

# PERI Bio Clean

## Concrete release agent

Translation of the Original Instructions for Use - Issue 06/2018



## Overview

### Product description

PERI Bio Clean

- is a semi-synthetic, non-water miscible concrete release agent,
- is solvent and mineral oil-free
- is free of hydrocarbons,
- is economical to use, therefore it is particularly cost-effective,
- is easily biologically degradable and is Blue Angel-certified according to RAL-UZ 178,
- has de-watering properties,
- is free of silicone and waxes.

Typical characteristic values		
		Standard/Guideline
Physical state	liquid	
Colour	yellow, clear	
Odour	characteristic	
Pour point	> -12 °C	DIN ISO 3016
Flash point	> 160 °C	DIN EN ISO 2592
Density - at 15 °C	0,89 g/cm <sup>3</sup>	DIN EN ISO 12185
Water solubility	insoluble	
Kin. viscosity at - 20 °C	14,5 mm <sup>2</sup> /s	ASTM D 7042
Water hazard class	WHC 1 - slightly hazardous to water	Legal regulation
Working temperature	0°C to 60 °C	
GISCODE/Product Code	BTM 10	

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## Key

### Pictogram | Definition



Danger / Warning / Caution



Note



To be complied with



Tip



Safety gloves



Safety glasses



Protective clothing



Protective mask

### Dimension specifications

Dimensions are usually given in cm. Other measurement units, e.g. mm, are shown in the illustrations.

Load details are usually given in kg. Other measurement units, e.g. t, are shown in the illustrations.

### Conventions

- Instructions are numbered with:  
1. ...., 2. ...., 3. ....
- The result of an instruction is shown by: →

## Safety Instructions

### Safety instruction categories

The safety instructions alert site personnel to the risks involved and provide information on how to avoid these risks. Safety instructions are featured at the beginning of the section or ahead of the instructions, and are highlighted as follows:



#### **DANGER**

This sign indicates an extremely hazardous situation which, if not avoided, will result in death or serious injury.



#### **WARNING**

This sign indicates a hazardous situation which, if not avoided, could result in death or serious injury.



#### **CAUTION**

This sign indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



#### **INFORMATION**

This sign indicates warning of situations whereby failure to observe the information can result in material damage.

### Set-up of the safety instructions



#### **SIGNAL WORD**

Type and source of the danger!  
Consequences of non-compliance.  
⇒ Avoidance measures

## Safety Instructions

### General

When using PERI Bio Clean, the Instructions for Use are to be complied with at all times!

Without exception, all current safety regulations and guidelines valid in those countries where our products are used and inspected must be observed; see also the Safety Data Sheet in the appendix.

The contractor must ensure that the Instructions for Use provided by PERI are available at all times for the users and that they are fully understood!

The contractor can only assign those persons to independently use the concrete release agent who are actually familiar with the task!

The PERI Bio Clean concrete release agent is to be used as intended so that persons are never put at risk in any way, e.g. observe the wind direction!

### Personal protective equipment

The contractor must ensure that the required personal protective equipment (PPE) is available and used as intended. The PPE consists of:



Safety gloves



Safety glasses



Protective clothing



Protective mask

For more specific information on the PPE, refer to the Safety Data Sheet, Section 8, in the appendix.

## Safety Instructions

### Product-specific

When complying with the general rules of occupational safety and industrial hygiene, this product poses no risk to the health of the personnel using it.

### Fire-fighting measures



#### **DANGER**

If a fire should break out, hazardous decomposition products such as carbon monoxide and carbon dioxide are produced.

Do not inhale explosion or combustion gases.

⇒ Wear an ambient condition-independent respirator.

For more information on fire fighting, see Safety Data Sheet, Section 5, in the appendix.

## Intended use

PERI products have been designed for exclusive use in the industrial and commercial sectors by suitably trained personnel only!

PERI Bio Clean is used as a concrete release agent.

PERI Bio Clean is suitable for use on

- commercially available formwork and construction site equipment,
- heated formwork,
- non or moderately absorbent formlining, e.g. formwork panels coated with phenolic resin,
- all-plastic panels,
- plastic-coated formlining.

## Instructions on use

The use in a way not intended or deviating from the intended use according to the Instructions for Use represents a misapplication with a potential safety risk.

Changes to PERI components are not permitted.

Only PERI original components may be used. The use of other products and spare parts represents a misapplication with associated safety risks.

Before being used for the first time, spray the side surfaces and the frame side of the formwork panels with concrete release agent.

Formlining is sprayed immediately after striking. PERI Bio Clean prevents the adhesion of concrete to the forming surface and thereby reduces cleaning requirements.

If used correctly, any subsequent processing of the concrete surfaces through plastering, wallpaper, paint and ceramic is not adversely affected.

PERI Bio Clean is supplied ready-to-use in 20 l plastic canisters or 208 l metal drums.

