

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**  
Version: **3.0 en**  
Replaces version of: 2019-07-26  
Version: (2)

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Revision: 2022-08-15

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

### 1.1 Product identifier

Identification of the substance **Roti®-Histokitt II ready-to-use, for histology**  
Article number T160

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

Relevant identified uses: Laboratory chemical  
Laboratory and analytical use  
Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** sicherheit@carlroth.de  
**Website:** www.carlroth.de

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):** **sicherheit@carlroth.de**

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	3	Flam. Liq. 3	H226
3.1D	Acute toxicity (dermal)	4	Acute Tox. 4	H312
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.8R	Specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.9	Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

### Supplemental hazard information

Code	Supplemental hazard information
EUH208	contains Methacrylic acid methyl ester, n-Butyl methacrylate. May produce an allergic reaction

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources.

## 2.2 Label elements

### Labelling

#### Signal word

Warning

#### Pictograms

GHS02, GHS07,  
GHS08



#### Hazard statements

H226	Flammable liquid and vapour
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs (kidney, liver, central nervous system) through prolonged or repeated exposure

#### Precautionary statements

##### Precautionary statements - prevention

P210	Keep away from heat, sparks, open flames, hot surfaces. No smoking
P280	Wear protective gloves/protective clothing

##### Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P304+P340	IF INHALED: Remove person to fresh air and keep 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
P314	Get medical advice/attention if you feel unwell

#### Supplemental hazard information

EUH208	Contains Methacrylic acid methyl ester, n-Butyl methacrylate. May produce an allergic reaction.
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**Hazardous ingredients for labelling:** Xylene (isomers)

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

### 2.3 Other hazards

Special danger of slipping by leaking/spilling product.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.








## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Xylene (isomers)	CAS No 1330-20-7  EC No 215-535-7	40 – 70	Flam. Liq. 3 / H226 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 STOT RE 2 / H373 Asp. Tox. 1 / H304	  	C(a) GHS-HC IOELV
n-Butyl methacrylate	CAS No 97-88-1  EC No 202-615-1	< 1	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 STOT SE 3 / H335	 	D GHS-HC
Methacrylic acid methyl ester	CAS No 80-62-6  EC No 201-297-1	< 1	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 STOT SE 3 / H335	 	D GHS-HC IOELV

#### Notes

C(a): Mixture of isomers

D: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Xylene (isomers)	CAS No 1330-20-7  EC No 215-535-7	-	-	1.100 mg/kg 11 mg/l/4h	dermal inhalation: va- pour

For full text of abbreviations: see SECTION 16

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Roti®-Histokitt II ready-to-use, for histology

article number: T160

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

#### Following ingestion

Do NOT induce vomiting. Call a physician immediately.

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

Irritation, Allergic reactions, Cough, Dyspnoea, Nausea, Vomiting, Unconsciousness

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Danger of explosion.

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

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation.

#### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

### Consideration of other advice:

Ground/bond container and receiving equipment.

### Ventilation requirements

Use local and general ventilation.

### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
EU	xylene	1330-20-7	IOELV	50	221	100	442			H	2000/39/EC
EU	methyl methacrylate	80-62-6	IOELV	50		100					2009/161/EU
GB	xylene, mixture of isomers	1330-20-7	WEL	50	220	100	441				EH40/2005
GB	methyl methacrylate	80-62-6	WEL	50	208	100	416				EH40/2005

#### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

H Absorbed through the skin

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Biological limit values

Country	Name of agent	CAS No	Parameter	Notation	Identifier	Value	Material	Source
GB	xylene, mixture of isomers	1330-20-7	methylhippuric acids	crea	BMGV	650 mmol/mol	urine	EH40/2005

