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

refrigerant R 134a
8887100007
1,1,1,2-Tetrafluoroethane
Registration number (ECHA): --
Index: ---
EINECS, ELINCS, NLP: 212-377-0
CAS: 811-97-2

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Refrigerant
Sector of use [SU]:
SU17 - General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment.
Chemical product category [PC]:
PC16 - Heat transfer fluids
Process category [PROC]:
PROC 1 - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC 5 - Mixing or blending in batch processes
PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC20 - Use of functional fluids in small devices
Article Categories [AC]:
AC 1 - Vehicles
AC 2 - Machinery, mechanical appliances, electrical/electronic articles
Environmental Release Category [ERC]:
ERC 2 - Formulation into mixture
ERC 9a - Widespread use of functional fluid (indoor)
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
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
www.waeco.de

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)

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 12.05.2016 / 0005
Replacing version dated / version: 13.07.2015 / 0004
Valid from: 12.05.2016
PDF print date: 19.05.2017
refrigerant R 134a
8887100007

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
Press. Gas	(Comp.)	H280-Contains gas under pressure, may explode if heated.

2.2 Label elements
Labeling according to Regulation (EC) 1272/2008 (CLP)

1,1,1,2-Tetrafluoroethane
CAS: 811-97-2, Index:--- EC: 212-377-0

Warning

H280-Contains gas under pressure, may explode if heated.

P410+P403-Protect from sunlight. Store in a well-ventilated place.

Contains fluorinated greenhouse gases.

2.3 Other hazards
No vPvB substance
No PBT substance
Danger of bursting (explosion) when heated
Liquid projections or spray may cause frostbite.
In high doses:
Narcotic effect.

SECTION 3: Composition/information on ingredients

3.1 Substance

1,1,1,2-Tetrafluoroethane	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	212-377-0
CAS	811-97-2
content %	
Classification according to Regulation (EC) 1272/2008 (CLP)	---

3.2 Mixture
n.a.

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 3.1/3.2 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
Inhalation
Remove person from danger area.
Assure the safety of the rescuer.
Supply person with fresh air. Call doctor immediately.
If the person is unconscious, place in a stable side position and consult a doctor.
Respiratory arrest - Artificial respiration apparatus necessary.
Keep affected persons warm.
Skin contact
Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.
Cover frostbite aseptically.
Eye contact
Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.
Consult medical specialist.
Ingestion
Typically no exposure pathway.
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.
with long-term contact:
Product removes fat.
Dermatitis (skin inflammation)
At high concentrations:
Suffocating effect.
Disturbed heart rhythm
Death
Skin contact:
Frostbite
Eye contact:
Frostbite
Risk of serious damage to eyes.
Watering eyes
Corrosive burns on skin as well as mucous membrane possible.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
4.3 Indication of any immediate medical attention and special treatment needed
Indications for the physician:
References
Corticosteroid controlled dosage aerosol
No administration of adrenaline-ephedrine preparations.
Inhalation of conflagration gases:
Pulmonary oedema prophylaxis

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media

Product is not combustible.
Adapt to the nature and extent of fire.

Unsuitable extinguishing media
None

5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Hydrofluoric acid
Toxic pyrolysis products.
Explosive mixtures of vapour and air may form.
Danger of bursting (explosion) when heated
Corrosive vapours
Room ventilation also at ground level.
suffocating effect.

5.3 Advice for firefighters
Protective respirator with independent air supply.
Full protection
Fire fighting only at a safe distance
Water mist
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
Ensure sufficient ventilation.
Avoid inhalation, and contact with eyes or skin.
Vapours heavier than air.

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 penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.
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.
Allow to evaporate.
If spray or gas escapes, ensure ample fresh air is available.

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.
Room ventilation also at ground level.
Avoid inhalation of the vapours.
Avoid contact with eyes or skin.
Keep away from sources of ignition - Do not smoke.
Take precautions against electrostatic charges.
Do not use on hot surfaces.
Use as far as possible in closed circuit plants/systems.
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.
Earth devices.

Avoid welding.

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.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.
Do not store with highly flammable, flammable, or self-igniting materials.
Do not store with flammable or self-igniting materials.
Suitable container:
Steel
Stainless steel (alloy steel)
Unsuitable container:
Various plastics
Store in a well ventilated place.
Store cool.
Observe special regulations for gases.
Store cool.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB **Chemical Name**	1,1,1,2-Tetrafluoroethane	Content %:
WEL-TWA: 1000 ppm (4240 mg/m3)	WEL-STEL: ---	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

IRL OELV-8h = Occupational Exposure Limit Value (8-hour reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction. | OELV-15min = Occupational Exposure Limit Value (15-minute reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction. | 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.

