

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH)



Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269
Version: 1.0 en

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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®-Mark
Article number	8269
Registration number (REACH)	not relevant (mixture)

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

Identified uses:	laboratory chemical laboratory and analytical use
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1.3 Details of the supplier of the safety data sheet

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

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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

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Signal word not required

2.3 Other hazards

There is no additional information.

Roti®-Mark BI-PINK Protein marker, prestained



article number: 8269

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
1,4-Dithiothreitol	CAS No 3483-12-3 EC No 222-468-7	< 10	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 Aquatic Chronic 3 / H412		
Sodium dodecyl sulphate	CAS No 151-21-3 EC No 205-788-1 REACH Reg. No 01-2119489461-32-xxxx	< 3	Flam. Sol. 2 / H228 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Chronic 3 / H412		Eye Dam. 1; H318: C ≥ 20 % Eye Irrit. 2; H319: 10 % ≤ C < 20 %

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 all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

None.

Hazardous combustion products

in case of fire and/or explosion do not breathe fumes

5.3 Advice for firefighters

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

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

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.

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures are necessary.

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.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

- **Ventilation requirements**

Use local and general ventilation.

- **Specific designs for storage rooms or vessels**

Recommended storage temperature: -20 °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)

Data are not available.

Relevant DNELs/DMELs/PNECs and other threshold levels

- **relevant DNELs of components of the mixture**

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium dodecyl sulphate	151-21-3	DNEL	285 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium dodecyl sulphate	151-21-3	DNEL	4.060 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

- **relevant PNECs of components of the mixture**

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Sodium dodecyl sulphate	151-21-3	PNEC	0,055 mg/l	water
Sodium dodecyl sulphate	151-21-3	PNEC	0,176 mg/l	freshwater
Sodium dodecyl sulphate	151-21-3	PNEC	0,018 mg/l	marine water
Sodium dodecyl sulphate	151-21-3	PNEC	1,35 mg/l	sewage treatment plant (STP)
Sodium dodecyl sulphate	151-21-3	PNEC	6,97 mg/kg	freshwater sediment

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Sodium dodecyl sulphate	151-21-3	PNEC	0,697 mg/kg	marine sediment
Sodium dodecyl sulphate	151-21-3	PNEC	1,29 mg/kg	soil

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.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 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.

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid (fluid)
Colour	dark violet
Odour	this information is not available
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	~ 7,5 (25 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	~ 100 °C at 1.013 hPa
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	This information is not available.
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Decomposition temperature	no data available
Viscosity	not determined
Explosive properties	Shall not be classified as explosive
Oxidising properties	none

9.2 Other information

There is no additional information.

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

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

No known hazardous reactions

10.4 Conditions to avoid

Keep away from heat.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
1,4-Dithiothreitol	3483-12-3	oral	400 mg/kg
Sodium dodecyl sulphate	151-21-3	oral	1.200 mg/kg
Sodium dodecyl sulphate	151-21-3	inhalation: dust/mist	1,5 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

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

• Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

data are not available

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

Frequently or prolonged contact with skin may cause dermal irritation

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
1,4-Dithiothreitol	3483-12-3	EC50	27 mg/l	daphnia magna	48 h
Sodium dodecyl sulphate	151-21-3	LC50	29 mg/l	fish	96 h
Sodium dodecyl sulphate	151-21-3	ErC50	>120 mg/l	algae	72 h
Sodium dodecyl sulphate	151-21-3	EC50	53 mg/l	algae	72 h

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sodium dodecyl sulphate	151-21-3	EC50	135 mg/l	microorganisms	3 h

12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
Sodium dodecyl sulphate	151-21-3	biotic/abiotic	90 %	28 d
Sodium dodecyl sulphate	151-21-3	carbon dioxide generation	95 %	28 d

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
1,4-Dithiothreitol	3483-12-3	-0,48
Sodium dodecyl sulphate	151-21-3	≤-2,03 (20 °C)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

Sewage disposal-relevant information

Do not empty into drains.

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.

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	(not subject to transport regulations)
14.2	UN proper shipping name	not relevant
14.3	Transport hazard class(es)	not relevant
	Class	-
14.4	Packing group	not relevant
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)
14.6	Special precautions for user	
	There is no additional information.	

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

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 of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

Not subject to ADR, RID and ADN.

• **International Maritime Dangerous Goods Code (IMDG)**

Not subject to IMDG.

• **International Civil Aviation Organization (ICAO-IATA/DGR)**

Not subject to ICAO-IATA.

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)

• **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

• **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

• **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

• **Restrictions according to REACH, Annex XVII**

Name of substance	CAS No	Wt%	Type of registration	Conditions of restriction	No
Sodium dodecyl sulphate		2	1907/2006/EC annex XVII	R3	3
Sodium dodecyl sulphate		2	1907/2006/EC annex XVII	R40	40
1,4-Dithiothreitol		5	1907/2006/EC annex XVII	R3	3

Legend

R3

- Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
- Articles not complying with paragraph 1 shall not be placed on the market.
- Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and,
 - present an aspiration hazard and are labelled with R65 or H304,
- Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
- Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
 - grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
 - lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
- No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.

Roti®-Mark BI-PINK Protein marker, prestained

article number: **8269**

Legend

- R40
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
- metallic glitter intended mainly for decoration,
 - artificial snow and frost,
 - 'whoopie' cushions,
 - silly string aerosols,
 - imitation excrement,
 - horns for parties,
 - decorative flakes and foams,
 - artificial cobwebs,
 - stink bombs.
2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

• Restrictions according to REACH, Title VIII

None.

• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

none of the ingredients are listed

• 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
	not assigned		

• Directive 75/324/EEC relating to aerosol dispensers

Filling batch

Deco-Paint Directive (2004/42/EC)

VOC content	2 %
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Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	0 %
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Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

Roti®-Mark BI-PINK Protein marker, prestained

article number: 8269

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors

none of the ingredients are listed

National inventories

Country	National inventories	Status
AU	AICS	not all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	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	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	not all ingredients are listed

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
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
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

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
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 européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH)



Roti®-Mark BI-PINK Protein marker, prestained

article number: **8269**

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
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)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Sol.	flammable solid
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
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
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
STOT SE	specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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

not relevant.

Code	Text
H228	flammable solid
H302	harmful if swallowed
H315	causes skin irritation
H318	causes serious eye damage
H319	causes serious eye irritation
H332	harmful if inhaled
H335	may cause respiratory irritation
H412	harmful to aquatic life with long lasting effects

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.