#### Notation

crea Creatinine

#### Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Xylene (isomers)	1330-20-7	DNEL	221 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Xylene (isomers)	1330-20-7	DNEL	442 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
Xylene (isomers)	1330-20-7	DNEL	221 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Xylene (isomers)	1330-20-7	DNEL	442 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
Xylene (isomers)	1330-20-7	DNEL	212 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Methacrylic acid methyl ester	80-62-6	DNEL	348,4 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Methacrylic acid methyl ester	80-62-6	DNEL	208 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
Methacrylic acid methyl ester	80-62-6	DNEL	416 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
Methacrylic acid methyl ester	80-62-6	DNEL	13,67 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Xylene (isomers)	1330-20-7	PNEC	0,327 mg/l	aquatic organisms	freshwater	short-term (single instance)
Xylene (isomers)	1330-20-7	PNEC	0,327 mg/l	aquatic organisms	marine water	short-term (single instance)
Xylene (isomers)	1330-20-7	PNEC	6,58 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Xylene (isomers)	1330-20-7	PNEC	12,46 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Xylene (isomers)	1330-20-7	PNEC	12,46 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Xylene (isomers)	1330-20-7	PNEC	2,31 mg/kg	terrestrial organisms	soil	short-term (single instance)
Methacrylic acid methyl ester	80-62-6	PNEC	0,94 mg/l	aquatic organisms	water	intermittent release
Methacrylic acid methyl ester	80-62-6	PNEC	0,94 mg/l	aquatic organisms	freshwater	short-term (single instance)
Methacrylic acid methyl ester	80-62-6	PNEC	0,094 mg/l	aquatic organisms	marine water	short-term (single instance)
Methacrylic acid methyl ester	80-62-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Methacrylic acid methyl ester	80-62-6	PNEC	10,2 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Methacrylic acid methyl ester	80-62-6	PNEC	0,102 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Methacrylic acid methyl ester	80-62-6	PNEC	1,48 mg/kg	terrestrial organisms	soil	short-term (single instance)

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

##### • type of material

FKM (fluoro rubber)

##### • material thickness

0,4 mm

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

##### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

##### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

##### Environmental exposure controls

Keep away from drains, surface and ground water.



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Roti®-Histokitt II ready-to-use, for histology

article number: T160

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	viscous
Colour	clear - colourless
Odour	characteristic - aromatic
Melting point/freezing point	0 °C
Boiling point or initial boiling point and boiling range	137 °C at 1.013 hPa
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	1,1 vol% (LEL) - 7 vol% (UEL)
Flash point	23 °C
Auto-ignition temperature	>250 °C
Decomposition temperature	not relevant
pH (value)	7 (20 °C)
Kinematic viscosity	473,7 mm <sup>2</sup> /s at 20 °C
Dynamic viscosity	250 – 450 mPa s at 20 °C (Brookfield)

#### Solubility(ies)

Water solubility	(practically insoluble)
Solubility in hydrocarbons, aromatic	soluble

#### Partition coefficient

Partition coefficient n-octanol/water (log value):	this information is not available
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Vapour pressure	8,21 hPa at 20 °C
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#### Density and/or relative density

Density	0,95 g/cm <sup>3</sup> at 20 °C
Relative vapour density	3,7 at 20 °C (air = 1)

Particle characteristics	not relevant (liquid)
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#### Other safety parameters

Oxidising properties	none
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### 9.2 Other information

Information with regard to physical hazard classes:	There is no additional information.
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# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Other safety characteristics:

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition. Vapours may form explosive mixtures with air.

#### If heated

Risk of ignition.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser, Nitric acid and nitrous acid, Sulphuric acid, Sulphur

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

plastic and rubber

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

#### Acute toxicity

Harmful in contact with skin.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Xylene (isomers)	1330-20-7	dermal	1.100 mg/kg
Xylene (isomers)	1330-20-7	inhalation: vapour	11 mg/l/4h

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Xylene (isomers)	1330-20-7	inhalation: vapour	LC50	29 mg/l/4h	rat
Xylene (isomers)	1330-20-7	oral	LD50	3.523 mg/kg	rat

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Methacrylic acid methyl ester	80-62-6	oral	LD50	7.872 mg/kg	rat
Methacrylic acid methyl ester	80-62-6	inhalation: vapour	LC50	29,8 mg/l/4h	rat
Methacrylic acid methyl ester	80-62-6	dermal	LD50	>5.000 mg/kg	rabbit
n-Butyl methacrylate	97-88-1	oral	LD50	>2.000 mg/kg	rat
n-Butyl methacrylate	97-88-1	inhalation: vapour	LC50	29 mg/l/4h	rat
n-Butyl methacrylate	97-88-1	dermal	LD50	>2.000 mg/kg	rabbit

### Skin corrosion/irritation

Causes skin irritation.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Contains Methacrylic acid methyl ester, n-Butyl methacrylate. May produce an allergic reaction.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

May cause respiratory irritation.

### Specific target organ toxicity - repeated exposure

May cause damage to organs (kidney, liver, central nervous system) through prolonged or repeated exposure.

Hazard category	Target organ	Exposure route
2	kidney	if exposed
2	liver	if exposed
2	central nervous system	if exposed

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting, nausea

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

- **If in eyes**

Causes serious eye irritation

- **If inhaled**

Irritation to respiratory tract, cough, Dyspnoea

- **If on skin**

causes skin irritation, May produce an allergic reaction, pruritis, localised redness

- **Other information**

Other adverse effects: Headache, Dizziness, Liver and kidney damage, Symptoms can occur only after several hours

### 11.2 Endocrine disrupting properties

None of the ingredients are listed.

