

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**
Version: **GHS 3.0 en**
Replaces version of: 2021-04-14
Version: (GHS 2)

date of compilation: 2018-02-02
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Identification of the substance **ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids**

Article number A156

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 squirting or spraying. Do not use for products which come into direct contact with the skin. 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
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 Westmead, NSW	131126	

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
3.1O	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.1D	Acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	Acute toxicity (inhal.)	3	Acute Tox. 3	H331

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.2	Skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.5	Germ cell mutagenicity	2	Muta. 2	H341
3.6	Carcinogenicity	2	Carc. 2	H351
3.7	Reproductive toxicity	2	Repr. 2	H361d
3.9	Specific target organ toxicity - repeated exposure	1	STOT RE 1	H372

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS05, GHS06,
GHS08



Hazard statements

H302+H312	Harmful if swallowed or in contact with skin
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

Precautionary statements

Precautionary statements - prevention

P260	Do not breathe dusts or mists
P280	Wear protective gloves/protective clothing

Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Precautionary statements - storage

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

P403+P233 Store in a well-ventilated place. Keep container tightly closed

For professional users only

Hazardous ingredients for labelling: Trichloromethane, Phenol, Isoamyl alcohol

2.3 Other hazards

This material is combustible, but will not ignite readily.

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
Trichloromethane	CAS No 67-66-3	50 - < 60	Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Carc. 2 / H351 Repr. 2 / H361d STOT RE 1 / H372	 	IARC: 2B
Phenol	CAS No 108-95-2	32.4 - < 50	Acute Tox. 4 / H302 Acute Tox. 3 / H311 Acute Tox. 3 / H331 Skin Corr. 1B / H314 Eye Dam. 1 / H318 Muta. 2 / H341 STOT RE 2 / H373	  	
Isoamyl alcohol	CAS No 123-51-3	1 - < 5	Flam. Liq. 3 / H226 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 EUH066	  	C(a)

Notes

C(a): Mixture of isomers

IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

2B:

For full text of abbreviations: see SECTION 16

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes hold- ing eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). In case of accident or unwellness, seek medical advice immedi- ately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Gastric perforation, Vomiting, Risk of serious damage to eyes, Risk of blindness, Breathing difficulties, Headache, Vertigo, Dizziness, 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 (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Ingredients of the mixture combustible. The product itself does not burn.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen chloride (HCl), Hydrogen halides (HX)

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

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. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

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. Use extractor hood (laboratory). Handle and open container with care. Avoid exposure. Clear contaminated areas thoroughly.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep in a cool place. May cause decomposition by long-term light influence.

Incompatible substances or mixtures

Observe hints for combined storage.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

Consideration of other advice:

Store locked up.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Specific designs for storage rooms or vessels

Recommended storage temperature: 2 – 8 °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 ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
AU	phenol	108-95-2	WES	1	4						WES
AU	isoamylalcohol (3-methylbutan-1-ol)	123-51-3	WES	100	361	125	452				WES
AU	chloroform (trichloromethane)	67-66-3	WES	2	10						WES

Notation

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

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
Trichloromethane	67-66-3	DNEL	2.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Trichloromethane	67-66-3	DNEL	333 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Trichloromethane	67-66-3	DNEL	2.5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Trichloromethane	67-66-3	DNEL	0.94 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Phenol	108-95-2	DNEL	8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Phenol	108-95-2	DNEL	16 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