Use a suitable pumping system to extract PERI Bio-Clean from the 208 l metal drum.

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## Additional technical documentation

- Instructions for Use:
  - PERI Clean
  - PERI Plasto Clean
  - Release agent pressure sprayer

## Target groups

### Contractors

These Instructions for Use are intended for contractors who either

- assemble, modify and dismantle the PERI products, or
- use them, e.g. for concreting, or
- who have them used, e.g. for forming operations.

### Construction site coordinator

The Safety and Health Protection Coordinator\*

- is appointed by the client,
- must identify potential hazards during the planning phase,
- determines measures that provide protection against risks,
- creates a safety and health plan,
- coordinates the protective measures for the contractor and site personnel so that they do not endanger each other,
- monitors compliance with the protective measures.

### Competent personnel

Due to the specialist knowledge gained from professional training, work experience, and recent professional activity, the competent person has a reliable understanding of safety-related issues and can correctly carry out inspections. Depending on the complexity of the test to be undertaken, e.g. scope of testing, type of testing or the use of certain measuring devices, a range of specialist knowledge is necessary.



- **In other countries, ensure that the relevant national guidelines and regulations in the respective current version are complied with!**
- **If no country-specific regulations are available, it is recommended to proceed according to German guidelines and regulations.**

\* Valid in Germany: Regulations for Occupational Health and Safety on Construction Sites 30 (RAB 30).

## Qualified persons

PERI products may only be assembled, modified or dismantled by personnel who are suitably qualified to do so. For the work to be carried out, the qualified persons must have received instructions\*\* covering at least the following points:

- Explanation of the plan for the assembly, modification or dismantling of the PERI product in an understandable form and language.
- Description of measures in order to safely assemble, modify or dismantle the PERI product.
- Designation of the preventive measures to avoid the risk of persons and objects falling.
- Designation of the safety precautions in the event of changing weather conditions which could adversely affect the safety of the PERI product concerned as well as the personnel.
- Details regarding the permissible loads.
- Description of any other risks that are associated with the assembly, modification or dismantling procedures.

\*\* Instructions are given by the contractor himself or a competent person selected by him.

## Apply using a release agent pressure sprayer



### **DANGER**

May be fatal if swallowed and if it enters the respiratory tract.

If swallowed, immediately call the local poison control centre or doctor.

Do NOT induce vomiting.

⇒ Only work with PPE.



### **INFORMATION**

Guide value for application quantity depending on the type of formlining: 20 g/m<sup>2</sup>.

Used in excess, this can lead to spotting, powdering and sanding of the concrete surface.



- When using a release agent pressure sprayer, the PERI Bio Clean concrete release agent may only be used outside, e.g. on the construction site.
- Wear personal protective equipment. The PPE consists of:
  - safety glasses
  - safety gloves
  - protective clothing
  - protective mask
- Carefully open the container.
- Working pressure of the release agent pressure sprayer: approx. 3 bar.
- For instructions on how to use the release agent pressure sprayer, see the Instructions for Use supplied by the manufacturer.
- The PERI Bio Clean concrete release agent can also be applied by hand outside. We would advise against doing this because uniform distribution is very difficult.



To ensure the release agent is evenly distributed over the formlining, we recommend applying the release agent to a horizontally-positioned formwork panel. (Fig. 01)

## Application

1. Apply concrete release agent thinly and evenly by means of the flat spray nozzle attached to the release agent pressure sprayer.
2. With a standard rubber scraper, z. B. pull-off edge, remove any surplus concrete release agent.
3. Wipe the formlining, z. B. with a cloth.

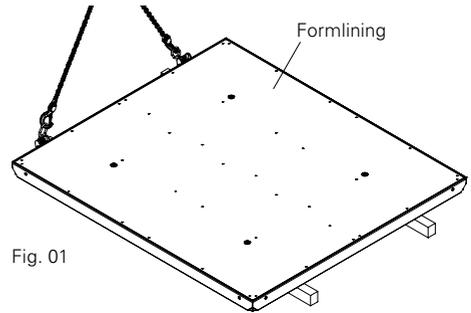


Fig. 01

## Application by hand

Alternatively, the release agent can be applied by hand using the following:

- brush
- roller
- cloth



### **DANGER**

May be fatal if swallowed and if it enters the respiratory tract.

If swallowed, immediately call the local poison control centre or doctor.

Do NOT induce vomiting.

⇒ Only work with PPE.



