

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : POOLSAN CS  
Product code : 64447  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Consumer use, Professional use  
Function or use category : Water treatment chemicals

##### 1.2.2. Uses advised against

No additional information available

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

Bio Services International  
Jagershoek 13  
8570 Vichte - Belgique-Belgie  
T 00.32.56.77.24.34 Ma-Vr 8-12u /13-17u - F 00.32.56.77.24.35  
[regulatory@bsi-products.com](mailto:regulatory@bsi-products.com) - [www.bsi-products.com](http://www.bsi-products.com)

#### 1.4. Emergency telephone number

Emergency number : B 0032.70.245.245//F 0033.(0)383 22 50 50//0033.(0)1.40.05.48.48//N 003130 274 8888.

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1 H290  
Skin corrosion/irritation, Category 1 H314  
Serious eye damage/eye irritation, Category 1 H318  
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400  
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



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	GHS05	GHS09
Signal word (CLP)	: Danger	
Contains	: copper sulphate pentahydrate; hydrogen chloride	
Hazard statements (CLP)	: H290 - May be corrosive to metals. H314 - Causes severe skin burns and eye damage. H410 - Very toxic to aquatic life with long lasting effects.	
Precautionary statements (CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P103 - Read label before use. P234 - Keep only in original container. P260 - Do not breathe fume. P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective clothing, protective gloves. P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor/physician. P363 - Wash contaminated clothing before reuse. P390 - Absorb spillage to prevent material damage. P391 - Collect spillage. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.	
Child-resistant fastening	: Applicable	
Tactile warning	: Applicable	

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
copper sulphate pentahydrate	(CAS-No.) 7758-99-8 (EC-No.) 231-847-6 (EC Index-No.) 029-023-00-4	10 – 50	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
hydrogen chloride	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-00-2	1 – 10	Press. Gas Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314
ZINC	(CAS-No.) 7440-66-6 (EC-No.) 231-175-3 (EC Index-No.) 030-001-00-1	< 5	Water-react. 1, H260 Pyr. Sol. 1, H250 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1 (REACH-no) 01-2119487297-23	< 5	Ox. Liq. 2, H272 Skin Corr. 1A, H314 Eye Dam. 1, H318 Acute Tox. 1 (Inhalation), H330 Met. Corr. 1, H290

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### Specific concentration limits:

Name	Product identifier	Specific concentration limits
Nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1 (REACH-no) 01-2119487297-23	( 5 ≤C < 20) Skin Corr. 1B, H314 ( 20 ≤C < 100) Skin Corr. 1A, H314 ( 65 <C < 99) Ox. Liq. 3, H272 ( 99 ≤C < 100) Ox. Liq. 2, H272

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, spray.
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#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Avoid release to the environment.

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

- For containment : Collect spillage.  
Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, spray, vapours. Wear personal protective equipment.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

- Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.  
Incompatible materials : Metals.  
Packaging materials : Do not store in corrodable metal.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Nitric acid (7697-37-2)

#### Netherlands - Occupational Exposure Limits

Grenswaarde TGG 8H (mg/m <sup>3</sup> )	0 mg/m <sup>3</sup>
Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	1.3 mg/m <sup>3</sup>

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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### Personal protective equipment symbol(s):



### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: clear. Blue.
Odour	: No data available
Odour threshold	: No data available
pH	: 0.4
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 100 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.169 g/ml
Solubility	: completely miscible.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 1.27 mm <sup>2</sup> /s CIPAC MT 22.1 OECD N° 114
Viscosity, dynamic	: 1.48 cP CIPAC MT 22.1 OECD N° 114
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content : 0 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with (some) halogens.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts with (some) halogens.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

metals. Strong acids. Strong bases. Oxidizing agent. Halogens.

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### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### ZINC (7440-66-6)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 inhalation rat (mg/l)	> 5.41 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

#### Nitric acid (7697-37-2)

LC50 inhalation rat (Dust/Mist - mg/l/4h)	6603 mg/l
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Skin corrosion/irritation : Causes severe skin burns.  
pH: 0.4  
Serious eye damage/irritation : Causes serious eye damage.  
pH: 0.4  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

#### ZINC (7440-66-6)

NOAEL (oral, rat, 90 days)	31.52 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
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Aspiration hazard : Not classified

### POOLSAN CS

Viscosity, kinematic	1.27 mm <sup>2</sup> /s CIPAC MT 22.1 OECD N° 114
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.  
Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.  
Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

#### Nitric acid (7697-37-2)

LC50 fish 1	72 mg/l
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EC50 other aquatic organisms 1	33 mg/l waterflea
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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### Nitric acid (7697-37-2)

Partition coefficient n-octanol/water (Log Pow)	-2.3
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
European List of Waste (LoW) code : 06 03 13\* - solid salts and solutions containing heavy metals

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 1903	UN 1903	UN 1903	UN 1903	UN 1903
<b>14.2. UN proper shipping name</b>				
DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid)	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid)	Disinfectant, liquid, corrosive, n.o.s. (hydrogen chloride ; Nitric acid)	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid)	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid)
<b>Transport document description</b>				
UN 1903 DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid), 8, II, (E), ENVIRONMENTALLY HAZARDOUS	UN 1903 DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid), 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1903 Disinfectant, liquid, corrosive, n.o.s. (hydrogen chloride ; Nitric acid), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 1903 DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 1903 DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (hydrogen chloride ; Nitric acid), 8, II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8

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### 14.4. Packing group

II	II	II	II	II
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### 14.5. Environmental hazards

Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
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No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : C9  
Special provisions (ADR) : 274  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P001, IBC02  
Mixed packing provisions (ADR) : MP15  
Tank code (ADR) : L4BN  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 2X  
APP code : B

#### Transport by sea

Special provisions (IMDG) : 274  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B  
Stowage category (IMDG) : B  
Properties and observations (IMDG) : A wide variety of corrosive liquids. Causes burns to skin, eyes and mucous membranes.

#### Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A3, A803  
ERG code (IATA) : 8L

#### Inland waterway transport

Classification code (ADN) : C9  
Special provisions (ADN) : 274  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

#### Rail transport

Classification code (RID) : C9  
Special provisions (RID) : 274  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02  
Mixed packing provisions (RID) : MP15

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Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 80

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on
3(a)	Nitric acid
3(b)	Nitric acid
3(c)	POOLSAN CS
3.	POOLSAN CS

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 0 %

#### 15.1.2. National regulations

##### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

#### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

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BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Full text of H- and EUH-statements:	
Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Ox. Liq. 3	Oxidising Liquids, Category 3
Press. Gas	Gases under pressure
Pyr. Sol. 1	Pyrophoric Solids, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Water-react. 1	Substances and Mixtures which, in contact with water, emit flammable gases, Category 1
H250	Catches fire spontaneously if exposed to air.

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H260	In contact with water releases flammable gases which may ignite spontaneously.
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.