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
Phenol	108-95-2	DNEL	1.23 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Isoamyl alcohol	123-51-3	DNEL	73.16 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Isoamyl alcohol	123-51-3	DNEL	292 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Isoamyl alcohol	123-51-3	DNEL	73.16 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Isoamyl alcohol	123-51-3	DNEL	292 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Trichloromethane	67-66-3	PNEC	0.146 mg/l	aquatic organisms	freshwater	short-term (single instance)
Trichloromethane	67-66-3	PNEC	0.015 mg/l	aquatic organisms	marine water	short-term (single instance)
Trichloromethane	67-66-3	PNEC	0.048 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Trichloromethane	67-66-3	PNEC	0.45 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Trichloromethane	67-66-3	PNEC	0.09 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Trichloromethane	67-66-3	PNEC	0.56 mg/kg	terrestrial organisms	soil	short-term (single instance)
Phenol	108-95-2	PNEC	0.008 mg/l	aquatic organisms	freshwater	short-term (single instance)
Phenol	108-95-2	PNEC	0.001 mg/l	aquatic organisms	marine water	short-term (single instance)
Phenol	108-95-2	PNEC	2.1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Phenol	108-95-2	PNEC	0.091 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Phenol	108-95-2	PNEC	0.009 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Phenol	108-95-2	PNEC	0.136 mg/kg	terrestrial organisms	soil	short-term (single instance)
Isoamyl alcohol	123-51-3	PNEC	0.12 mg/l	aquatic organisms	freshwater	short-term (single instance)
Isoamyl alcohol	123-51-3	PNEC	0.012 mg/l	aquatic organisms	marine water	short-term (single instance)

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: A156

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Isoamyl alcohol	123-51-3	PNEC	37 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Isoamyl alcohol	123-51-3	PNEC	0.496 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Isoamyl alcohol	123-51-3	PNEC	0.05 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Isoamyl alcohol	123-51-3	PNEC	0.029 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. Wear face protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. 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

≥0,5 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.

Safety data sheet Safety data sheet

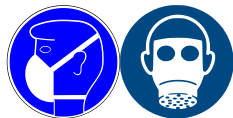
acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: A156

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	clear - light brown
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	>61 °C
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	>80 °C
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	7.5 – 8 (20 °C)
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	(partially soluble)
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	not determined
<u>Density and/or relative density</u>	
Density	1.2 – 1.3 g/cm ³ at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics: There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated

Vapours may form explosive mixtures with air.

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, Acetone, Aldehydes, Amines, Ammonia (NH₃), Alkaline earth metal, Metal powder, Mineral acids, Nitro compound, Peroxides, Strong alkali, Strong acid

10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat.

10.5 Incompatible materials

different plastics, Rubber articles, metals

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 if swallowed. Harmful in contact with skin. Toxic if inhaled.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: A156

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Trichloromethane	67-66-3	oral	908 mg/kg
Trichloromethane	67-66-3	inhalation: vapour	3 mg/l/4h
Phenol	108-95-2	oral	317 mg/kg
Phenol	108-95-2	dermal	630 mg/kg
Phenol	108-95-2	inhalation: dust/mist	0.5 mg/l/4h
Isoamyl alcohol	123-51-3	inhalation: vapour	11 mg/l/4h

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Trichloromethane	67-66-3	oral	LD50	908 mg/kg	rat
Phenol	108-95-2	oral	LD50	317 mg/kg	rat
Phenol	108-95-2	dermal	LD50	630 mg/kg	rabbit
Isoamyl alcohol	123-51-3	oral	LD50	>5,000 mg/kg	rat
Isoamyl alcohol	123-51-3	dermal	LD50	3,216 mg/kg	rabbit

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: A156

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

- **If in eyes**

causes burns, Causes serious eye damage, risk of blindness

- **If inhaled**

vertigo, headache, breathing difficulties, dizziness, unconsciousness

- **If on skin**

causes severe burns, causes poorly healing wounds

- **Other information**

Other adverse effects: Liver and kidney damage, Cardiac arrhythmias

11.2 Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Trichloromethane	67-66-3	EC50	152.5 mg/l	aquatic invertebrates	48 h
Trichloromethane	67-66-3	ErC50	13.3 mg/l	algae	72 h
Phenol	108-95-2	LC50	8.9 mg/l	fish	96 h
Phenol	108-95-2	EC50	3.1 mg/l	aquatic invertebrates	48 h
Isoamyl alcohol	123-51-3	LC50	700 mg/l	fish	96 h
Isoamyl alcohol	123-51-3	EC50	255 mg/l	aquatic invertebrates	48 h
Isoamyl alcohol	123-51-3	ErC50	>500 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Trichloromethane	67-66-3	EC50	0.48 mg/l	microorganisms	24 h
Phenol	108-95-2	LC50	21.93 mg/l	fish	14 d
Phenol	108-95-2	EC50	10 mg/l	aquatic invertebrates	16 d
Isoamyl alcohol	123-51-3	EC50	320 mg/l	aquatic invertebrates	24 h

