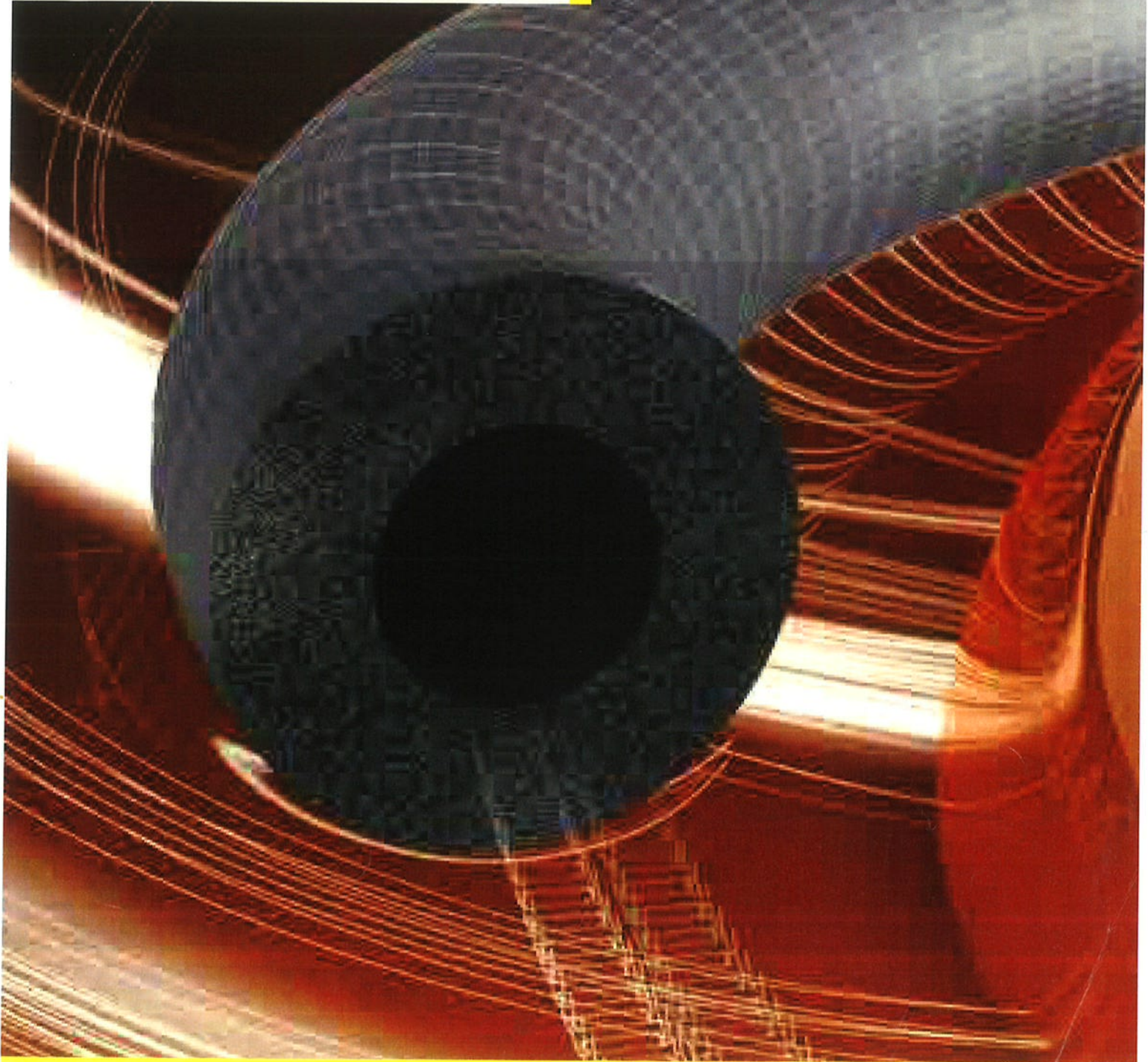


28 / 3 / 2017 - A RATING .
K-FLEX ▶ ST

ELMAT NO
MAT 04 - 1635800004

K-FLEX ST





K-FLEX ST

- ▶ ELASTOMERIC INSULATION FOR ALL CIVIL AND INDUSTRIAL APPLICATIONS
- ▶ HIGH PERFORMANCE FOR ALL APPLICATIONS IN A TEMPERATURE RANGE FROM -200 °C TO +110 °C
- ▶ PREVENTS THE RISK OF CONDENSATION AND IMPROVES ENERGY SAVING
- ▶ CLASS OF REACTION TO FIRE EUROCLASS BL-S2, D0
- ▶ VERY FINE CLOSED CELLULAR STRUCTURE AND HIGH TECHNICAL PERFORMANCE
- ▶ RESISTANT TO MOULD, FUNGI AND BACTERIA
- ▶ LIGHT AND FLEXIBLE

