

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond 4kR

Revision date: 02.05.2018

Product code: 19

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SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

GermanBond 4kR

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

Manufacture of rubber products , Adhesives, sealants, Plating agent

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	germanBelt GmbH	
Street:	Carl-Vollrath-Str. 8	
Place:	D-07422 Bad Blankenburg	
Telephone:	+49 (0)36741 / 5680-0	Telefax: +49 (0)36741 / 5680-70
e-mail:	sales@germanbelt.de	

1.4. Emergency telephone number:

Giftnotruf England: +44 (171) 635 91 91, Giftnotruf England: +44 (171) 635 91 91, Giftnotruf Norwegen: +47 (22) 591 300,

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Very toxic to aquatic life with long lasting effects.

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling

ethyl acetate, cyclohexane

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

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Precautionary statements

P403+P235	Store in a well-ventilated place. Keep cool.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P243	Take action to prevent static discharges.
P210	Keep away from heat. No Smoking.

Special labelling of certain mixtures

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains Kolophonium. May produce an allergic reaction. Restricted to professional users.

Additional advice on labelling

No longer be emitted from packaging size > 350 g to the general public. For package size ≤ 350 g Additional marking: "This product may not'll processed under conditions of poor ventilation." and "This product must not be used for bonding carpets."

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixture in organic solvents

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
141-78-6	ethyl acetate			< 45 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
110-82-7	cyclohexane			< 45 %
	203-806-2	601-017-00-1	01-2119463273-41	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			
1314-13-2	zinc oxide			< 5 %
	215-222-5	030-013-00-7	01-2119463881-32	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
8050-09-7	Rosin, colophony			0,1 - 1 %
	232-475-7	650-015-00-7		
	Skin Sens. 1; H317			

Full text of H and EUH statements: see section 16.

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SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove affected person from the danger area and lay down. Transport affected person in lying position, in case of shortness of breath in half-sitting position. Remove contaminated, saturated clothing immediately. Call a physician immediately.

After inhalation

In case of respiratory tract irritation, consult a physician. Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

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

No data available

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

No data available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water mist, Foam, Carbon dioxide (CO₂), Water spray, Sand

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Vapours are heavier than air, spread along floors and form explosive mixtures with air. Personal protection equipment: see section 8 Remove all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

No data available

6.4. Reference to other sections

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

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Advice on safe handling

Keep away from sources of ignition - No smoking.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air.

Further information on handling

Splashproof grounded devices

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed. Keep/Store only in original container. Material, solvent-resistant

Advice on storage compatibility

Keep in a cool, well-ventilated place away from acids. Do not store together with: Food and feedingstuffs, Oxidising agent

Further information on storage conditions

maximum storage temperature < 20°C

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
110-82-7	Cyclohexane	100	350		TWA (8 h)	WEL
		300	1050		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
141-78-6	ethyl acetate		
Worker DNEL, acute	inhalation	local	1468 mg/m ³
Worker DNEL, long-term	inhalation	local	734 mg/m ³
Consumer DNEL, acute	inhalation	local	734 mg/m ³
Worker DNEL, long-term	dermal		63 mg/kg bw/day
Consumer DNEL, long-term	dermal		37 mg/kg bw/day
Consumer DNEL, long-term	inhalation	local	367 mg/m ³
Consumer DNEL, long-term	oral		4,5 mg/kg bw/day
110-82-7	cyclohexane		
Consumer DNEL, long-term	oral	systemic	59,4 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	2016 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	700 mg/m ³
Consumer DNEL, long-term	dermal	systemic	1186 mg/kg bw/day
Worker DNEL, long-term	inhalation	local	700 mg/m ³
Consumer DNEL, acute	inhalation	systemic	412 mg/m ³
Consumer DNEL, acute	inhalation	local	412 mg/m ³
Consumer DNEL, long-term	inhalation	local	206 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	206 mg/m ³
Worker DNEL, acute	inhalation	local	700 mg/m ³
Worker DNEL, acute	inhalation	systemic	700 mg/m ³

PNEC values

CAS No	Substance	
Environmental compartment	Value	
141-78-6	ethyl acetate	
Freshwater	0,26 mg/l	
Marine water	0,026 mg/l	
Freshwater sediment	0,34 mg/kg	
Marine sediment	0,034 mg/kg	
Soil	0,22 mg/kg	
110-82-7	cyclohexane	
Freshwater	0,207 mg/l	
Marine water	0,207 mg/l	
Micro-organisms in sewage treatment plants (STP)	3,24 mg/l	
Soil	2,99 mg/kg	

8.2. Exposure controls
Protective and hygiene measures

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

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Eye/face protection

goggles

Hand protection

Suitable material: FKM (fluoro rubber) NBR (Nitrile rubber) Unsuitable material: PVC (polyvinyl chloride) CR (polychloroprene, chloroprene rubber) Breakthrough time (maximum wearing time) ≥ 8 h, Thickness of the glove material 0,35 - 0,4 mm

