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

# n-Heptane ROTICHROM® GC

#### article number: **1YH9** Version: **1.0 en**

date of compilation: 2022-12-19

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

1.1 Product identifier

Identification of the substance

Article number

EC number

CAS number

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

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205-563-8

142-82-5

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 :Department Health, Safety and Environment sheet:

## 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	2	Flam. Liq. 2	H225
3.2	Skin corrosion/irritation Specific target organ toxicity - single exposure (narcotic effects, drowsiness)		Skin Irrit. 2	H315
3.8D			STOT SE 3	H336
3.10	Aspiration hazard	1	Asp. Tox. 1	H304



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Section	ection Hazard class		Hazard class and category	Hazard statement
4.1A	A Hazardous to the aquatic environment - acute hazard		Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

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

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

# Labelling

Signal word Danger

# Pictograms

GHS02, GHS07, GHS08, GHS09

# **Hazard statements**

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H410	Very toxic to aquatic life with long lasting effects

## **Precautionary statements**

#### **Precautionary statements - prevention**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition
	sources. No smoking
P273	Avoid release to the environment

#### **Precautionary statements - response**

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing
P331	Do NOT induce vomiting

# **Precautionary statements - storage**

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

## 2.3 Other hazards

# Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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3.1

# **SECTION 3: Composition/information on ingredients**

Substances	
Name of substance	n-Heptane
Molecular formula	$C_7H_{16}$
Molar mass	100,2 <sup>g</sup> / <sub>mol</sub>
CAS No	142-82-5
EC No	205-563-8

# **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

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

#### **Following ingestion**

Call a physician immediately. Observe aspiration hazard if vomiting occurs.

- **4.2 Most important symptoms and effects, both acute and delayed** Aspiration hazard, Irritation, Headache, Vertigo, Dizziness, Drowsiness, Narcosis
- **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

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# 5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapourair 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

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. 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. Retain contaminated washing water and dispose of it. 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.

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# 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. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

#### Measures to protect the environment

Avoid release to the environment.

## 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

Store in a well-ventilated place. 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)**

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
EU	n-heptane	142-82-5	IOELV	500	2.085						2000/39/ EC
GB	n-heptane	142-82-5	WEL	500	2.085						EH40/ 2005

Notation

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

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#### Notation

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)

#### Human health values

#### Relevant DNELs and other threshold levels

Endpoint Threshold level		Protection goal, route of exposure	Used in	Exposure time	
	DNEL 2.085 mg/m <sup>3</sup> human, inhala		human, inhalatory	worker (industry)	chronic - systemic effects
	DNEL 300 mg/kg bw/ human, dermal day		worker (industry)	chronic - systemic effects	

#### 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 consider-able 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

NBR (Nitrile 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.

Flame-retardant protective clothing.

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#### **Respiratory protection**



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65  $^{\circ}$ 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	like: - Gasoline
Melting point/freezing point	-90,5 °C
Boiling point or initial boiling point and boiling range	98,2 – 98,4 °C at 100 kPa (ECHA)
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	35 g/m³ (LEL) - 280 g/m³ (UEL) / 0,84 vol% (LEL) - 6,7 vol% (UEL)
Flash point	-4 °C (ECHA)
Auto-ignition temperature	204 °C (ECHA) (auto-ignition temperature (liquids and gases))
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	0,641 <sup>mm²</sup> / <sub>s</sub> at 20 °C
Dynamic viscosity	0,4423 cP at 20 °C
Solubility(ies)	
Water solubility	0,002 <sup>g</sup> / <sub>l</sub> at 25 °C (ECHA)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	4,5 (ECHA)
Soil organic carbon/water (log KOC)	2,38 (ECHA)
Vapour pressure	6,09 kPa at 25 °C
Density and/or relative density	
Density	0,68 – 0,69 <sup>g</sup> / <sub>cm³</sub> at 20 °C
Relative vapour density	3,46 (air = 1)
• •	

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	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:	
	Gas group (explosion group)	IIA Maximum Experimental Safe Gap value; MESG > 0,9 mm
	Maximum explosion pressure	9,4 bar
	Surface tension	19,66 <sup>mN</sup> / <sub>m</sub> (25 °C) (ECHA)

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

It's a reactive substance. 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

## 10.4 Conditions to avoid

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

# 10.5 Incompatible materials

Rubber articles, different plastics

# **10.6** Hazardous decomposition products

Hazardous combustion products: see section 5.

# **SECTION 11: Toxicological information**

# **11.1** Information on toxicological effects

## **Classification acc. to GHS**

## Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful in contact with skin or if inhaled.

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number: <b>1YH9</b>							
Acute toxicity							
Exposure route	Endpoint	Value	Species	Method	Source		
oral	LD50	>5.000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA		
inhalation: vapour	LC50	>29,29 <sup>mg</sup> / <sub>l</sub> /4h	rat		ECHA		
dermal	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rabbit		ECHA		

#### Skin corrosion/irritation

Causes skin irritation.

## 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

May cause drowsiness or dizziness.

# Specific target organ toxicity - repeated exposure

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

## **Aspiration hazard**

May be fatal if swallowed and enters airways.