> Site <



> Video <



> App. Manual <



K-FLEX ▶ ST

TECHNICAL DATA ▶ K-FLEX ST TUBES



Property	Value	Test method
Temperature range	K-FLEX ST Tubes: from -165 °C* to +110 °C K-FLEX ST/SK: from -40 °C to +85 °C	EN 14706 EN 14707
Thermal conductivity λ W/(m•K)	Thicknesses $\leq$ 25mm -20 °C = 0,031 0 °C = 0,033 +20 °C = 0,035 +40 °C = 0,037 Thicknesses $>$ 25mm -20 °C = 0,034 0 °C = 0,036 +20 °C = 0,038 +40 °C = 0,040	EN 13787 EN ISO 8497
Corrosion problems	pH neutral (7 $\pm$ 0,5)	EN 13468
Permeability μ	$\geq$ 10000 $\geq$ 7000	EN 12086
Fire	K-FLEX ST TUBI Thickness up to 50 mm: Euroclass B _L -s2, d0 Thickness over 50 mm: Euroclass B _L -s3, d0 K-FLEX ST/SK: Euroclass B _L -s2, d0 Class 0	EN 13501-1 EN 13501-1 EN 13501-1 BS 476 Part 6/7

* For industrial applications, product can be applied down to -198°C; for applications below -40°C please contact our technical department.

K-FLEX reserves the right to change data and technical requirements without notice.

TECHNICAL DATA ▶ K-FLEX ST SHEETS



Property	Value	Test method
Temperature range	K-FLEX ST Sheets: from -165 °C* to +85 °C	EN 14706 EN 14707
Thermal conductivity λ W/(m•K)	Thicknesses $\leq$ 25mm -20 °C = 0,031 0 °C = 0,033 +20 °C = 0,035 +40 °C = 0,037 Thicknesses $>$ 25mm -20 °C = 0,034 0 °C = 0,036 +20 °C = 0,038 +40 °C = 0,040	EN 13787 EN 12667
Corrosion problems	pH neutral (7 $\pm$ 0,5)	EN 13468
Permeability μ	$\geq$ 10000 $\geq$ 7000	EN 12086
Fire	K-FLEX ST Sheets: Euroclass B-s3, d0 Class 0	EN 13501-1 BS 476 Part 6/7

* For industrial applications, product can be applied down to -198°C; for applications below -40°C please contact our technical department.

K-FLEX reserves the right to change data and technical requirements without notice.

RANGE ▶ K-FLEX ST



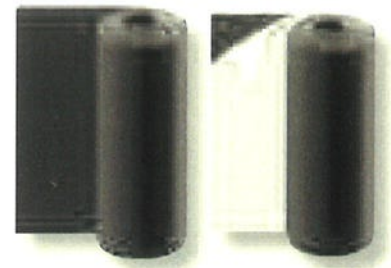
K-FLEX ST TUBES

K-FLEX ST products meet all the requirements demanded by civil and industrial refrigeration, air conditioning, plumbing, insulation of tanks, fittings, water pipes and all other applications that need thermal insulation.



K-FLEX ST/SK TUBES

K-FLEX ST/SK is a cut-to-length self-seal elastomeric insulation. This innovative technology includes adhesive tapes which are quick and easy to use for the installer. This new system has been developed to save on installation time and reduce the use of other adhesives to improve working conditions at the construction site.

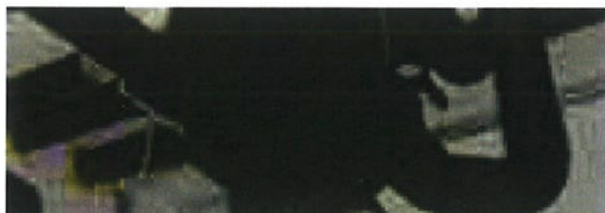


K-FLEX ST SHEETS

K-FLEX ST SHEETS are ideal for sheet metal ducts and large size pipes. The height of 1000/1500 mm minimises segmentation of the coating and simplifies installation, greatly reducing time and labour cost. Available in standard and adhesive.