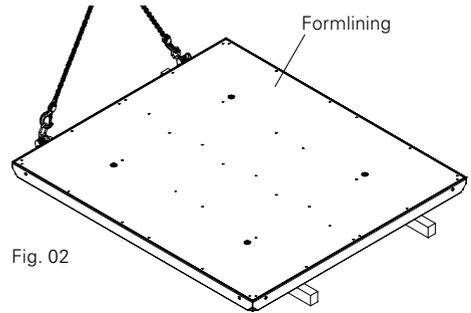
- When used inside, e.g. in closed rooms or halls, PERI Bio Clean concrete release agent may only be applied by hand - not using the release agent pressure sprayer.
- Wear personal protective equipment. The PPE consists of:
  - safety glasses
  - safety gloves
  - protective clothing
  - protective mask
- Guide value for application quantity depending on the type of formlining: 20 g/m<sup>2</sup>. Used in excess, this can lead to spotting, powdering and sanding of the concrete surface.



To ensure the release agent is distributed evenly over the formlining, we recommend applying the release agent to a horizontally-positioned formwork panel. (Fig. 02)

## Application

1. Apply the concrete release agent thinly and evenly using a brush, roller or cloth.
2. With a standard rubber scraper, z. B. pull-off edge, remove any surplus concrete release agent.
3. Wipe the formlining, z. B. with a cloth.



## Storage



- Storage class: 10 - according to TRGS 510.
- Storage period: 36 months.
- Storage temperature: > 0 °C.

Keep the container tightly closed and store in a cool, well-ventilated place.

Protect container against:

- frost
- heat
- direct sunlight

## Transportation



It is not a hazardous material as defined in the transport regulations for agriculture (ADR), maritime (IMDG) and air transport (ICAO).

See also the Safety Data Sheet, Section 14, in the appendix.

During the moving procedure with the crane, ensure that containers are picked up and set down so that any unintentional falling over, falling apart, sliding, falling to the ground or rolling is avoided.

## Disposal



Water hazard class: WHC 1 - slightly hazardous to water.

Concrete release agent must not be discharged into:

- the sewer system,
- bodies of water,
- underground / soil.

For more information on the correct disposal, see Safety Data Sheet, Section 13, in the appendix.



Item no.	Weight kg		
031440	0,86	<b>PERI Bio Clean</b>	<b>Note</b> Follow Instructions for Use!
031455	0,86	<b>PERI Bio Clean, 20 L</b>	
		<b>PERI Bio Clean, 208 L</b>	
<p>Biologically easily decomposable concrete release agent on a semi-synthetic basis. Can be used on formwork and equipment. Water Hazard Class: WHC 1.</p>			



104890	4,700	<b>Release agent pressure sprayer</b>	<b>Complete with</b>
		For evenly spraying formlining surfaces with PERI Clean, PERI Bio Clean or PERI Plasto Clean.	<ul style="list-style-type: none"> <li>1 x 117019 Flat Spray Nozzle</li> <li>1 x 117017 Spiral Hose 2.5 m</li> <li>1 x 117015 Shut-Off Valve</li> <li>1 x 031526 Sealing Kit</li> <li>1 x 117016 Air Pump</li> </ul>



**Note**  
Follow Instructions for Use!

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26.03.2018

**PERI Bio Clean**

**Article No: 031440/20L; 031455/208L**

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

### 1.1. Product identifier

PERI Bio Clean Article No: 031440/20L; 031455/208L

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

#### Use of the substance/mixture

Separating agent

### 1.3. Details of the supplier of the safety data sheet

Company name:	Zeller+Gmelin GmbH & Co. KG	
Street:	Schlossstr. 20	
Place:	D-73054 Eisingen	
Telephone:	+49 (0) 7161 / 802-0	Telefax: +49 (0) 7161 / 802-290
e-mail:	info@zeller-gmelin.de	
Contact person:	Uwe Allmendinger	Telephone: +49 (0) 7161 / 802-297
e-mail:	produksicherheit@zeller-gmelin.de	
Internet:	www.zeller-gmelin.de	
Responsible Department:	Produktsicherheit / Product Safety	

### 1.4. Emergency telephone number:

Germany: +49 (0) 7161 / 802-400  
In England and Wales: NHS Direct: 0845 4647 or 111 In Scotland: NHS 24 - 08454 24 24 24 In Republic of Ireland: 01 809 2166

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No. 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

### 2.2. Label elements

### 2.3. Other hazards

Results of PBT and vPvB assessment: not applicable.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Ester-based mixture.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Remove contaminated, saturated clothing immediately.

#### After inhalation

Remove casualty to fresh air and keep warm and at rest.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Let water be drunk in little sips (dilution effect). Call a physician immediately. Do NOT induce vomiting.

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**4.2. Most important symptoms and effects, both acute and delayed**

When in doubt or if symptoms are observed, get medical advice.

**4.3. Indication of any immediate medical attention and special treatment needed**

No information available.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

Full water jet.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Do not inhale explosion and combustion gases.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Do not allow to enter into soil/subsoil.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

See protective measures under point 7 and 8.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Clean contaminated articles and floor according to the environmental legislation.