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values Filtering device (full mask or mouthpiece) with filter: A

Environmental exposure controls

Discharge into the environment must be avoided. Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	white black transparent
Odour:	fruity

Test method

Changes in the physical state

Initial boiling point and boiling range:	77 - 82 °C	ASTM D 1120
Flash point:	-11 °C	

Flammability

		ISO 10156
Lower explosion limits:	1 vol. %	
Upper explosion limits:	12,8 vol. %	
Vapour pressure: (at 20 °C)	104 hPa	Cyclohexan
Vapour pressure: (at 20 °C)	100 hPa	Ethylacetat
Density (at 20 °C):	0,88 g/cm ³	
Viscosity / dynamic: (at 20 °C)	ca. 1700 mPa·s	
Solvent content:	ca. 80 %	

9.2. Other information

Solid content:	ca. 20 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

In case of warming: Danger of explosion

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10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

 Carbon dioxide (CO₂) Carbon monoxide

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
141-78-6	ethyl acetate				
	oral	LD50 mg/kg 5600	Rat		
	dermal	LD50 mg/kg 18000	Rabbit		
	inhalative vapour	LC50 58 mg/l	Rat		
110-82-7	cyclohexane				
	oral	LD50 mg/kg > 5000	Rat	OECD 401	
	dermal	LD50 mg/kg > 2000	Rabbit	OECD 402	
	inhalative (4 h) vapour	LC50 mg/l > 32,88	Rat	OECD 403	
1314-13-2	zinc oxide				
	oral	LD50 mg/kg > 5000	Rat	OECD 401	
	inhalative (4 h) aerosol	LC50 > 5 mg/l	Rat		

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

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

May cause drowsiness or dizziness. (ethyl acetate; cyclohexane)

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Aspiration hazard

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

SECTION 12: Ecological information
12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
141-78-6	ethyl acetate					
	Acute fish toxicity	LC50	230 mg/l	96 h	Pimephales promelas (fathead minnow)	
	Acute crustacea toxicity	EC50	717 mg/l	48 h	Daphnia magna (Big water flea)	
	Fish toxicity	NOEC	< 9,65 mg/l	32 d	Pimephales promelas	
110-82-7	cyclohexane					
	Acute fish toxicity	LC50	4,53 mg/l	96 h	Fisch	OECD 203
	Acute crustacea toxicity	EC50	2,4 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202
	Algae toxicity	NOEC	0,94 mg/l		Algen	OECD 201
1314-13-2	zinc oxide					
	Acute fish toxicity	LC50	0,14 - 1,1 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	0,14 mg/l	96 h	Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50	5 mg/l	48 h	Daphnia magna (Big water flea)	
8050-09-7	Rosin, colophony					
	Acute fish toxicity	LC50	< 10 mg/l	96 h	Brachydanio rerio	OECD 203
	Acute crustacea toxicity	EC50	911 mg/l	48 h	Daphnia magna	OECD 202

12.2. Persistence and degradability

There are no data available on the preparation/mixture itself.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
141-78-6	ethyl acetate				
	OECD 301 D	79 %	20		
110-82-7	cyclohexane				
	OECD 301 F	77 %	28		

12.3. Bioaccumulative potential

There are no data available on the preparation/mixture itself.

BCF

CAS No	Chemical name	BCF	Species	Source
141-78-6	ethyl acetate	30		
110-82-7	cyclohexane	167		

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

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SECTION 13: Disposal considerations
13.1. Waste treatment methods
Advice on disposal

Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Classification code: F1
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Classification code: F1
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3

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14.4. Packing group:

III

Hazard label:

3



Marine pollutant:

yes

Special Provisions:

223, 955

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-E, S-D

Air transport (ICAO-TI/IATA-DGR)
14.1. UN number:

UN 1133

14.2. UN proper shipping name:

Adhesives

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

Hazard label:

3



Special Provisions:

A3

Limited quantity Passenger:

10 L

Passenger LQ:

Y344

Excepted quantity:

E1

IATA-packing instructions - Passenger:

355

IATA-max. quantity - Passenger:

60 L

IATA-packing instructions - Cargo:

366

IATA-max. quantity - Cargo:

220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:

yes



Danger releasing substance:

Cyclohexan

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

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 57: cyclohexane

2010/75/EU (VOC):

80 % (704 g/l)

2004/42/EC (VOC):

80 % (704 g/l)

Information according to 2012/18/EU (SEVESO III):

E1 Hazardous to the Aquatic Environment

Additional information:

P5c

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Additional information

REACH, Anhang XVII, Nr. 3, Nr. 40, Nr. 57

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,9,16.
8, 15

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.
 EUH208 Contains Kolophonium. May produce an allergic reaction.

Further Information

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.

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1		-	3, 11	1	-	-	-	-	

LCS: Life cycle stages

SU: Sectors of use

PC: Product categories

PROC: Process categories

ERC: Environmental release categories

AC: Article categories

TF: Technical functions

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