Safety data sheet in accordance with regulation (EC) No 1907/2006 Trade name: Marabu Fixativ, 150 ml Version: 4/GB Date revised: 09.07.2019 Print date: 13.07.19 Substance number: 23111006862 Replaces Version: 3 / GB **SECTION 1: Identification of the substance/mixture and of the** company/undertaking 1.1. Product identifier Marabu Fixativ, 150 ml 1.2. Relevant identified uses of the substance or mixture and uses advised against Use of the substance/preparation Spray varnish **Identified Uses** SU21 Consumer uses: Private households (= general public = consumers) PC9a Coatings and paints, thinners, paint removers 1.3. Details of the supplier of the safety data sheet Address Marabu GmbH & Co. KG Asperger Strasse 4 71732 Tamm Germany Telephone no. +49-7141/691-0 Fax no. +49-7141/691-147 Information provided Department product safety by / telephone E-mail address of PRSI@marabu.de person responsible for this SDS **1.4. Emergency telephone number** (+49) (0)621-60-43333 **SECTION 2: Hazards identification** 2.1. Classification of the substance or mixture Classification (Regulation (EC) No. 1272/2008) Classification (Regulation (EC) No. 1272/2008) Aerosol 1 H222 H229 Eve Irrit. 2 H319 STOT SE 3 H336 2.2. Label elements Labelling according to regulation (EC) No 1272/2008 Hazard pictograms Signal word Danger Hazard statements