**6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

See protective measures under point 7 and 8.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Use personal protection equipment. Do not eat, drink or smoke when using this product. Provide fresh air. Handle and open container with care. Conditions to avoid: generation/formation of aerosols.

**Advice on protection against fire and explosion**

No special measures are necessary.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Protect against: Frost. Keep away from heat. Protect against direct sunlight. Keep container tightly closed in a cool, well-ventilated place.

**7.3. Specific end use(s)**

Observe technical data sheet.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**8.2. Exposure controls**

**Appropriate engineering controls**

See chapter 7. No additional measures necessary.

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**Protective and hygiene measures**

When using do not eat, drink, smoke, sniff.

**Eye/face protection**

Eye glasses with side protection.

**Hand protection**

Wear suitable gloves. Recommended glove articles: DIN EN 374. Suitable material: NBR (Nitrile rubber). Breakthrough time (maximum wearing time): > 480 min (Thickness of the glove material: 0.4 mm). Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

**Skin protection**

Protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used. Suitable respiratory protection apparatus: Filtering Half-face mask (DIN EN 149), e.g. FFA P / FFP3.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	yellow, clear	
Odour:	characteristic	
		<b>Test method</b>
pH-Value:		not applicable
<b>Changes in the physical state</b>		
Melting point:		not determined
Initial boiling point and boiling range:		not determined
Pour point:		-12 °C DIN ISO 3016
Flash point:		> 160 °C
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Ignition temperature:		not determined
Decomposition temperature:		No information available.
Vapour pressure:		not determined
Density (at 15 °C):		0,89 g/cm³ DIN EN ISO 12185
Water solubility:		insoluble
Partition coefficient:		not determined
Viscosity / dynamic:		not determined
Viscosity / kinematic: (at 20 °C)		14,5 mm²/s ASTM D 7042
Flow time:		not determined
Vapour density:		not determined
Evaporation rate:		not determined

**9.2. Other information**

No information available.

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

No information available.

### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

No information available.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### **Acute toxicity**

Based on available data, the classification criteria are not met.

#### **Irritation and corrosivity**

Based on available data, the classification criteria are not met.

#### **Sensitising effects**

Based on available data, the classification criteria are not met.

#### **Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

#### **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.

#### **Practical experience**

#### **Other observations**

Keeping to the general worker's protection rules and the industrial hygienics, there is no risk in handling this product through the personnel.

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the mixture itself.

### 12.2. Persistence and degradability

Biodegradation: 80-90% (By analogy.; Method: OECD 301 B; Test duration: 28 d)  
evaluation: The product is: Readily biodegradable (according to OECD criteria).

### 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.

#### Waste disposal number of waste from residues/unused products

130207 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; readily biodegradable engine, gear and lubricating oils; hazardous waste

#### Contaminated packaging

Non-contaminated packages may be recycled. Consult the appropriate local waste disposal expert about waste disposal.

## SECTION 14: Transport information

### Land transport (ADR/RID)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.
Marine pollutant:	NO

### Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user

No data available

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

## SECTION 15: Regulatory information

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

#### EU regulatory information

2010/75/EU (VOC):	0 %
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

#### National regulatory information

Water contaminating class (D):	1 - slightly water contaminating
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### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.



**Safety Data Sheet**  
according to Regulation (EC) No 1907/2006

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**SECTION 16: Other information****Abbreviations and acronyms**

ADR: Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 CAS: Chemical Abstracts Service (a division of the American Chemical Society)  
 DNEL/DMEL: Derived No-Effect Level / Derived Minimal Effect Level  
 PNEC: Predicted No Effect Concentration  
 WEL (UK): Workplace Exposure Limits  
 TWA (EC): Time-Weighted Average  
 STEL (EC): Short Term Exposure Limit  
 ATE: Acute Toxicity Estimate  
 LD50: Lethal Dose, 50% (median lethal dose)  
 LC50: Lethal Concentration, 50% (median lethal concentration)  
 EC50: half maximal Effective Concentration  
 ErC50: EC50 in terms of reduction of growth rate  
 AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen  
 VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

**Further Information**

Safety Data Sheet according to COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

**The optimal  
System for every  
Project and every  
Requirement**



**Wall Formwork**



**Column Formwork**



**Slab Formwork**



**Climbing System**



**Bridge Formwork**



**Tunnel Formwork**



**Shoring Systems**



**Construction Scaffold**



**Facade Scaffold**



**Industrial Scaffold**



**Access**



**Protection Scaffold**



**Safety Systems**



**System-Independent  
Accessories**



**Services**



**PERI GmbH**  
**Formwork Scaffolding Engineering**  
 Rudolf-Diesel-Strasse 19  
 89264 Weissenhorn  
 Germany  
 Tel. +49 (0)7309.950-0  
 Fax +49 (0)7309.951-0  
 info@peri.com  
 www.peri.com

