

Page 1 of 17
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 07.11.2018 / 0003
Replacing version dated / version: 07.05.2018 / 0002
Valid from: 07.11.2018
PDF print date: 07.11.2018
TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

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

Relevant identified uses of the substance or mixture:

Additives
Leak detector

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Dometic WAECO International GmbH, Hollefeldstr. 63, 48282 Emsdetten, Germany
Phone:+49 (0) 2572 879 0, Fax:+49 (0) 2572 879 300
info@dometic-waeco.de, www.airconservice.de

GB
Dometic UK Ltd Dometic House, The Brewery, DT11 9LS Blandford St Mary, Dorset, United Kingdom
Phone:+44 (0) 0844 626 0133, Fax:+44 (0) 0844 626 0143
automotive@dometic.co.uk, www.airconstations.co.uk

IRL
Dometic UK Ltd Dometic House, The Brewery, DT11 9LS Blandford St Mary, Dorset, United Kingdom
Phone:+44 (0) 0844 626 0133, Fax:+44 (0) 0844 626 0143
automotive@dometic.co.uk, www.airconstations.co.uk

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

IRL
National Poisons Information Centre, Beaumont Hospital, Dublin 9, Ireland, Tel.:
+353 (0)1 809 2166 (Public Poisons Info Line, 8am-10pm, 7 days a week)
+353 (0)1 809 2566 (Info for Healthcare Professionals ONLY, 24 h, 7 days a week)

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (CCWA)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic Acute	1	H400-Very toxic to aquatic life.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.

2.2 Label elements

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

H317-May cause an allergic skin reaction. H410-Very toxic to aquatic life with long lasting effects.

P273-Avoid release to the environment. P280-Wear protective gloves.
 P333+P313-If skin irritation or rash occurs: Get medical advice / attention.
 P501-Dispose of contents / container to an approved waste disposal facility.

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-methyl-.omega.-methoxy-

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-methyl-.omega.-methoxy-	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	---
CAS	24991-61-5
content %	60-70
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1, H317

Decyloxirane	
Registration number (REACH)	01-2119943390-42-XXXX
Index	---
EINECS, ELINCS, NLP	220-667-3
CAS	2855-19-8
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)

Dodecyloxirane	
Registration number (REACH)	01-2119943387-29-XXXX
Index	---
EINECS, ELINCS, NLP	221-781-6
CAS	3234-28-4
content %	1-2,5

Page 3 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)
--	--

Tris(methylphenyl) phosphate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	215-548-8
CAS	1330-78-5
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Repr. 2, H361fd Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

2,6-di-tert-butyl-p-cresol	
Registration number (REACH)	01-2119555270-46-XXXX
Index	---
EINECS, ELINCS, NLP	204-881-4
CAS	128-37-0
content %	0,01-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
 Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.
 Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

Eye contact

Remove contact lenses.
 Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.
 Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
 In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

- Coughing
- eyes, reddened
- Watering eyes
- reddening of the skin
- Allergic reaction
- Irritation of the mouth and throat

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 07.11.2018 / 0003

Replacing version dated / version: 07.05.2018 / 0002

Valid from: 07.11.2018

PDF print date: 07.11.2018

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO₂/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Toxic gases

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unprotected persons away.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Under all circumstances prevent penetration into the soil.

Page 5 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Protect from direct sunlight and warming.
 Store in a well-ventilated place.
 Store cool.
 Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB	Chemical Name	2,6-di-tert-butyl-p-cresol	Content %:0,01- <1
	WEL-TWA: 10 mg/m3	WEL-STEL: ---	---
	Monitoring procedures: ---		
	BMGV: ---	Other information: ---	
IRL	Chemical Name	2,6-di-tert-butyl-p-cresol	Content %:0,01- <1
	OELV-8h: 10 mg/m3	OELV-15min: ---	---
	Monitoring procedures: ---		
	BLV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

OELV-8h = Occupational Exposure Limit Value (8-hour reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | OELV-15min = Occupational Exposure Limit Value (15-minute reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BLV = Biological limit value | Other information: Carc1A, Carc1B = carcinogenic substance, Cat. 1A or 1B. Muta1A, Muta1B = mutagenic substance, Cat. 1A or 1B. Repr1A, Repr1B = Substances known to be toxic for reproduction, Cat. 1A or 1B. Sk = can be absorbed through skin. Asphx = asphyxiant. Sen = Respiratory sensitizer. BOELV = Binding Occupational Exposure Limit Values. IOELV = Indicative Occupational Exposure Limit Values.