H222

Trade name: Marabu Fixativ, 150 ml Version: $4/3B$ Data revised: $0.07.2019$ Substance number: 23111006862 Replaces Version: $3/GB$ Print date: $13.07.19$ H229 Pressurised container: May burst if heated. H336 May cause drowsiness or dizziness. Proceautionary statements Proceautionary on an open fame or other ignition source. Proceautionary on a poen fame or other ignition source. Proceautionary on proceautionary sources compensatures exceeding 50 °C/122°F. Proceautionary and proceeding source as problematic waste. Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008) contains Acetone:Ethyl acetate/Propan-2-otm-Butyl acetate/2-Methoxy-1-methylethyl acetate/ Solvent based spray varnish Hazardous ingredients Proceautiation or proceaution source and acet shaft and acet an	Safety data sheet in accorda		EC) No 1907	/2006		
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EUH066Repeated exposure may cause skin dryness or cracking.Further supplemental informationWithout adequate ventilation, explosive atmosphere/gas mix may be created.3.3. Other hazardsNo special hazards have to be mentioned.SECTION 3: Composition/information on ingredients ***3.2. MixturesChemical characterization Solvent based spray varnish Hazardous ingredientsAcetone CAS No.CAS No.67-64-1 200-662-2 Registration no.12119471330-49 200-662-2 Eye Irrit. 2 H319 STOT SE 3H225 H319 H336Pine Butyl acetate CAS No.123-86-4 20-4658-1 Registration no.123-86-4 20-4658-1 Registration no.123-86-4 20-4658-1 Registration no.123-86-4 20-4658-1 Registration no.123-86-4 20-4658-1 Registration no.123-86-4 20-4658-1 200-662-2 <td>Supplemental inform</td> <td></td> <td></td> <td></td> <td></td>	Supplemental inform					
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Without adequate ventilation, explosive atmosphere/gas mix may be created.3.3. Other hazardsNo special hazards have to be mentioned.SECTION 3: Composition/information on ingredients ***3.2. MixturesChemical characterization Solvent based spray varnishHazardous ingredientsAcetone CAS No.CAS No.67-64-1 EINECS no.EINECS no.200-662-2 			may cause s	kin arynes	s or cracking.	
No special hazards have to be mentioned. <b>SECTION 3: Composition/information on ingredients</b> *** <b>3.2. Mixtures</b> Chemical characterization Solvent based spray varnish Hazardous ingredients Acetone CAS No. 67-64-1 EINECS no. 200-662-2 Registration no. 01-2119471330-49 Concentration $>= 10 < 20 \%$ Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 2 H225 Eye Irrit. 2 H319 STOT SE 3 H336 <b>n-Butyl acetate</b> CAS No. 123-86-4 EINECS no. 204-658-1 Registration no. 01-2119485493-29 Concentration $>= 1 < 10 \%$ Classification (Regulation (EC) No. 1272/2008)	••		osphere/gas	mix may b	e created.	
3.2. MixturesChemical characterization Solvent based spray varnishHazardous ingredientsAcetone CAS No. $67-64-1$ EINECS no. $200-662-2$ Registration no. $01-2119471330-49$ Concentration $>= 10 < 20 \%$ Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 2 Eye Irrit. 2 H319 STOT SE 3H225 H336n-Butyl acetate CAS No. $123-86-4$ EINECS no. $204-658-1$ Registration no. $01-2119485493-29$ Concentration $>= 1 < 10 \%$ Classification (Regulation (EC) No. 1272/2008)		ave to be mentioned.				
Chemical characterization Solvent based spray variashHazardous ingredientsAcetone CAS No. $67-64-1$ EINECS no. $200-662-2$ Registration no. $01-2119471330-49$ Concentration>= $10$ <		ition/informatio	on on ing	redient	<u>'S ***</u>	
Solvent based spray varnish Hazardous ingredients Acetone CAS No. 67-64-1 EINECS no. 200-662-2 Registration no. 01-2119471330-49 Concentration $>= 10 < 20 \%$ Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 2 H225 Eye Irrit. 2 H319 STOT SE 3 H336 n-Butyl acetate CAS No. 123-86-4 EINECS no. 204-658-1 Registration no. 01-2119485493-29 Concentration $>= 1 < 10 \%$ Classification (Regulation (EC) No. 1272/2008)	3.2. Mixtures					
Hazardous ingredientsAcetone $CAS No.$ $67-64-1$ $EINECS no.$ $200-662-2$ Registration no. $01-2119471330-49$ Concentration>= $10$ Concentration>= $10$ < $20$ $\%$ Classification (Regulation (EC) No. 1272/2008)Flam. Liq. 2H225Eye Irrit. 2H319STOT SE 3H336n-Butyl acetateCAS No.123-86-4EINECS no.204-658-1Registration no.01-2119485493-29Concentration>=1Concentration>= $1$ < $10$ %Classification (Regulation (EC) No. 1272/2008)	Chemical characteriz	ation				
Acetone $GAS No.$ $67-64-1$ EINECS no. $200-662-2$ Registration no. $01-2119471330-49$ Concentration $>= 10$ $< 20$ Classification (Regulation (EC) No. 1272/2008)       Flam. Liq. 2       H225         Eye Irrit. 2       H319         STOT SE 3       H336         n-Butyl acetate       CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration $>= 1$ $< 10$ Classification (Regulation (EC) No. 1272/2008)	Solvent based spray v	/arnish				
Acetone $GAS No.$ $67-64-1$ EINECS no. $200-662-2$ Registration no. $01-2119471330-49$ Concentration $>= 10$ $< 20$ Classification (Regulation (EC) No. 1272/2008)       Flam. Liq. 2       H225         Eye Irrit. 2       H319         STOT SE 3       H336         n-Butyl acetate       CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration $>= 1$ $< 10$ Classification (Regulation (EC) No. 1272/2008)	Hazardous ingredient	ts				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-					
EINECS no.       200-662-2         Registration no.       01-2119471330-49         Concentration       >=       10       <		67-64-1				
Registration no. Concentration $01-2119471330-49$ $>= 10 < 20 \%$ Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 2 Eye Irrit. 2 STOT SE 3H225 H319 H336n-Butyl acetate CAS No.CAS No.123-86-4 EINECS no.EINECS no.204-658-1 Registration no.Registration no.01-2119485493-29 ConcentrationConcentration>= 1 < 10 %						
Concentration>=10<20%Classification (Regulation (EC) No. 1272/2008) Flam. Liq. 2H225 Eye Irrit. 2H319 H336n-Butyl acetate CAS No.123-86-4 EINECS no.204-658-1 Registration no.01-2119485493-29 Concentration>=1<10%Classification (Regulation (EC) No. 1272/2008)						
Flam. Liq. 2       H225         Eye Irrit. 2       H319         STOT SE 3       H336 <b>n-Butyl acetate</b> CAS No.         CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1          10       %         Classification (Regulation (EC) No. 1272/2008)       1272/2008)	•		<	20	%	
Flam. Liq. 2       H225         Eye Irrit. 2       H319         STOT SE 3       H336 <b>n-Butyl acetate</b> CAS No.         CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1          10       %         Classification (Regulation (EC) No. 1272/2008)       1272/2008)						
Eye Irrit. 2       H319         STOT SE 3       H336 <b>n-Butyl acetate</b> Kegistration no.         CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1         Classification (Regulation (EC) No. 1272/2008)       Kegistration (Regulation (EC) No. 1272/2008)	Classification (Regula					
STOT SE 3       H336         n-Butyl acetate       CAS No.         CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1       <						
n-Butyl acetate         CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1       <						
CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1       <		5101 SE 3	H336			
CAS No.       123-86-4         EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1       <	n Destad and to the					
EINECS no.       204-658-1         Registration no.       01-2119485493-29         Concentration       >=       1       <		100.06.4				
Registration no. $01-2119485493-29$ Concentration>=1<						
Concentration >= 1 < 10 % Classification (Regulation (EC) No. 1272/2008)						
Classification (Regulation (EC) No. 1272/2008)			_	10	%	
	Concentration	~- 1		10	<i>/</i> •	
	Classification (Regula	tion (EC) No. 1272/200	08)			

