fresh air, prevent physical strain (including walk), or seek medical help.

Skin contact: take off contaminated clothing. Wash thoroughly with water and soap (corrosive effect) drape with sterile bandage and seek medical attention.

Eye contact: flush immediately with large amounts of fresh water at least 10 minutes; seek medical attention.

Ingestion: rinse mouth with potable water and leave victim to drink 0.5 L. Do not induce vomiting, seek medical aid.

4.2 Most important symptoms and effects, both acute and delayed

The mixture causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

In case of health problems or should the symptoms persist, always seek medical advice and provide information contained in this MSDS.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable: powder, snow, water spray, use extinguishing media according to the character of the fire.

Unsuitable: do not use water – risk of release to the sewers and environment.

5.2 Special hazards arising from the substance or mixture

In case of fire the product releases toxic gas. Avoid burning products.

5.3 Advice for fire fighters

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In case fires wear full protective clothing, protective gloves and suitable respiratory system protection. In case of release to the sewers act upon emergency plans (capturing and/or diluting with water).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Wear suitable personal protective equipment. Avoid contact with skin and eyes. Do not use the substance in the closed area. Do not eat, drink and smoke when handling the product.

6.1.2 For emergency responders

Wear suitable personal protective equipment. Avoid contact with skin and eyes. Do not use the substance in the closed area. Avoid release to the environment, contact to water attack and dampness.

6.2 Environmental precautions

Avoid release to the sewers, water courses, soil or environment. In case of accidental discharge of large amount of the concentrated product to the surface water, ground water or waste water, notify local authorities according to local regulations (e.g. fire brigade, police, rescue police, water course administrator).

6.3 Methods and material for containment and cleaning up

In case spill the product, use suitable absorbents (special absorbents for aggressive materials or universal absorbents) and put into the labelled lockable container. Avoid accidental discharge into sewers or water courses. In case of accidental discharge into sewers or water courses, dilute the product with sufficient amount of water.

6.4 Reference to other sections

See section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in good ventilated workplace and wear suitable personal protective equipment and avoid contact with other substances (substances of acid character). Avoid excessive contamination of employees. Do NOT eat, drink and smoke when handling the product. Avoid excessive contamination of environment.

7.2 Conditions for safe storage, including any incompatibilities

Store the mixture in original containers. Store in dry and weathering protected areas hedging against potential losses blend into the surroundings and against unauthorized access. Do not store in direct sunlight or near heat sources. Keep away from food, drink, fresh water and feed. Storage temperature: from -15 to + 30°C.

7.3 Specific and use(s)

Important information is provided by material data safety sheet, by instructions on the label or on the web pages by company – Bochemie a.s. (www.bochemie.cz).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Exposure limits values in accordance Regulation of Government No. 361/2007 of Czech Act Collection in last wording.

Substance	CAS	PEL (mg/m ³)	NPK-P (mg/m ³)	Conversion factor to ppm
2-(2-butoxyethoxy)ethanol*	112-34-5	70	100	0.151

* Irritating to mucous membranes (eyes, respiratory system) respectively skin.

8.1.2 Biological limit values

Decree No 432/2003 of Czech Act Collection does not set indication limits of biological exposure tests.

8.1.3 Information monitoring procedures

Monitor the concentration in the workplace according to the provisions of Regulation of Government No. 361/2007 of Czech Act Collection in last wording.

8.1.4 Value of DNEL and PNEC

The values are not determined for mixture.

