

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: **2972**  
Version: **GHS 3.0 en**  
Replaces version of: 2020-01-22  
Version: (GHS 2)

date of compilation: 2019-07-05  
Revision: 2021-08-16

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

### 1.1 Product identifier

Identification of the substance **Density standard 1,0792 g/ml (20 °C)**  
ROTI(R)Calipure

Article number 2972

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

Relevant identified uses: Laboratory and analytical use  
Laboratory chemical

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
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
2.6	Flammable liquid	3	Flam. Liq. 3	H226

Supplemental hazard information

Code	Supplemental hazard information
EUH066	repeated exposure may cause skin dryness or cracking

For full text of abbreviations: see SECTION 16

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

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

The product is combustible and can be ignited by potential ignition sources.

## 2.2 Label elements

### Labelling

#### Signal word

Warning

#### Pictograms

GHS02



#### Hazard statements

H226 Flammable liquid and vapour

#### Precautionary statements

##### Precautionary statements - prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 Keep container tightly closed  
P241 Use explosion-proof electrical/ventilating/lighting equipment  
P280 Wear protective gloves/protective clothing/eye protection/face protection

##### Precautionary statements - response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction

##### Precautionary statements - storage

P403+P235 Store in a well-ventilated place. Keep cool

##### Precautionary statements - disposal

P501 Dispose of contents/container to industrial combustion plant

#### Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

## 2.3 Other hazards

### 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

# Safety data sheet



acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

## Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Pentanol, isomers	CAS No 30899-19-5	≥ 10 - < 20	Flam. Liq. 3 / H226 Acute Tox. 4 / H332 STOT SE 3 / H335 EUH066	 	C(a)

### Notes

C(a): Mixture of isomers

For full text of abbreviations: see SECTION 16

## 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.

#### 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

Vomiting

### 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

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

## 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 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.

## 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

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. 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.

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

## 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.

### 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)

Data are not available.

### 8.2 Exposure controls

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

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

### • 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

Butyl caoutchouc (butyl rubber)

### • material thickness

0,7mm

### • 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	138 °C
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	1.3 vol% - 10.5 vol%
Flash point	49 °C
Auto-ignition temperature	300 °C
Decomposition temperature	not relevant
pH (value)	not determined (neutral)
Kinematic viscosity	not determined

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

### Solubility(ies)

Water solubility not determined

### Partition coefficient

Partition coefficient n-octanol/water (log value): this information is not available

Vapour pressure 3.1 hPa at 20 °C

Density 1.079 g/cm<sup>3</sup> at 20 °C

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: There is no additional information.

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.

#### **If heated**

Risk of ignition. 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

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

## 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

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Pentanol, isomers	30899-19-5	inhalation: vapour	11 mg <sub>i</sub> /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.

##### 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

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.

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

#### • If swallowed

vomiting

#### • If in eyes

Data are not available.

#### • If inhaled

Data are not available.



# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

- **If on skin**

repeated exposure may cause skin dryness or cracking

- **Other information**

none

## 11.2 Endocrine disrupting properties

None of the ingredients are listed.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### **Biodegradation**

Data are not available.

### 12.2 Process of degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 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.

#### **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**

H3 Flammable liquids

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

## 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 1105
IMDG-Code	UN 1105
ICAO-TI	UN 1105

### 14.2 UN proper shipping name

UN RTDG	PENTANOLS
IMDG-Code	PENTANOLS
ICAO-TI	Pentanol

### 14.3 Transport hazard class(es)

UN RTDG	3
IMDG-Code	3
ICAO-TI	3

### 14.4 Packing group

UN RTDG	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

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	1105
Class	3
Packing group	III
Danger label(s)	3



# Safety data sheet

acc. to Safe Work Australia - Code of Practice



Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

**Excepted quantities (EQ)** E1  
UN RTDG

**Limited quantities (LQ)** 5 L  
UN RTDG

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

Proper shipping name PENTANOLS  
Particulars in the shipper's declaration UN1105, PENTANOLS, 3, III, 49°C c.c.  
Marine pollutant -  
Danger label(s) 3



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 Pentanols  
Particulars in the shipper's declaration UN1105, Pentanols, 3, III  
Danger label(s) 3



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

There is no additional information.

#### National regulations(Australia)

#### Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

#### 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

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	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
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
2.1		Supplemental hazard information: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: The product is combustible and can be ignited by potential ignition sources.	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Hazardous ingredients for labelling: Polyethylene glycol		yes
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

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
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: Polyethylene glycol		yes
2.3	Other hazards: There is no additional information.	Other hazards	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
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Flam. Liq.	Flammable liquid
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
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
STOT SE	Specific target organ toxicity - single exposure
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Density standard 1,0792 g/ml (20 °C) ROTI(R)Calipure

article number: 2972

### 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 chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

### Disclaimer

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