rade name: Marabu Fixativ	r, 150 ml	., ·					Marab
Substance number: 231110	06862	Version: Replaces		n: 3/GB		Date revised: 09 Print date:	
	STOT SE 3		H336				
Ethyl acetate CAS No. EINECS no. Registration no. Concentration	141-78-6 205-500-4 01-21194751( >=	)3-46 1	<	10	%		
Classification (Reg	ulation (EC) No. 12 Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	272/2008)	H225 H319 H336				
<b>Propan-2-ol</b> CAS No. EINECS no. Registration no. Concentration Classification (Regu	67-63-0 200-661-7 01-211945755 >=	1	<	10	%		
Classification (Regi	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	272/2000)	H225 H319 H336				
<b>2-Methoxy-1-methyl</b> CAS No. EINECS no. Registration no. Concentration	ethyl acetate 108-65-6 203-603-9 01-211947579 >=	91-29 1	<	10	%		
Classification (Reg	ulation (EC) No. 12 Flam. Liq. 3 STOT SE 3	272/2008)	H226 H336				
Further ingredients	***						
Hydrocarbons, C3-4 CAS No. EINECS no. Registration no. Concentration	; Petroleum gas 68476-40-4 270-681-9 01-211948655 >=	57-22 25	<	50	%	[3]	
Classification (Reg	ulation (EC) No. 12 Flam. Gas 1 Press. Gas	272/2008)	H220 H280				
Dimethoxymethane CAS No. EINECS no. Concentration	109-87-5 203-714-2 >=	25	<	50	%	[3]	
Classification (Reg	ulation (EC) No. 12 Flam. Liq. 2	272/2008)	H225				

Trade name: Marabu Fixativ, 150 ml

Version: 4/GB

Substance number: 23111006862

Replaces Version: 3 / GB

[3] Substance with occupational exposure limits

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

## **General information**

In all cases of doubt, or when symptoms persist, seek medical attention. If unconscious place in recovery position and seek medical advice.

#### After inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Summon a doctor immediately.

#### After skin contact

After contact with skin, wash immediately with plenty of water. Don't use solvents.

#### After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water, holding the evelids apart for at least 10 minutes and seek immediate medical advice.

#### After ingestion

Summon a doctor immediately. Keep at rest. Do NOT induce vomiting.

#### 4.2. Most important symptoms and effects, both acute and delayed Until now no symptoms known so far.

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

## Hints for the physician / treatment

Treat symptomatically

## SECTION 5: Firefighting measures

## 5.1. Extinguishing media

### Suitable extinguishing media

Recommended: alcohol resistant foam, CO2, powders, water spray/mist, Not be used for safety reasons: water jet

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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); dense black smoke

## 5.3. Advice for firefighters

### Special protective equipment for fire-fighting

In case of combustion use a suitable breathing apparatus.