8.2 Exposure controls

Decyloxirane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,171	µg/l	
	Environment - marine		PNEC	0,017	µg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,71	µg/l	
	Environment - sewage treatment plant		PNEC	3,6	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	6,25	mg/kg bw/d	

Page 6 of 17

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 07.11.2018 / 0003

Replacing version dated / version: 07.05.2018 / 0002

Valid from: 07.11.2018

PDF print date: 07.11.2018

TP-9825-0301: Tracer® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Consumer	Human - dermal	Long term, systemic effects	DNEL	6,25	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	10,9	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	10,4	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	36,7	mg/m3	

Dodecyloxirane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,002	µg/l	
	Environment - marine		PNEC	0,0002	µg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,024	µg/l	
	Environment - sewage treatment plant		PNEC	2,61	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	6,25	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	6,25	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	10,9	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	10,4	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	36,7	mg/m3	

2,6-di-tert-butyl-p-cresol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - soil		PNEC	1,04	mg/kg wwt	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment		PNEC	1,29	mg/kg wwt	
	Environment - marine		PNEC	0,4	µg/l	
	Environment - periodic release		PNEC	4	µg/l	
	Environment - freshwater		PNEC	4	µg/l	
	Environment - oral (animal feed)		PNEC	16,7	mg/kg	
	Environment - soil		PNEC	1,23	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,74	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5,8	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	8,3	mg/kg bw/day	

Tris(methylphenyl) phosphate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,000146	mg/l	
	Environment - sediment, freshwater		PNEC	0,0404	mg/l	
	Environment - sediment, marine		PNEC	0,00404	mg/l	
	Environment - soil		PNEC	0,000003	mg/l	
	Environment - marine		PNEC	0,000014	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	37	mg/kg bw/day	
Consumer	Human - dermal	Short term, local effects	DNEL	8	mg/cm ²	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1,67	mg/kg bw/day	
Consumer	Human - oral	Short term, systemic effects	DNEL	157,5	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,03	mg/kg	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,28	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,06	mg/m ³	
Workers / employees	Human - dermal	Short term, local effects	DNEL	16	mg/cm ²	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,33	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	74	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	1,11	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,47	mg/m ³	

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Page 8 of 17

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 07.11.2018 / 0003

Replacing version dated / version: 07.05.2018 / 0002

Valid from: 07.11.2018

PDF print date: 07.11.2018

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Chemical resistant protective gloves (EN 374).

If applicable

Protective nitrile gloves (EN 374)

Minimum layer thickness in mm:

>= 0,4

Permeation time (penetration time) in minutes:

>= 480

Protective hand cream recommended.

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

Normally not necessary.

If air supply is not sufficient, wear protective breathing apparatus.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellow
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	>35 °C
Flash point:	>100 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,864 (relative density)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	>20,5 mm ² /s (Not determined)
Explosive properties:	Product is not explosive.
Oxidising properties:	No

9.2 Other information

Page 9 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Miscibility: Not determined
 Fat solubility / solvent: Not determined
 Conductivity: Not determined
 Surface tension: Not determined
 Solvents content: Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Heating, open flame, ignition sources

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:		30	%			of the mixture consists of component(s) of unknown toxicity.

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-methyl-omega.-methoxy-						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:						Sensitising

Page 10 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Aspiration hazard:						No
--------------------	--	--	--	--	--	----

Decyloxirane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)

Dodecyloxirane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)

Tris(methylphenyl) phosphate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>3700	mg/kg	Rat		Analogous conclusion
Acute toxicity, by dermal route:	LD0	10000	mg/kg	Rabbit		Analogous conclusion
Acute toxicity, by inhalation:	LC50	11,1	mg/l/1h			Aerosol
Skin corrosion/irritation:						Slightly irritant
Serious eye damage/irritation:						Slightly irritant
Respiratory or skin sensitisation:				Guinea pig		Negative
Germ cell mutagenicity:					(Ames-Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Positive
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	250	mg/kg	Rat		

2,6-di-tert-butyl-p-cresol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2930	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:						Slightly irritant
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Slightly irritant

Page 11 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Respiratory or skin sensitisation:				Human being		Not sensitising
Germ cell mutagenicity:					(Ames-Test)	Negative
Germ cell mutagenicity:				Mammalian	in vitro	Negative
Reproductive toxicity:	NOAEL	100	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	25	mg/kg	Rat		(28 d)
Symptoms:						mucous membrane irritation