1,1,1,2-Tetrafluoroethane						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,1	mg/l	
	Environment - marine		PNEC	0,01	mg/l	
	Environment - periodic release		PNEC	1	mg/l	

	Environment - sediment, freshwater		PNEC	0,75	mg/kg dw	
	Environment - sewage treatment plant		PNEC	73	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2476	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	13936	mg/m3	

8.2 Exposure controls
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. EN 14042.
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 (EN 166) with side protection, with danger of projections.
Face protection (EN 166)

Skin protection - Hand protection: References
Chemical resistant protective gloves (EN 374).
Recommended
Protective gloves made of polyvinyl alcohol (EN 374)
If applicable
Insulating gloves EN 511 (cold)
Insulating gloves EN 407 (heat)
The breakthrough times determined in accordance with EN 374 Part 3 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).
Recommended
Neoprene® / Polychloroprene
Apron
Boots, double-lined (protection from frostbite) (EN ISO 20347).

Respiratory protection:
If OES or MEL is exceeded.
Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

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:	Liquefied gas
Colour:	Colourless
Odour:	Slightly
Odour:	Ether
Odour threshold:	Not determined
pH-value:	Neutral
Melting point/freezing point:	-26,3 °C (Setting point)
Initial boiling point and boiling range:	-101 °C
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not combustible.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	6,65 bar (25°C)
Vapour pressure:	13,18 bar (50°C)
Vapour density (air = 1):	4,32 (20°C)
Density:	1,21 g/ml (25°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	1,15 g/l (25°C)
Partition coefficient (n-octanol/water):	1,06
Auto-ignition temperature:	Not determined
Decomposition temperature:	>370 °C
Viscosity:	0,21 Pas (25°C)
Explosive properties:	Not determined
Oxidising properties:	No

9.2 Other information

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
See also Subsection 10.2 to 10.6.
The product has not been tested.

10.2 Chemical stability
See also Subsection 10.1 to 10.6.

10.3 Possibility of hazardous reactions
See also Subsection 10.1 to 10.6.
Avoid contact with other chemicals.

10.4 Conditions to avoid
See also section 7.
Heating, open flame, ignition sources
Pressure increase will result in danger of bursting.

Decomposition:
> 370°C

10.5 Incompatible materials

See also section 7.
Alkali metals
Magnesium
Aluminium
Zinc
Metals in powder form
Chlorine

10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.
See also section 5.2
Hydrofluoric acid
Danger of explosion
CF2O

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

1,1,1,2-Tetrafluoroethane						
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:	LC50	>2086	mg/l/4h			
Skin corrosion/irritation:						Mild irritant
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizising
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.

SECTION 12: Ecological information

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

1,1,1,2-Tetrafluoroethane							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	450	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	980	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>118	mg/l			
12.2. Persistence and degradability:		28d	3	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable

12.3. Bioaccumulative potential:	Log Pow		1,06				25°C
12.4. Mobility in soil:	Log Koc		~ 1,5				Product is slightly volatile., calculated value
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.
Toxicity to bacteria:	EC10	6h	>730	mg/l	Pseudomonas putida		
Other information:	AOX		100	%			
Ozone depletion potential (ODP):			0				Does not degrade ozone.
Global warming potential (GWP):	HGWP		1300				(HGWP = Halocarbon Global Warming Potential, R-11 = 1)
Water solubility:			1	g/l			25°C

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)
16 05 04 gases in pressure containers (including halons) containing hazardous substances
14 06 01 chlorofluorocarbons, HCFC, HFC
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.
Recommendation:
Return to manufacturer with residual pressure.
15 01 04 metallic packaging

SECTION 14: Transport information

General statements

14.1. UN number: 3159

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
UN 3159 1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT GAS R134A)

14.3. Transport hazard class(es): 2.2
14.4. Packing group: -
Classification code: 2A
LQ: 120 ml
14.5. Environmental hazards: Not applicable
Tunnel restriction code: C/E

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

REFRIGERANT GAS R 134A

14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
EmS:	F-C, S-V
Marine Pollutant:	n.a
14.5. Environmental hazards:	Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:
Refrigerant gas R 134a

14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
14.5. Environmental hazards:	Not applicable

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:
For products and equipment containing fluorinated greenhouse gases, please note Regulation (EU) No 517/2014 and Implementing Regulation (EU) 2015/2068.
Comply with trade association/occupational health regulations.

VOC --

Observe incident regulations.

TA air:
5.2.5

Incident regulations:
Annex II

15.2 Chemical safety assessment

There is no chemical safety report available.

SECTION 16: Other information

Revised sections: 2, 15
Observe special regulations for gases.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.
Employee training in handling dangerous goods is required.
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).
--- ---

Press. Gas (Comp.) — Gases under pressure-Compressed gas

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
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
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