### Other information

Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately, must not be discharged into the drains.

## **SECTION 6: Accidental release measures**

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

Keep away sources of ignition. Ensure adequate ventilation. Do not breathe gas/fumes/vapour/spray. Refer to protective measures listed in Sections 7 and 8.

## 6.2. Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Trade name: Marabu Fixativ, 150 ml

Substance number: 23111006862

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

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent - avoid use of solvents.

## 6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

## SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

### Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Provide good ventilation of working area (local exhaust ventilation if necessary). Handle and open container with care. Isolate from sources of heat, sparks and open flame. Avoid skin and eye contact. Smoking, eating and drinking shall be prohibited in application area. Comply with the health and safety at work laws.

## Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.

## Classification of fires / temperature class / Ignition group / Dust explosion class

Classification of fires C (Flammable gases) Temperature class T3

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

## Requirements for storage rooms and vessels

Store in accordance with national regulation

### Further information on storage conditions

Keep away from sources of ignition. Keep container in a cool, well-ventilated place. Observe label precautions.

### 7.3. Specific end use(s)

Spray varnish

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

## 8.1. Control parameters

## **Exposure limit values**

Acetone				
List	EH40			
Туре	WEL			
Value	1210	mg/m³	500	ppm(V)
Short term exposure limit	3620	mg/m³	1500	ppm(V)
Status: 2011				
Ethyl acetate				
List	EH40			
Туре	WEL			
Value			200	ppm(V)
Short term exposure limit			400	ppm(V)
Status: 2011				
2-Methoxy-1-methylethyl ace	etate			
List	EH40			
Туре	WEL			
Value	274	mg/m³	50	ppm(V)

Trade name: Marabu Fixativ, 150 ml



				Marabu
		Version: 4/GB		Date revised: 09.07.2019
Substance number: 23111006862		Replaces Version:	3 / GB	Print date: 13.07.19
Short term exposure limit	548	mg/m³	100	ppm(V)
Skin resorption / sensibilisation:	Sk;	Status: 2011		
Propan-2-ol				
List	EH4			
Туре	WEL			
Value	999	mg/m³	400	ppm(V)
Short term exposure limit Status: 2011	1250	) mg/m³	500	ppm(V)
Dimethoxymethane				
List	EH4			
Туре	WEL		1000	
Value	3160	0	1000	ppm(V)
Short term exposure limit Status: 2011	3950	) mg/m³	1250	ppm(V)
n-Butyl acetate		_		
List	EH4	-		
Туре	WEL			
Value	724	mg/m³	150	ppm(V)
Short term exposure limit Status: 2011	966	mg/m³	200	ppm(V)
Derived No/Minimal Effect Lev	vels (	DNEL/DMEL) ***		
Hydrocarbons, C3-4; Petroleum	u ae			
Type of value		ved Minimal Effect L	evel (DMFL)	
Reference group	Worl			
Duration of exposure		g term		
Route of exposure		lative		
Mode of action		emic effects		
Concentration		2,21		mg/m³
Type of value	Deriv	ved No Effect Level	(DNEL)	
Reference group	Worl		<b>X Y</b>	
Duration of exposure	Long	g term		
Route of exposure	dern			
Mode of action	Syst	emic effects		
Concentration		23,4		mg/kg/d
Type of value	Deriv	ved Minimal Effect L	evel (DMEL)	
Reference group		sumer	. ,	
Duration of exposure		g term		
Route of exposure		lative		
Mode of action	Syst	emic effects		
Concentration		0,066		mg/m³
Acetone				
Type of value	Deriv	ved No Effect Level	(DNEL)	
Reference group	Worl		. ,	
Duration of exposure	Long	g term		
Route of exposure	dern			
Concentration		186		mg/kg/d
Type of value	Deriv	ved No Effect Level	(DNEL)	
Reference group	Worl		. ,	
Duration of exposure	Shor	rt term		
Route of exposure	inha	lative		
Concentration		2420		mg/m³