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

## • If swallowed

aspiration hazard

## • If in eyes

causes slight to moderate irritation

## • If inhaled

headache, vertigo, dizziness, fatigue, narcosis

# • If on skin

causes skin irritation

# Other information

none

11.2 Endocrine disrupting properties Not listed.

# 11.3 Information on other hazards

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There is no additional information.

# **SECTION 12: Ecological information**

# 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)					
Endpoint Value Species Source Exposure					
EC50	0,64 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	ECHA	48 h	

Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
EC50	0,23 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	ECHA	21 d

# 12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
oxygen depletion	28,2 %	2 d

## 12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

n-octanol/water (log KOW)	4,5 (ECHA)
BCF	552 (ECHA)

# 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	2,38 (ECHA)
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# 12.5 Results of PBT and vPvB assessment

Data are not available.

# **12.6 Endocrine disrupting properties** Not listed.

# 12.7 Other adverse effects

Data are not available.

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# **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. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### 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.

#### Properties of waste which render it hazardous

- HP 3 flammable
- HP 4 irritant skin irritation and eye damage
- HP 5 specific target organ toxicity (STOT)/aspiration toxicity
- HP 14 ecotoxic

#### 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

1 - 1 - 1		
	ADRRID	UN 1206
	IMDG-Code	UN 1206
	ICAO-TI	UN 1206
14.2	UN proper shipping name	
	ADRRID	HEPTANES
	IMDG-Code	HEPTANES
	ICAO-TI	Heptanes
14.3	Transport hazard class(es)	
	ADRRID	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	
	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II

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- **14.5** Environmental hazards hazardous to the aquatic environment
- 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

# Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information

Proper shipping name	HEPTANES
Particulars in the transport document	UN1206, HEPTANES, 3, II, (D/E), environmentally hazardous
Classification code	F1
Danger label(s)	3, "Fish and tree"
Environmental hazards	<b>YES</b> (hazardous to the aquatic environment)
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D/E
Hazard identification No	33
Emergency Action Code	3YE
Emergency Action Code Regulations concerning the International Carri information	-
Regulations concerning the International Carrie	-
Regulations concerning the International Carrie information	age of Dangerous Goods by Rail (RID)Additional
Regulations concerning the International Carrie information Classification code	age of Dangerous Goods by Rail (RID)Additional
Regulations concerning the International Carrie information Classification code	age of Dangerous Goods by Rail (RID)Additional
Regulations concerning the International Carrie information Classification code Danger label(s)	F1 Fish and tree Yes
Regulations concerning the International Carrie information Classification code Danger label(s)  Environmental hazards	Age of Dangerous Goods by Rail (RID)Additional F1 3 Fish and tree Yes Hazardous to water
Regulations concerning the International Carrie information Classification code Danger label(s)  Environmental hazards Excepted quantities (EQ)	Age of Dangerous Goods by Rail (RID)Additional F1 3 Fish and tree Yes Hazardous to water E2
Regulations concerning the International Carrie information Classification code Danger label(s)  Environmental hazards Excepted quantities (EQ) Limited quantities (LQ)	Age of Dangerous Goods by Rail (RID)Additional F1 3 Fish and tree Yes Hazardous to water E2 1 L



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International Maritime Dangerous Goods	Code (IMDG) - Additional information
Proper shipping name	HEPTANES
Particulars in the shipper's declaration	UN1206, HEPTANES, 3, II, -4°C c.c., MARINE POL- LUTANT
Marine pollutant	<b>yes (P)</b> (hazardous to the aquatic environment)
Danger label(s)	3, "Fish and tree"
Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-D
Stowage category	В
International Civil Aviation Organization (	ICAO-IATA/DGR) - Additional information
Proper shipping name	Heptanes
Particulars in the shipper's declaration	UN1206, Heptanes, 3, II
Environmental hazards	<b>yes</b> (hazardous to the aquatic environment)
Danger label(s)	3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 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 ap- plication of lower and upper-tier re- quirements				
E1	environmental hazards (hazardous to the aquatic en- vironment, cat. 1)	100 200	56)	

#### Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

# **Deco-Paint Directive**

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Industrial Emissions Directive (IED)		
VOC content	100 %	
VOC content	690 <sup>g</sup> /l	

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

not listed

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

not listed

#### Water Framework Directive (WFD)

not listed

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

not listed

#### **Regulation on drug precursors**

not listed

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

not listed

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

not listed

## **Regulation on persistent organic pollutants (POP)**

not listed

## National regulations(GB)

# List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list not 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	Νο	
n-Heptane	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3	
n-Heptane	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.

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	Ν	ati	iona	al iı	nve	nto	ries
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Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed as "ACTIVE"

#### Legend

Legena	
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 registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

# 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

# **SECTION 16: Other information**

# Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in imple- mentation of Council Directive 98/24/EC
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level

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Abbr.	Descriptions of used abbreviations
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
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
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 Na- tions
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)
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
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).

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



# n-Heptane ROTICHROM® GC

article number: 1YH9

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

Code	Text
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

# Disclaimer

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