<i>2-(2-butoxyethoxy)ethanol</i>		
PNEC	fresh water	1 mg/l

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	marine water	0.1 mg/l
	intermittent	3.9 mg/l
	fresh water, sediment	4.0 mg/kg
	marine water, sediment:	0.4 mg/kg
	soil	0.4 mg/kg
	sewerage plant	200 mg/l
DNEL		
Short term exposure: worker (local)	inhalation	7.5 mg/m ³
Long term exposure: worker (systematic)	dermal	10 mg/kg/day
	inhalation	5 mg/m ³
	oral	1.3 mg/kg/day
Long term exposure: worker (local)	inhalation	5 mg/m ³
Short term exposure: consumer (local)	inhalation	15 ppm
Long term exposure: consumer (systematic)	dermal	20 mg/kg/day
	inhalation	10 ppm
Long term exposure: consumer (local)	inhalation	5 ppm

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation/exhaustion at workplace. Do not drink, eat or smoke during the work. Keep usual hygienic rules for handling the product and wear suitable personal protective equipment. Only the personnel familiar with the properties of the product, with handling instructions and principles of personal and environmental protection and wearing personal protective equipment is allowed to handle the product. Contaminated clothes can be reused only after thorough cleanup. Wash hands and face by drinking water and soap and flush mouth with drinking water before eating and at the end of working shift and use protective cream on the skin.

8.2.2 Individual protection measures, such as personal protective equipment

- Eye/face protection:** protective goggles and protective shield if risk of penetration by the mixture into your eyes.
- Skin protection:** protective clothing, closed shoes, treat the exposed skin by cream after washing.
- Hand protection:** wear rubber (latex) gloves.
- Respiratory protection:** ensure suitable aspirators.

8.2.3 Environmental exposure controls

Observe instructions for handling and storage, particularly ensure provisions preventing spill of concentrated mixture into watercourses, soil and sewerage (for further information see Handling Conditions according to Act No 254/2001 of Czech Act Coll., on Waters).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance (°C):	liquid
Colour:	colourless to yellowish
Odour:	slightly aromatic
Odour threshold	slightly aromatic
pH (at 20°C):	cca 2.5-4.0
Melting point:	not estimated
Freezing point:	not estimated
Boiling point:	not estimated
Flash point:	not determined
Evaporation rate:	not determined
Flammability (solid, gas):	not flammable
Upper/lower flammability or explosive limits:	not flammable
Vapour pressure (°C):	not determined
Vapour density:	not determined
Relative density:	0.98 – 1.02
Solubility:	unlimited miscible
Partition coefficient: n-octanol/water:	not determined
Auto-ignition temperature;	not determined

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Decomposition temperature: not estimated
Viscosity: not estimated
Explosive properties: not-explosive
Oxidising properties: does not show oxidising properties

9.2 Other information

VOC – Content of volatile organic compounds: A/e, WB 130 g/l, containe < 130 g/l.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

The mixture reacts with oxidising agents.

10.2 Chemical stability

Stable under normal conditions of usage and storage (keep temperature range for storage).

10.3 Possibility of hazardous reactions

Reaction with acids and strong oxidizing agents, the possibility of a hazardous chemical reaction.

10.4 Conditions to avoid

Avoid raised temperature, long-lasting direct exposure to sun and temperature changes during storage.

10.5 Incompatible materials

Strong oxidising agents and concentrated acids.

10.6 Hazardous decomposition products

Carbon oxides, nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) acute toxicity	Not established for this mixture <u>2-(2-butoxyethoxy)etanol</u> LD50 oral, rat = 5,660 mg/kg LD50 dermal, rabbit = 4,000 mg/kg <u>Cypermethrin</u> LD50 oral, rat = 500 mg/kg LD50 dermal, rabbit > 2000 mg/kg LC50 inhalation, rat = 3.28mg/l/4h <u>Alcohols, C12-15, branched and linear, ethoxylated</u> LD50 oral, rat > 300 – 2000 mg/kg <u>Permethrin</u> LD50 oral, rat = 480 mg/kg/bw LC50 inhalation, rat > 4,638 mg/l
b) skin corrosion/irritation:	The mixture is not classified as corrosive/irritant to skin.
c) serious eye damage/irritation:	The mixture causes serious eye damage.
d) respiratory or skin sensitisation:	Contains Permethrin. May produce an allergic reaction.
e) germ cell mutagenicity:	Criteria for classification are not met based on available data. The mixture is not classified as mutagenic.
f) carcinogenicity:	Criteria for classification are not met based on available data. The mixture is not classified as carcinogenic.
g) reproductive toxicity:	Criteria for classification are not met based on available data. The mixture is not classified as toxic for reproduction.
h) STOT-single exposure:	Criteria for classification are not met based on available data.
i) STOT-repeated exposure:	Criteria for classification are not met based on available data.
j) aspiration hazard:	Criteria for classification are not met based on available data.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Not established for the mixture.