Trade name: Marabu Fixativ, 150 ml	Version: 4 / GB	Marabu Date revised: 09.07.2019
Substance number: 23111006862	Replaces Version: 3 / GB	Print date: 13.07.19
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Concentration	1210	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Concentration	62	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Concentration	62	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Concentration	200	mg/m³
Ethyl acetate		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Concentration	1468	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	1468	g/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	dermal	
Mode of action	Chronic effects	
Concentration	63	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	inhalative	
Mode of action	Chronic effects	
Concentration	734	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	inhalative	
Mode of action	Chronic effects	
Concentration	734	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Reference group	Conountor	

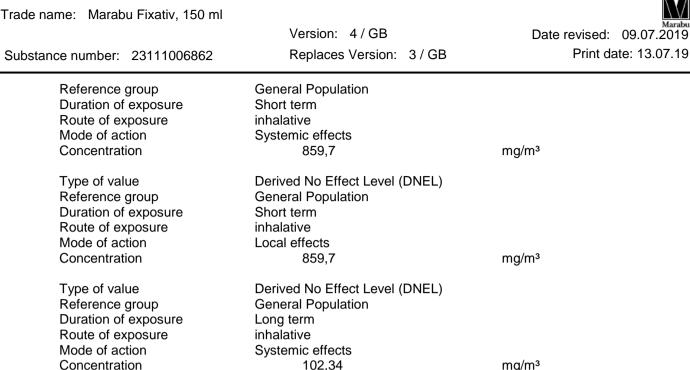
Trade name: Marabu Fixativ, 150 ml

Substance number: 23111006862

Version: 4 / GB Replaces Version: 3 / GB Date revised: 09.07.2019 Print date: 13.07.19

Substance number: 23111006862	Replaces Version: 3/GB	Print date: 13.07.19
Route of exposure	inhalative	
Mode of action	Acute effects	
Concentration	734	mg/m³
Concentration	734	ing/in-
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	734	mg/m³
Concontration		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	dermal	
Mode of action	Chronic effects	
Concentration	37	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	inhalative	
Mode of action	Chronic effects	
Concentration	367	mg/m³
		5
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	oral	
Mode of action	Chronic effects	
Concentration	4,5	mg/m³
	.,.	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	367	mg/m³
2-Methoxy-1-methylethyl aceta		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	796	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	275	mg/m³
	-	5
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	320	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	

rade name: Marabu Fixativ, 150 ml		Marab
	Version: 4/GB	Date revised: 09.07.2019
Substance number: 23111006862	Replaces Version: 3 / GB	Print date: 13.07.19
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	33	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	33	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	36	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Lifetime	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	550	mg/m³
n-Butyl acetate		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	960	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	960	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	480	mg/m³
Type of value	Derived No Effect Level (DNEL)	



Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration	Derived No Effect Level (DNEL) General Population Long term inhalative Systemic effects 102,34	mg/m³
Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration	Derived No Effect Level (DNEL) General Population Long term inhalative Local effects 102,34	mg/m³
Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration	Derived No Effect Level (DNEL) Worker Long term dermal Systemic effects 11	mg/kg/d
<b>Propan-2-ol</b> Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration	Derived No Effect Level (DNEL) Worker Long term inhalative Systemic effects 500	mg/m³
Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration	Derived No Effect Level (DNEL) Worker Long term dermal Systemic effects 888	mg/kg/d

Type of value Reference group Duration of exposure Route of exposure Mode of action Concentration

Type of value

Derived No Effect Level (DNEL)

mg/m<sup>3</sup>

Derived No Effect Level (DNEL)