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

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
Trichloromethane	67-66-3	biotic/abiotic	0 %	14 d		
Phenol	108-95-2	biotic/abiotic	85 %	14 d		
Phenol	108-95-2	carbon dioxide generation	45.5 %	3 d		ECHA
Phenol	108-95-2	oxygen depletion	96 %	20 d		ECHA
Isoamyl alcohol	123-51-3	biotic/abiotic	84 %	27 d		
Isoamyl alcohol	123-51-3	oxygen depletion	84 %	27 d		ECHA

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
Trichloromethane	67-66-3		1.97 (25 °C)	
Phenol	108-95-2	17.5	1.47 (30 °C)	
Isoamyl alcohol	123-51-3		1.35 (pH value: ~6.5)	

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.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: A156

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.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H6.1 Poisonous (Acute)
H11 Toxic (Delayed or chronic)

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

UN RTDG	UN 2810
IMDG-Code	UN 2810
ICAO-TI	UN 2810

14.2 UN proper shipping name

UN RTDG	TOXIC LIQUID, ORGANIC, N.O.S.
IMDG-Code	TOXIC LIQUID, ORGANIC, N.O.S.
ICAO-TI	Toxic liquid, organic, n.o.s.
Technical name (hazardous ingredients)	Trichloromethane, Phenol

14.3 Transport hazard class(es)

UN RTDG	6.1
IMDG-Code	6.1
ICAO-TI	6.1

14.4 Packing group

UN RTDG	III
IMDG-Code	III
ICAO-TI	III

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

14.5 Environmental hazards hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment): Phenol

14.6 Special precautions for user
There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport information National regulations Additional information (UN RTDG)

UN number	2810
Class	6.1
Environmental hazards	Yes Hazardous to the aquatic environment
Packing group	III
Danger label(s)	6.1 Fish and tree



Special provisions (SP)	223, 274 UN RTDG
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Excepted quantities (EQ)	E1 UN RTDG
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Limited quantities (LQ)	5 L UN RTDG
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International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S.
Particulars in the shipper's declaration	UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (contains: Trichloromethane, Phenol), 6.1, III, MARINE POLLUTANT
Marine pollutant	yes (hazardous to the aquatic environment), (Phenol)
Danger label(s)	6.1, "Fish and tree"



Special provisions (SP)	223, 274
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Excepted quantities (EQ)	E1
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Limited quantities (LQ)	5 L
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EmS	F-A, S-A
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Stowage category	A
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Safety data sheet Safety data sheet


acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

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

Proper shipping name	Toxic liquid, organic, n.o.s.
Particulars in the shipper's declaration	UN2810, Toxic liquid, organic, n.o.s., (contains: Trichloromethane, Phenol), 6.1, III
Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	6.1
	
Special provisions (SP)	A3, A4, A137
Excepted quantities (EQ)	E1
Limited quantities (LQ)	2 L

SECTION 15: Regulatory information

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

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

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

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

Legend

AICS	Australian Inventory of Chemical Substances
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
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
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: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

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
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2		Precautionary statements - storage: change in the listing (table)	yes
2.2	Precautionary statements - disposal		yes
2.2		Precautionary statements - disposal: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

Abbr.	Descriptions of used abbreviations
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
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
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
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
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
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Muta.	Germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



ROTI®-Phenol/Chloroform/Isoamyl alcohol , ready-to-use, for extraction of nucleic acids

article number: **A156**

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
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. 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
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs 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.