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Xylene (isomers)	1330-20-7	LC50	2,6 mg/l	rainbow trout	96 h
Xylene (isomers)	1330-20-7	ErC50	4,7 mg/l	algae	72 h
Methacrylic acid methyl ester	80-62-6	LC50	>79 mg/l	fish	96 h
Methacrylic acid methyl ester	80-62-6	EC50	69 mg/l	aquatic invertebrates	48 h
Methacrylic acid methyl ester	80-62-6	ErC50	>110 mg/l	algae	72 h
n-Butyl methacrylate	97-88-1	LC50	5,57 mg/l	japanese ricefish/medaka (Oryzias latipes)	96 h
n-Butyl methacrylate	97-88-1	EC50	25,4 mg/l	daphnia magna	48 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Xylene (isomers)	1330-20-7	EC50	2,2 mg/l	algae	73 h
Methacrylic acid methyl ester	80-62-6	LC50	33,7 mg/l	fish	35 d
Methacrylic acid methyl ester	80-62-6	EC50	49 mg/l	aquatic invertebrates	21 d

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

### Biodegradation

Data are not available.

### 12.2 Process of degradability

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Xylene (isomers)	1330-20-7	oxygen depletion	98 %	28 d		ECHA
Methacrylic acid methyl ester	80-62-6	biotic/abiotic	>94 %	148 d		
Methacrylic acid methyl ester	80-62-6	oxygen depletion	94 %	14 d		ECHA
n-Butyl methacrylate	97-88-1	biotic/abiotic	88 %	28 d		

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Xylene (isomers)	1330-20-7	>5,5 - <12,2	3,15 (pH value: 7, 20 °C)	
Methacrylic acid methyl ester	80-62-6		1,38 (pH value: ~7, 20 °C)	
n-Butyl methacrylate	97-88-1		3,03 (25 °C)	

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**

### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADRRID	UN 1307
IMDG-Code	UN 1307
ICAO-TI	UN 1307

### 14.2 UN proper shipping name

ADRRID	XYLENES
IMDG-Code	XYLENES
ICAO-TI	Xylenes

### 14.3 Transport hazard class(es)

ADRRID	3
IMDG-Code	3
ICAO-TI	3

### 14.4 Packing group

ADRRID	III
IMDG-Code	III
ICAO-TI	III

### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Proper shipping name	XYLENES
Particulars in the transport document	UN1307, XYLENES, 3, III, (D/E)
Classification code	F1
Danger label(s)	3

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**



Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30
<b>Emergency Action Code</b>	<b>3Y</b>

### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

<b>Classification code</b>	F1
<b>Danger label(s)</b>	3



<b>Excepted quantities (EQ)</b>	E1
<b>Limited quantities (LQ)</b>	5 L
<b>Transport category (TC)</b>	3
<b>Hazard identification No</b>	30

### International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	XYLENES
Particulars in the shipper's declaration	UN1307, XYLENES, 3, III, 23°C c.c.
Marine pollutant	-
Danger label(s)	3



Special provisions (SP)	223
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	A

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Xylenes
Particulars in the shipper's declaration	UN1307, Xylenes, 3, III
Danger label(s)	3



Special provisions (SP)	A3
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# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**

Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

##### Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
P5c	flammable liquids (cat. 2, 3)	5.000	50.000	51)

##### Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

##### Deco-Paint Directive

VOC content	100 % 950 g/l
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##### Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	950 g/l

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

##### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)			
Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
Xylene (isomers)	1330-20-7	(17) (11)	

##### Legend

- (11) Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylenes) is exceeded  
(17) Total mass of xylene (ortho-xylene, meta-xylene, para-xylene)

##### Water Framework Directive (WFD)



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Xylene (isomers)	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

### Legend

A) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### National regulations(GB)

### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

### Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Roti®-Histokitt II	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3
Methacrylic acid methyl ester	flammable / pyrophoric		40

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### National inventories

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Country	Inventory	Status
AU	AIIC	not all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
US	TSCA	not all ingredients are listed

### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		Supplemental hazard information: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources.	yes

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: T160

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2	contains: Xylene (isomers)		yes
2.3	Other hazards: There is no additional information.	Other hazards: Special danger of slipping by leaking/spilling product.	yes
2.3		Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
2009/161/EU	Commission Directive establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**

Abbr.	Descriptions of used abbreviations
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Roti®-Histokitt II ready-to-use, for histology

article number: **T160**

Abbr.	Descriptions of used abbreviations
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs (kidney, liver, central nervous system) through prolonged or repeated exposure.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.