

ISOFOL 2426 S

Version: 1.04

Revision Date 2019/03/20

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	ISOFOL 2426 S
REACH No.	01-2120099437-42-0000
Substance name (REACH / CLP)	Guerbet alcohols, C24-26, branched and cyclic

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

Use	Industrial use raw material for lubricants and lubricant additives Raw material for chemical processes process control substance raw material for industry
Uses advised against	

1.3 Details of the supplier of the safety data sheet

Company	SASOL Germany GmbH Anckelmannsplatz 1 20537 Hamburg
	Telephone: +49 40 63684-1000 Telefax: +49 40 63684-3700
Information (Product safety):	Telephone: + 49 (0) 23 65 - 49 47 05 Telefax: + 49 (0) 23 65 - 49 92 40
E-mail address	msds-info.germany@de.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+ 49 (0) 5 51 - 1 92 40 (GIZ-Nord Poisons Centre)
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

None known.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance in the meaning of regulation (EC) 1907/2006.

CHEMICAL CHARACTERIZATION**Guerbet alcohols, C24-26, branched and cyclic****component type:** Active ingredient**EC-No.:** 942-520-9**Index-No.:****CAS-No.:** 2041102-78-5**REACH No.:** 01-2120099437-42-0000**Substance name (REACH / CLP):** Guerbet alcohols, C24-26, branched and cyclic**COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES**

No hazardous ingredients

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	No hazards which require special first aid measures.
If inhaled	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
In case of skin contact	Wash off with soap and water.
In case of eye contact	Rinse with plenty of water.
If swallowed	Consult a physician if necessary. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	Symptoms: No information available. Risks: No information available.
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4.3 Indication of any immediate medical attention and special treatment needed

Indication of any immediate medical attention and special treatment needed	Treatment: No information available.
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Water, Foam, Dry powder, Carbon dioxide (CO2)
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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Dangerous gases or fumes may occur in case of fire.
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5.3 Advice for firefighters

Special protective equipment for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions	Handle in accordance with good industrial hygiene and safety practice.
Special precautions	Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

Advice on safe handling	No special technical protective measures required.
Advice on protection against fire and explosion	Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	No special storage conditions required.
Storage class (TRGS 510)	10: Combustible liquids not in Storage Class 3
Other data	Protect from frost, heat and sunlight.

7.3 Specific end use(s)

Specific use(s)	This information is not available.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****National occupational exposure limits**

No data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

No data available

8.2 Exposure controls**PERSONAL PROTECTIVE EQUIPMENT**

Respiratory protection	No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.
Hand protection	Coordinate hand protection with other chemicals used. Preventive hand protection is recommended., Use barrier cream regularly.
Eye protection	Safety glasses
Skin and body protection	Wear suitable protective equipment.
Hygiene measures	General industrial hygiene practice.
Protective measures	No special protective equipment required.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	liquid; 20 °C; 1,013 hPa
Form	liquid
Colour	colourless
Odour	alcohol-like
Odour Threshold	No valid method available
pH	Not applicable

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Melting point/range	-33 °C; 1,029 hPa; ASTM D97
Boiling point/boiling range	> 370 °C; 1,020 hPa; ASTM D 1120-94
Flash point	217 °C; 1,028 hPa; DIN ISO 2592
Evaporation rate	No data available
Flammability (solid, gas)	not applicable (liquid)
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	0.0000007 Pa; 20 °C; OECD Test Guideline 104 0.00055 Pa; 50 °C; OECD Test Guideline 104
Relative vapour density	> 1
Density	0.850 g/cm ³ ; 20 °C; ASTM D 7042
Relative density	0.8506; 20 °C; ASTM D 7042-04
Water solubility	< 0.0005 g/l; 20 °C; OECD Test Guideline 105
Partition coefficient: n-octanol/water	log Pow: 8.67; 25 °C; pH: 7; OECD Test Guideline 117
Ignition temperature	256 °C; 1,007 hPa; DIN 51794
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	124.4 mPas; 20 °C; ASTM D 7042
Viscosity, kinematic	146.2 mm ² /s; 20 °C; ASTM D 7042
Explosive properties	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note Stable at normal ambient temperature and pressure. No decomposition if stored and applied as directed.

10.2 Chemical stability

Note No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions None known.

10.4 Conditions to avoid

Conditions to avoid Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.

