

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 1 of 9

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

GermanBond RFE

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

Hardener, Adhesives, sealants, Reserved for industrial and professional use.

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

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

May cause drowsiness or dizziness.

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

Ethyl acetate

Signal word: Danger

Pictograms:

Hazard statements

H225 Highly flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P243 Take action to prevent static discharges.

P240 Ground and bond container and receiving equipment.

P233 Keep container tightly closed.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 2 of 9

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.
 EUH204 Contains isocyanates. May produce an allergic reaction.

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			70 - < 75 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
4151-51-3	Tris-(p-isocyanatophenyl)-thiophosphat			25 - < 30 %
	223-981-9		01-2119948848-16	
	Acute Tox. 4; H302 EUH066			
108-90-7	chlorobenzene			< 1 %
	203-628-5	602-033-00-1	01-2119432722-45	
	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Aquatic Chronic 2; H226 H332 H315 H411			

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

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

Remove contaminated, saturated clothing immediately.

After inhalation

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of respiratory tract irritation, consult a physician.

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

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

Do NOT induce vomiting. Call a physician in any case!

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

First Aid, decontamination, treatment of symptoms.

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

No information available.

SECTION 5: Firefighting measures
5.1. Extinguishing media

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 3 of 9

Suitable extinguishing mediaCarbon dioxide (CO₂). Foam. Extinguishing powder. Water spray jet.**Unsuitable extinguishing media**

High power water jet.

5.2. Special hazards arising from the substance or mixtureIn case of fire may be liberated: Carbon monoxide Nitrogen oxides (NO_x). Hydrogen cyanide (hydrocyanic acid).**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.

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

Personal protection equipment: see section 8 Keep away from sources of ignition - No smoking. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Take up mechanically. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

6.4. Reference to other sections

SECTION 13: Disposal considerations

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

Provide adequate ventilation. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

The accumulation in lowlying or closed rooms can cause increased danger of fire and explosion.

Further information on handling

Take off immediately all contaminated clothing. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

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

Advice on storage compatibility

Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

I No data available

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 4 of 9

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
108-90-7	Chlorobenzene	1	4.7		TWA (8 h)	WEL
		3	14		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	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
4151-51-3	Tris-(p-isocyanatophenyl)-thiophosphat			
Worker DNEL, long-term		inhalation	local	0,047 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
4151-51-3	Tris-(p-isocyanatophenyl)-thiophosphat		
Freshwater			0,1 mg/l
Marine water			0,01 mg/l
Freshwater sediment			2557 mg/kg
Marine sediment			155 mg/kg
Micro-organisms in sewage treatment plants (STP)			100 mg/l
Soil			510 mg/kg

8.2. Exposure controls
Protective and hygiene measures

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

Eye/face protection

Wear eye/face protection. EN 374: Butyl caoutchouc (butyl rubber), Thickness of the glove material: >= 0,5 mm, Breakthrough time (maximum wearing time): >= 60 min

Hand protection

Wear suitable gloves.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 5 of 9

worn. A2-P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	yellow, light brown
Odour:	fruity

Test method

Changes in the physical state

Initial boiling point and boiling range:	ca. 77 °C
Flash point:	ca. -4 °C DIN 51755
Lower explosion limits:	2,2 vol. %
Upper explosion limits:	11,5 vol. %
Ignition temperature:	ca. 460 °C
Vapour pressure: (at 20 °C)	97 hPa
Density (at 20 °C):	ca. 1,0 g/cm ³ DIN 53217
Viscosity / dynamic: (at 20 °C)	3 mPa·s DIN 53019

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

at room temperature: No known hazardous decomposition products.

10.3. Possibility of hazardous reactions

 Exothermic reaction with: Amines, Alcohols ; After contact with water: Carbon dioxide (CO₂)

10.4. Conditions to avoid

Heating may cause a fire or explosion.

10.5. Incompatible materials

Reacts with : Amines, Alcohols, Oxidising agent, Water

10.6. Hazardous decomposition products

The product is stable under storage at normal ambient temperatures.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 6 of 9

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	
4151-51-3	Tris-(p-isocyanatophenyl)-thiophosphat				
	oral	ATE mg/kg	500		
	inhalative (4 h) aerosol	LC50 mg/l	5,721	Rat	OECD 403
108-90-7	chlorobenzene				
	oral	LD50 mg/kg	22550	Kaninchen	
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

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

May cause drowsiness or dizziness. (ethyl acetate)

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

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 mg/l	< 9,65	32 d	Promephales promelas	
108-90-7	chlorobenzene					
	Acute algae toxicity	ErC50 mg/l	12,5	96 h	Selenastrum capricornutum	IUCLID
	Acute crustacea toxicity	EC50	20 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 7 of 9

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
141-78-6	ethyl acetate				
	OECD 301 D		79 %	20	
4151-51-3	Tris-(p-isocyanatophenyl)-thiophosphat				
			58,2 %	28	
	Not readily biodegradable (according to OECD criteria)				

12.3. Bioaccumulative potential
Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-90-7	chlorobenzene	2,84

BCF

CAS No	Chemical name	BCF	Species	Source
141-78-6	ethyl acetate	30		

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 1173
14.2. UN proper shipping name:	ETHYL ACETATE, LÖSUNG
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3



Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 8 of 9

Inland waterways transport (ADN)

14.1. UN number: UN 1173
14.2. UN proper shipping name: ETHYL ACETATE, LÖSUNG
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Classification code: F1
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1173
14.2. UN proper shipping name: ETHYL ACETATE, SOLUTION
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Special Provisions: -
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1173
14.2. UN proper shipping name: ETHYL ACETATE, SOLUTION
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Limited quantity Passenger: 1 L
 Passenger LQ: Y341
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 353
 IATA-max. quantity - Passenger: 5 L
 IATA-packing instructions - Cargo: 364
 IATA-max. quantity - Cargo: 60 L

14.6. Special precautions for user

Reference to other sections: 6 - 8; Highly flammable; Thermal decomposition: >40°C; Keep away from food, drink and animal feedingstuffs.

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

No data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

GermanBond RFE

Revision date: 09.05.2018

Product code: 22

Page 9 of 9

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):	72 %
2004/42/EC (VOC):	72 %
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

Additional information

Merkblätter der BG Chemie M044 "Polyurethan-Herstellung und Verarbeitung/Isocyanate" und M17 "Lösemittel"

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,3,8,15.

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. 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.

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