Cypermethrin

Acute toxicity for daphnia

EC50

0.0003 mg/l/48h

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Acute toxicity for fish	LC50	0.0028 mg/l/96 h
Acute toxicity for algae	IC50	> 0.1 mg/l/72h
<u>Permethrin</u>		
Acute toxicity for daphnia	EC50	0.00006 mg/l/48h
Acute toxicity for fish	LC50	0.0051 mg/l/96 h
<u>2-(2-butoxyethoxy)ethanol</u>		
Acute toxicity for fish	LC50	1300 mg/l
Acute toxicity for daphnia	EC50	1150 mg/l
Acute toxicity for microorganisms	EC50	255 mg/l
<u>Alcohols, C12-15, branched and linear, ethoxylated</u>		
Chronic toxicity for daphnia	NOEC	0.17 mg/l/21 day

12.2 Persistence and degradability

Other components of product are gradually degradable in the environment.

Permethrin, Cypermethrin

Hardly biodegradable.

12.3 Bioaccumulative potential

Not established for the mixture.

2-(2-butoxyethoxy)ethanol

Bioconcentration potential is low (BCF less than 100 or Log Pow < 3).

Permethrin

Bioaccumulative potential is high (BCF 570, log Pow 6.1)

12.4 Mobility in soil

Not established for the mixture.

2-(2-butoxyethoxy)ethanol

Potential for mobility in soil is very high (Poc between 0 and 50).

Henry constant: 1.52 E-9 atm* m³/mol, 25°C assessed.

Partition coefficient, n-octanol/water (log Pow): 0.56 Measured.

Partition coefficient, soil organic carbon / water (Koc): 2 Estimated.

Permethrin

Partition coefficient, soil organic carbon / water (Koc): 25,500 – 404,400.

12.5 Results of PBT and vPvB assessment

The product does not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects

Toxicity for other environment was not determined. This product can be dangerous for the environment in case of discharge of large amounts of this product.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

a) Recommended Methods of Substance and Contaminated Packaging Disposal:

It is dangerous waste. Personal protective equipment should be used and provisions to be applied when handling and collecting wastes regarding protection of waste spill into environment. Waste hand over to specialized competent company, if need be hand over within the framework of dangerous waste collection in your community. Dispose of potential residuals of the preparation as hazardous waste.

b) Physical/chemical properties that may affect waste treatment options

Avoid contact with acids and strong oxidising and reducing agents and ammonia. Avoid raised temperature, long-lasting direct exposure to sun and temperature changes during storage.

c) Sewage disposal shall be discouraged

Waste should not be disposed of by release to sewers.

d) Special precautions for any recommended waste treatment

Suggestion of waste classification:		
subgroup	03 02	wastes from wood preservation
	03 02 05*	other wood preservatives containing dangerous

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		substances
Suggestion of waste container classification:		
Containers with residues of the mixture	15 01 10*	packaging containing residues of or contaminated by dangerous substances

Waste Legal Regulations:

Directive 2008/98/EC on waste and repealing certain Directives. If this mixture and its packaging become waste, the last user has to assign relevant waste code – European Waste Code (EWC code) according to Commission Decision (2000/532/EC).