10.5 Incompatible materials to avoid

Materials to avoid None known.;

10.6 Hazardous decomposition products

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Hazardous decomposition products	No decomposition if stored normally.
Thermal decomposition	No decomposition if used as directed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Guerbet alcohols, C24-26, branched and cyclic: LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 423 Based on available data, the classification criteria are not met.
Acute inhalation toxicity	Guerbet alcohols, C24-26, branched and cyclic: The study is not necessary. Justification: Negligible or unlikely exposure pathways
Acute dermal toxicity	Guerbet alcohols, C24-26, branched and cyclic: LD50 Rabbit: > 2 ml/kg Symptoms: Local irritation (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Octyldodecan-1-ol Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Skin irritation	Guerbet alcohols, C24-26, branched and cyclic: Rabbit: Mild skin irritation; OECD Test Guideline 404 Based on available data, the classification criteria are not met.
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Serious eye damage/eye irritation

Eye irritation	Guerbet alcohols, C24-26, branched and cyclic: Rabbit: not irritating; OECD Test Guideline 405 Based on available data, the classification criteria are not met.
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Respiratory or skin sensitisation

Sensitisation	Guerbet alcohols, C24-26, branched and cyclic: Maximisation Test Guinea pig: not sensitizing (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Octyldodecan-1-ol Based on available data, the classification criteria are not met.
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Germ cell mutagenicity

Genotoxicity in vitro	Guerbet alcohols, C24-26, branched and cyclic: Ames test; Salmonella typhimurium; with and without metabolic activation: negative; OECD Test Guideline 471 Guerbet alcohols, C24-26, branched and cyclic: Chromosome aberration test in vitro; Human lymphocytes; with and without metabolic activation: Non mutagenic; OECD Test Guideline 473 The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Hexyldodecan-1-ol Guerbet alcohols, C24-26, branched and cyclic: Mammalian cell gene mutation assay; Chinese hamster ovary cells; with and
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	without metabolic activation: negative; OECD Test Guideline 476 The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Hexyldecan-1-ol
Genotoxicity in vivo	Guerbet alcohols, C24-26, branched and cyclic: The study is not necessary. Justification: In vitro tests did not show mutagenic effects
Remarks	Guerbet alcohols, C24-26, branched and cyclic: Based on available data, the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Guerbet alcohols, C24-26, branched and cyclic: The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. Category approach
Reproductive toxicity	
Reproductive toxicity	Guerbet alcohols, C24-26, branched and cyclic: Rat; Oral NOAEL ((parents)): > 1,000 mg/kg (based on body weight and day) NOAEL (F1): > 1,000 mg/kg (based on body weight and day) (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Docosan-1-ol
RemarksReproductive toxicity	Guerbet alcohols, C24-26, branched and cyclic: Based on available data, the classification criteria are not met.
Teratogenicity	Guerbet alcohols, C24-26, branched and cyclic: Rat; Oral NOAEL: 1,000 mg/kg (based on body weight and day) NOAEL (pregnant female): 1,000 mg/kg (based on body weight and day); OECD Test Guideline 414 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Octyldodecan-1-ol
Remarks-Teratogenicity	Guerbet alcohols, C24-26, branched and cyclic: Rabbit; Oral NOAEL: > 2,000 mg/kg (based on body weight and day) NOAEL (pregnant female): > 2,000 mg/kg (based on body weight and day) (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Docosan-1-ol
Remarks-Teratogenicity	Guerbet alcohols, C24-26, branched and cyclic: Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	Guerbet alcohols, C24-26, branched and cyclic: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	Guerbet alcohols, C24-26, branched and cyclic: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Guerbet alcohols, C24-26, branched and cyclic: Rat; Oral; Subchronic toxicity

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NOAEL: 839.6 mg/kg (based on body weight and day)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
(literature value)

Test substance: 2-Octyldodecan-1-ol

Guerbet alcohols, C24-26, branched and cyclic:

Rat; Oral; 182-day

NOAEL: 1,000 mg/kg (based on body weight and day); OECD Test Guideline 408
(literature value)

The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Test substance: Docosan-1-ol

Aspiration hazard**Aspiration toxicity**

Guerbet alcohols, C24-26, branched and cyclic:
Not applicable

Toxicological information

Guerbet alcohols, C24-26, branched and cyclic:
Toxicokinetics
The substance is metabolised and excreted.
Bioaccumulation is unlikely.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Toxicity to fish**

Guerbet alcohols, C24-26, branched and cyclic:
(48 h) *Leuciscus idus* (Golden orfe) ; static test; DIN 38412
In the range of water solubility not toxic under test conditions.
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 2-Octyldodecan-1-ol

Toxicity to fish - Chronic toxicity

Guerbet alcohols, C24-26, branched and cyclic:
The study is not necessary.
Justification:
Substance is readily biodegradable and has a low aquatic toxicity.

Toxicity to daphnia and other aquatic invertebrates

Guerbet alcohols, C24-26, branched and cyclic:
EC50 (48 h) *Daphnia magna* (Water flea): > 100 mg/l ; semi-static test; OECD Test Guideline 202
In the range of water solubility not toxic under test conditions.

Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity

Guerbet alcohols, C24-26, branched and cyclic:
The study is not necessary.
Justification:
Substance is readily biodegradable and has a low aquatic toxicity.

Toxicity to aquatic plants

Guerbet alcohols, C24-26, branched and cyclic:
(72 h) *Desmodesmus subspicatus* (green algae) ; static test; DIN 38412; In the range of water solubility not toxic under test conditions.
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-Octyldodecan-1-ol

Toxicity to bacteria

Guerbet alcohols, C24-26, branched and cyclic:
EC0 (3 h) activated sludge of a predominantly domestic sewage: > 1,000 mg/l; Respiration inhibition; OECD Test Guideline 209
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 2-Octyldodecan-1-ol

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Toxicity to soil dwelling organisms	Guerbet alcohols, C24-26, branched and cyclic: The study is not necessary. Justification: Readily biodegradable. unlikely direct and indirect exposure of the soil compartment
Toxicity to terrestrial flora	Guerbet alcohols, C24-26, branched and cyclic: The study is not necessary. Justification: Readily biodegradable. unlikely direct and indirect exposure of the soil compartment
Toxicity for other terrestrial non-mammalian fauna	Guerbet alcohols, C24-26, branched and cyclic: The study is not necessary. Justification: Readily biodegradable. unlikely direct and indirect exposure of the soil compartment
12.2 Persistence and degradability	
Biodegradability	Guerbet alcohols, C24-26, branched and cyclic: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B
12.3 Bioaccumulative potential	
Bioaccumulation	Guerbet alcohols, C24-26, branched and cyclic: Bioconcentration factor (BCF): < 100; calculated (literature value) Bioaccumulation is unlikely.
12.4 Mobility in soil	
Mobility	Guerbet alcohols, C24-26, branched and cyclic: Adsorption/Soil/Sewage sludge; log Koc: 8.92 - 9.79; OECD Test Guideline 121 immobile strong adsorption to soil The substance and its relevant degradation products decompose rapidly.
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	Guerbet alcohols, C24-26, branched and cyclic: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). Based on available data, the classification criteria are not met.
12.6 Other adverse effects	
General advice	Guerbet alcohols, C24-26, branched and cyclic: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Can be incinerated, when in compliance with local regulations.
Contaminated packaging	Empty remaining contents.
waste code of the European Union: EWC	A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. The waste code must be determined in agreement with the regional waste disposal authority or company.

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SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.2 Proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.3 Transport hazard class

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.4 Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No information available.

SECTION 15: REGULATORY INFORMATION

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

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NATIONAL/OTHER REGULATIONS

Legislation on the control of major-accident hazards involving dangerous substances

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
list entry in the directive:: Not applicable

NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	not listed (product or constituents are not listed)
US. Toxic Substances Control Act	TSCA	listed (product or constituents are listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	not listed (product or constituents are not listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	not listed (product or constituents are not listed)
Japan. Kashin-Hou Law List	ENCS (JP)	not listed (product or constituents are not listed)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	not listed (product or constituents are not listed)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	not listed (product or constituents are not listed)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	not listed (product or constituents are not listed)
China. Inventory of Existing Chemical Substances (IECSC)	INV (CN)	not listed (product or constituents are not listed)

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

15.2 Chemical safety assessment

Guerbet alcohols, C24-26, branched and cyclic

A Chemical Safety Assessment has been carried out for this substance. An annex to the MSDS is not required.

SECTION 16: OTHER INFORMATION

Safety datasheet sections which have been updated:

15. Regulatory information

Further information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material

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designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
AICS	Australian Inventory of Chemical Substances
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials (US)
BCF	Bioconcentration factor
CLP	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DIN	Deutsches Institut für Normung
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC...	Effect concentration ... %
ENCS	Existing Notified Chemical Substances (Japan)
EWG	European Waste Catalogue
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organization for Standardization
IUAPC	International Union of Pure and Applied Chemistry
KECI	Korea Existing Chemicals Inventory
LC...	Lethal Concentration, ...%
LD...	Lethal Dose, ...%
MARPOL	International Convention for the Prevention of Pollution From Ships
NDSL	Non-Domestic Substances List
NOAEL	no observable adverse effect level
NOEL/NOEC	No Observed-effect level/concentration
NZIoC	New Zealand Inventory of Chemicals
OECD	Organisation for Economic Co-operation and Development
PBT	persistent, bioaccumulative, toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
TG	Test Guideline
TRGS	Technische Regeln für Gefahrstoffe
TSCA	Toxic Substances Control Act
vPvB	very persistent, very bioaccumulative
WGK	Wassergefährdungsklasse