**General Population** 

Systemic effects

89

Long term

inhalative

Print date: 13.07.19



Safety data sheet in accordance with	n regulation (EC) No 1907/2006	
Trade name: Marabu Fixativ, 150 ml		Marabu
Substance number: 23111006862	Version: 4 / GB Replaces Version: 3 / GB	Date revised: 09.07.2019 Print date: 13.07.19
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	319	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	26	mg/kg/d
Predicted No Effect Concen	tration (PNEC)	
Acetone		
Type of value	PNEC	
Туре	Freshwater	
Concentration	10,6	mg/l
Type of value	PNEC	
Туре	Saltwater	
Concentration	1,06	mg/l
Type of value	PNEC	
Туре	Water (intermittent release)	
Concentration	21	mg/l
Type of value	PNEC	
Туре	Freshwater sediment	
Concentration	30,4	mg/kg
Type of value	PNEC	
Туре	Marine sediment	
Concentration	3,04	mg/kg
Type of value	PNEC	
Туре	Soil	
Concentration	29,5	mg/kg
Type of value	PNEC	
Туре	Sewage treatment plant (STP)	
Concentration	100	mg/l
Ethyl acetate		
Type of value	PNEC	
Туре	Water	
Concentration	0,26	mg/l
Type of value	PNEC	
Туре	Aquatic	
Concentration	0,026	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,34	mg/kg
Type of value	PNEC	
Type of value	FINEC	

rade name: Marabu Fixativ, 150 ml		
	Version: 4 / GB	Date revised: 09.07.2019
Substance number: 23111006862	Replaces Version: 3 / GB	Print date: 13.07.19
Туре	Marine sediment	
Concentration	0,034	mg/kg
Type of value	PNEC	
Туре	Soil	
Concentration	0,22	mg/kg
2-Methoxy-1-methylethyl ace	tate	
Reference substance	2-Methoxy-1-methylethyl acetate	
Type of value	PNEC	
Туре	Freshwater	
Concentration	0,635	mg/l
Type of value	PNEC	
Туре	Freshwater sediment	
Concentration	3,29	mg/kg
Type of value	PNEC	
Туре	Soil	
Concentration	0,29	mg/kg
Source	Literature value	
Type of value	PNEC	
Туре	Sewage treatment plant (STP)	
Concentration	100	mg/l
Source	Literature value	<u> </u>
Type of value	PNEC	
Туре	Marine sediment	
Concentration	0,329	mg/kg
Source	Literature value	5 5
Type of value	PNEC	
Type	Saltwater	
Concentration	0,0635	mg/l
n-Butyl acetate		
Type of value	PNEC	
Туре	Freshwater	
Concentration	0,18	mg/l
Type of value	PNEC	
Туре	Saltwater	
Concentration	0,018	mg/l
Type of value	PNEC	
Туре	Freshwater sediment	
Concentration	0,981	mg/kg
Type of value	PNEC	
Туре	Marine sediment	
Concentration	0,0981	mg/kg
Type of value	PNEC	
Туре	Soil	

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Substance number: 23111006862	Replaces Version: 3 / GB	Print date: 13.07.19
Type of value	PNEC	
Туре	Sewage treatment plant (STP)	
Concentration	35,6	mg/l
Type of value	PNEC	
Туре	Water (intermittent release)	
Concentration	0,36	mg/l
Propan-2-ol		
Type of value	PNEC	
Туре	Freshwater	
Concentration	140,9	mg/l
Type of value	PNEC	
Туре	Saltwater	
Concentration	140,9	mg/l
Type of value	PNEC	
Туре	Sewage treatment plant (STP)	
Concentration	2251	mg/l
Type of value	PNEC	
Туре	Freshwater sediment	
Concentration	552	mg/kg
Type of value	PNEC	
Туре	Marine sediment	
Concentration	552	mg/kg
Type of value	PNEC	
Туре	Soil	
Concentration	28	mg/kg

## 8.2. Exposure controls

### **Exposure controls**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

## **Respiratory protection**

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators. Short term: filter apparatus, Filter A/P2; Self-contained breathing apparatus.

#### Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm Breakthrough time < 30 min

Breakthrough time < 30 min The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

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	Version:				vised: 09.07.2019
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Eye protection Safety glasses					
Body protection					
Personnel should wear anti-st fibre.	atic clothing made	of natura	l fibre or of I	nigh temperature r	esistant synthetic
SECTION 9: Physical and o	chemical pro	pertie	<u>S</u>		
9.1. Information on basic phys					
Form	Aerosol	-	-		
Colour	colourless				
Odour	solvent-like				
pH value					
Remarks	Not applicable				
Melting point					
Remarks	not determined				
Initial boiling point and boili	ng range				
Value	appr. 42			°C	
Pressure Source	1.013 Literature value	hPa			
Flash point					
Remarks	Not applicable				
Upper/lower flammability or	•			0/ () /)	
Lower explosion limit Upper explosion limit	appr. 1,2 appr. 19,9			%(V) %(V)	
Source	Literature value			, ( , )	
Density					
Value	0,74			g/cm <sup>3</sup>	
Temperature	20	°C		-	
Solubility in water					
Remarks	immiscible				
Partition coefficient: n-octar	nol/water				
Remarks	Not applicable				
Ignition temperature					
Value	appr. 260			°C	
Source	Literature value				
Viscosity					
Remarks					
Remarks	not determined				
9.2. Other information					
Other information					
The physical specifications are	e approximate value	es and re	efer to the us	sed safety relevan	t component(s).
SECTION 10: Stability and	reactivitv				
10.1. Reactivity None known					
10.2. Chemical stability					
Stable under recommended s	torage and handling	g conditic	ons (see sec	tion 7).	

		4007/0000	
Safety data sheet in accordance wi	th regulation (EC) No	1907/2006	
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<b>10.3. Possibility of hazardou</b> Keep away from oxidising ag exothermic reactions.		and strongly acid mate	erials in order to avoid
<b>10.4. Conditions to avoid</b> When exposed to high temp and direct sunlight.	eratures may produce	hazardous decomposi	tion products. Protect from heat
10.5. Incompatible materials None known			
10.6. Hazardous decomposit	ion products		
See chapter 5.2 (Firefighting	measures - Special h	azards arising from the	substance or mixture).
SECTION 11: Toxicologic	al information		
11.1. Information on toxicolo	gical ellects		
Acute oral toxicity Remarks	Based on available d	ata, the classification of	ritaria ara not mat
Acute oral toxicity (Compo			
Acetone	inento)		
Species LD50	rat 5800	mg/k	g
Acute dermal toxicity			
Remarks		ata, the classification of	criteria are not met.
Acute dermal toxicity (Con	nponents)		
Acetone Species LD50	rabbit 20000	mg/k	g
Acute inhalational toxicity			
Remarks	Based on available d	ata, the classification of	criteria are not met.
Skin corrosion/irritation			
Remarks	Based on available d	ata, the classification of	criteria are not met.
Serious eye damage/irritat	ion		
evaluation Remarks	irritant The classification crit	eria are met.	
Sensitization	Deced on eveileble d	ate the close if is at is a	
Remarks	Based on available d	ata, the classification of	criteria are not met.
Mutagenicity Remarks	Racad an available d	ata the classification of	ritoria ara pat mat
	Daseu un avaliable u	ata, the classification of	
Reproductive toxicity Remarks	Based on available d	ata, the classification of	riteria are not met
Carcinogenicity Remarks		ata, the classification of	
Specific Target Organ Toxi			
<b>Single exposure</b> Remarks evaluation	The classification crit		
Repeated exposure Remarks	Based on available d	ata, the classification o	criteria are not met.

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Substance number: 23111006862

## Aspiration hazard

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

## **Experience in practice**

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation. Ingestion may cause nausea, diarrhoea and vomiting.

### Other information

There are no data available on the mixture itself. The mixture has been assessed following the additivity method of the GHS/CLP Regulation (EC) No 1272/2008.

## **SECTION 12: Ecological information**

## 12.1. Toxicity

### **General information**

There are no data available on the mixture itself.Do not allow to enter drains or water courses.The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is not classified as dangerous for the environment.

## 12.2. Persistence and degradability

### **General information**

There are no data available on the mixture itself.

### 12.3. Bioaccumulative potential

### Partition coefficient: n-octanol/water

Not applicable

## Remarks 12.4. Mobility in soil

### **General information**

There are no data available on the mixture itself.

## 12.5. Results of PBT and vPvB assessment

### **General information**

There are no data available on the mixture itself.

## 12.6. Other adverse effects

### **General information**

There are no data available on the mixture itself.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

### Disposal recommendations for the product

Do not allow to enter drains or water courses.