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-methyl-.omega.-methoxy-							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Decyloxirane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.1. Toxicity to daphnia:	EC50	48h	0,171	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,056	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,00416	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

Dodecyloxirane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to algae:	EC50	72h	0,00236	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

Page 12 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

12.1. Toxicity to algae:	NOEC/NOEL	72h	0,00165	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
--------------------------	-----------	-----	---------	------	-------------------------------------	---	--

Tris(methylphenyl) phosphate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	0,6	mg/l			
12.1. Toxicity to fish:	NOEC/NOEL	28d	0,01	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	0,14	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	0,4	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:			80	%			
12.3. Bioaccumulative potential:	BCF		144				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		>10000 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

2,6-di-tert-butyl-p-cresol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>0,57	mg/l		QSAR	
12.1. Toxicity to fish:	NOEC/NOEL	42d	0,053	mg/l	Oryzias latipes	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	LC50	48h	0,61	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,07	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,5	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	1	mg/l		OECD 201 (Alga, Growth Inhibition Test)	

Page 13 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

12.2. Persistence and degradability:		28d	4,5	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not readily biodegradable
12.3. Bioaccumulative potential:	BCF		330-1800				
12.3. Bioaccumulative potential:			230-2500		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	56d
12.3. Bioaccumulative potential:	Log Pow		5,1				High
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge		
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Water solubility:			0,00076	g/l			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

07 03 99 wastes not otherwise specified

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Untamminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

14.1. UN number: 3082

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DECYLOXIRANE, DODECYLOXIRANE)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Classification code: M6



Page 14 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

LQ: 5 L
 14.5. Environmental hazards: environmentally hazardous
 Tunnel restriction code: -

Transport by sea (IMDG-code)

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DECYLOXIRANE,DODECYLOXIRANE)
 14.3. Transport hazard class(es): 9
 14.4. Packing group: III
 EmS: F-A, S-F
 Marine Pollutant: Yes
 14.5. Environmental hazards: environmentally hazardous



Transport by air (IATA)

14.2. UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (DECYLOXIRANE,DODECYLOXIRANE)
 14.3. Transport hazard class(es): 9
 14.4. Packing group: III
 14.5. Environmental hazards: environmentally hazardous



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.
 Minimum amount regulations have not been taken into account.
 Danger code and packing code on request.
 Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
 Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E1		100	200
E2		200	500

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 0,63 %

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2
 Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.

Page 15 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 07.11.2018 / 0003
 Replacing version dated / version: 07.05.2018 / 0002
 Valid from: 07.11.2018
 PDF print date: 07.11.2018
 TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Acute 1, H400	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

- Skin Sens. — Skin sensitization
- Aquatic Acute — Hazardous to the aquatic environment - acute
- Aquatic Chronic — Hazardous to the aquatic environment - chronic
- Skin Irrit. — Skin irritation
- Repr. — Reproductive toxicity

Any abbreviations and acronyms used in this document:

- AC Article Categories
- acc., acc. to according, according to
- ACGIH American Conference of Governmental Industrial Hygienists
- ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
- AOEL Acceptable Operator Exposure Level
- AOX Adsorbable organic halogen compounds
- approx. approximately
- Art., Art. no. Article number
- ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
- BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
- BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
- BCF Bioconcentration factor
- BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
- BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
- BMGV Biological monitoring guidance value (EH40, UK)
- BOD Biochemical oxygen demand
- BSEF Bromine Science and Environmental Forum
- bw body weight
- CAS Chemical Abstracts Service
- CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
- CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
- CIPAC Collaborative International Pesticides Analytical Council
- CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
- CMR carcinogenic, mutagenic, reproductive toxic
- COD Chemical oxygen demand
- CTFA Cosmetic, Toiletry, and Fragrance Association
- DMEL Derived Minimum Effect Level
- DNEL Derived No Effect Level
- DOC Dissolved organic carbon

Page 16 of 17

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 07.11.2018 / 0003

Replacing version dated / version: 07.05.2018 / 0002

Valid from: 07.11.2018

PDF print date: 07.11.2018

TP-9825-0301: Tracer® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ERC Environmental Release Categories
ES Exposure scenario
etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category

Page 17 of 17

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 07.11.2018 / 0003

Replacing version dated / version: 07.05.2018 / 0002

Valid from: 07.11.2018

PDF print date: 07.11.2018

TP-9825-0301: Tracer ® UV additive for R1234yf air conditioners, Tracer Kartusche 14,8 ml

PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical

identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.