SECTION 14: TRANSPORT INFORMATION

	(ADR/RID/GGVSE)	IMDG
14.1 UN Number:	UN 3082	UN 3082
14.2 UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (butoxydiglykol, alcohols, ethoxylated)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (butoxydiglykol, alcohols, ethoxylated)
14.3 Transport hazard class(es):	9	9
14.4 Packing group:	III	III
14.5 Environmental hazards:	YES	YES
14.6 Special precautions for user:	--	--
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	--	--
Other information:	Danger code (Kemler): 90 Limited quantities (LQ): 5L	Danger code (Kemler): 90 Limited quantities (LQ): 5L

SECTION 15: REGULATORY INFORMATION

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

Legislation regulating individual issues of the environmental protection and occupational hygiene conditions.
 Regulation No. 1907/2006 (REACH).
 Regulation No 1272/2008/ES (CLP)
 Regulation (EU) No. 528/2012 concerning the making available on the market and use of biocidal products.

15.2 Chemical safety assessment

A chemical Safety assessment was not carried out for the mixture.

SECTION 16: OTHER INFORMATION

a) Changes during Revision of the MSDS

Version 1.0 – correction of supplier information and other changes according to Reg. 830/2015/EU.

The changed sections are indicated with bold line:

b) A key or legend to abbreviations and acronyms used

Met. Corr.1	Corrosive to metals
Acute Tox. 4	Acute toxicity of cat. 4
Eye Irrit.2	Eye irritation, category 2
Eye Dam. 1	Serious eye damage cat. 1
Skin Corr. 1B	Skin corrosion of cat. 1B
Skin Sens. 1	Skin sensitization cat.1
STOT SE 3	Specific target organ toxicity (single exposure), category 3
Aquatic Acute 1	Hazardous to the aquatic environment of cat. 1
Aquatic Chronic 1,3	Hazardous to the aquatic environment cat. 1, 3
LC50	Lethal concentration, 50 percent
EC50	Effective Concentration, 50 percent
LD50	Lethal dose, 50 percent

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IC50	Half maximal inhibitory concentration
NPK-P	Maximum Permissible Concentration
PEL	Permissible Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
DNEL	Derived no-effect level
NOEC	No observed adverse effect concentration
vPvB	Very Persistent and Very Bioaccumulative
WB	Water Based

c) Key literature references and sources for data

Information contained herein is based on our best knowledge and current legislation, according to Reg. 1272/2008/EC. Further, this Material Safety Data Sheet was elaborated on grounds of information provided by suppliers of particular components of the mixture. The MSDS contains information needed for security of safety and occupational health protection and the environmental protection. The mentioned information refers to present state of knowledge and experience and is in accordance with legislation in force. It cannot be considered warrantee of suitability or usability of the product for particular application.

d) The methods of evaluating information

The mixture was classified according to additive method described in Regulation 1272/2008/EC.

e) List of relevant hazard statements

H 290	May be corrosive to metals.
H 302	Harmful if swallowed.
H 314	Causes severe skin burns and eye damage.
H 317	May cause an allergic skin reaction.
H 318	Causes serious eye damage.
H 319	Causes serious eye irritation
H 332	Harmful if inhaled.
H 335	May cause respiratory irritation
H 400	Very toxic to aquatic life.
H 410	Very toxic to aquatic life with long lasting effects.
H 412	Harmful to aquatic life with long lasting effects.

f) Instructions for Training

Personnel handling the preparation must be instructed about manipulation risks and on requirements for health and environmental protection (relevant provisions of the Labor Code as amended) and further, they must be demonstrably familiarized with dangerous properties, occupational health and environmental protection principles and first aid measures (Act No. 258/2000 Coll. on public health protection as amended).

g) Recommended Use Limitations:

The mixture should not be used for any other purpose than determined (see Section 1.2). As specific conditions of use of the substance are beyond control of the supplier, the user is the only responsible to adapt the information and warnings contained herein to local legislation and regulations. The safety information describes the product from perspective of its safety and it cannot be deemed technical specifications of the product.