### Disposal recommendations for packaging

Completely emptied packagings can be given for recycling. Not emptied containers are hazardous waste (waste code number 150110).

Safety data sheet in accordance with regulation (EC) No 1907/2006 Trade name: Marabu Fixativ, 150 ml Date revised: 09.07.2019 Version: 4/GB Print date: 13.07.19 Substance number: 23111006862 Replaces Version: 3 / GB **SECTION 14: Transport information** Land transport ADR/RID 14.1. UN number UN 1950 14.2. UN proper shipping name AEROSOLS 14.3. Transport hazard class(es) 2 Class 2.1 Label 14.4. Packing group Packing group Limited Quantity 11 Transport category 2 14.5. Environmental hazards Tunnel restriction code D

## Marine transport IMDG/GGVSee

14.1. UN number UN 1950 14.2. UN proper shipping name AEROSOLS 14.3. Transport hazard class(es) Class 2.1 14.4. Packing group Packing group 14.5. Environmental hazards no

## Air transport ICAO/IATA

14.1. UN number UN 1950 14.2. UN proper shipping name AEROSOLS 14.3. Transport hazard class(es) Class 2.1 14.4. Packing group Packing group 14.5. Environmental hazards

## Information for all modes of transport

14.6. Special precautions for user Transport within the user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Other information

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code no

# **SECTION 15: Regulatory information**

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

Major-accident categories acc. 96/82/EC

	bu Fixativ, 150 ml							Mar
		Version				D	ate revised:	
Substance number	23111006862	Replace	s Versi	on: 3/GE	3		Print dat	e: 13.07.′
Category	8	Extremely flamm	able	10.	000	kg	50.000	kg
VOC								
VOC (CH) VOC (EU)		98,65 98,65	% %	730 730	g/l g/l			
Other infor		30,00	70	750	g/i			
		n substances of ve	ry high	concern (S	VHC).			
15.2. Chemica	safety assess	sment						
		cal safety assessm	ent has	not been o	carried o	ut.		
<b>SECTION 16:</b>	Other inforr	nation						
	ements listed ir							
H225		Highly flammable	liquid a	and vapour				
H226		Flammable liquid	and va	pour.				
H319		Causes serious e						
H336		May cause drows	siness c	r dizziness				
•	ories listed in Ch	-	_					
Eye Irrit. 2		Eye irritation, Cat						
Flam. Liq.		Flammable liquid						
Flam. Liq. STOT SE		Flammable liquid Specific target or				iro Cato	a any 3	
Abbreviatio		Specific target of	yan lux	icity - Sirigi	e exposi	ire, Cale	gory 5	
		if au transport inter	notiono	l doo moro	hondioor	Dongo	rauaaa nar Da	uto
		le transport interna				•		ule
	Gefahrgutverordn				le march		uangereuses	
		e Code for Dangero	ous Goo	ods				
	ernational Air Trans							
	rnational Civil Avia	•						
	mical Abstracts Se	0						
		y of Existing Comn	nercial (	Chemical S	ubstanc	es		
		otified Chemical Su						
	ergency Schedules							
		of Chemical Substa						
		al Trade and Indust	ry (Japa	an)				
	xic Substances Co							
	atile Organic Comp	bound						
LD: Letha								
	concentration	high concorn						
	bstances of very h rived no effect leve	-						
	edicted no effect c							
UN: Unite		oncontration						
	upational exposure	e limit						
	tal information							
• •		d with the previous	version	of the safe	etv data s	sheet are	e marked with	***
		our present state						
		roduct properties a						
		y Data Sheet is bas						nt
		•		·			5	
legislation								
It provides	guidance on heal	th, safety and envir of technical perform						be

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible

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Substance number	22111006862	Version: 4 / GB Replaces Version:	2/CP	Date revised: 09.07.2019 Print date: 13.07.19		
Substance number:	23111006862	Replaces version:	37 GB	Finit date: 15.07.19		
The inform	g that the requirements of r ation contained in this safe risks, as required by other l	ty data sheet does no	ot constitute the user	's own assessment of		