PRODUCT RANGE ▶ K-FLEX ST

	LENGTH	THICKNESSES	DIAMETERS
K-FLEX ST - Tubes	2 m	6-9-13-19-25-32 40-50-60 mm	from 6 to 210 mm
K-FLEX ST/SK - Adhesive tubes	2 m	9-13-19-25-32 mm	from 12 to 114 mm
	THICKNESSES	HEIGHT	
K-FLEX ST - Sheets	3-6-10-13-16-19-25-32-40-50-60 mm	1000/1500 mm	
K-FLEX ST - Adhesive sheets	3-6-10-13-16-19-25-32-40-50 mm	1000/1500 mm	



PROJECTS ▶
K-FLEX ST

Germany



Product Information Sheet

in accordance with Regulation (CE) n.1907/2006 (REACH)

K-FLEX ST

1. IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Article/Mixture identification:

Trade name: K-FLEX ST
Shape: Sheet, tube, self-adhesive, tape
Trade code: isol001a

1.2. Relevant identified uses of the article/mixture and uses advised against

Recommended use:

Polymeric foam for thermal insulation

1.3. Details of the supplier of the information sheet:

Company:

L'Isolante K-Flex SpA
Via Don Locatelli, 35, 20877. Roncello, MB, Italy
Phone: +39 039 68 24.1

Competent person responsible for the information sheet:

Kflex-Reach@isolante.com

1.4. Emergency telephone number

Phone: +39 039 68 24.1 (9:00 – 17:00 hours)

In case of accident, locate the nearest antipoison centres in the following link:

WHO <http://apps.who.int/poisoncentres/>

2. HAZARDS IDENTIFICATION

2.1. Classification of the article:

The finished product consisting of a

Flexible elastomeric foam

it is not considered dangerous and has no risk factors under the conditions of its use.

It is an article according to REACH Regulation n. 1907/2006/CE and 2001/60/CE, it contains no substances included in Candidate List SVHC in quantities $\geq 0.1\%$ (w/w). Thus, it does not require a full SDS, according to Regulation 1907/2006/CE.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Symbols:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

None

2.3. Other hazards

PBT / vPvB substance: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Identification of the substance:

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K-FLEX ST

Not Available.

3.2. Article/Mixtures:

Articles of Flexible elastomeric foam in different shapes and dimensions.

4. FIRST AID MEASURES

4.1. Description of first aid measures

In case of skin contact:

During the processing of the product the contact with skin is unlikely. Use protective gloves.
The product has also no special risks related to its use.

In case of eyes contact:

During the processing of the product the contact with eyes is unlikely. The contact with the eyes can occur through contaminated hands or dust.
Rinse immediately with plenty of water and seek medical advice.
The product has also no special risks related to its use.

In case of ingestion:

Due to the particular shape of the product, is unlikely that the swallow occurs. The contact with the mouth can occur through contaminated hands or dust.
The product has also no special risks related to its use.

In case of Inhalation:

During the processing of the product, inhalation of particles and dust is unlikely.
The product has also no special risks related to its use.

4.2. Most important symptoms and effects, both acute and delayed

No known symptoms to date.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

No known treatment to date.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂). Chemical dry powder. Water spray.

Extinguishing media which must not be used for safety reasons:

No data available.

5.2. Special hazards arising from the substance or mixture

Burning smoke and fumes of carbon oxide (CO), carbon dioxide (CO₂), sulphur dioxide (SO₂) and alogens (Br, Cl).

5.3. Advice for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

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in accordance with Regulation (CE) n.1907/2006 (REACH)

K-FLEX ST

The product does not present any particular risk for the environment, however, do not allow to enter into soil/subsoil and the runoff into surface water or drains as a waste.

Retain contaminated washing water and dispose it.

In case of run-off into waterways, soil or drains as a waste, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Washing avoiding penetration of the pigments supported by the film into soil/subsoil, the runoff into surface water or drains.

Suitable material for taking up: absorbing material, organic, sand.

Wash with compatible material

6.4. Reference to other sections

See also section 8 and 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

The product can be handled without special precautions in the conditions required for its use.

However, avoid contact with skin and eyes through contaminated hands or dust.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage class (Germany only): LGK 13 non-flammable solid.

Keep away from food, drink and feed.

Incompatible materials:

Strong oxidizers and acids.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Polymeric foam for thermal insulation

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

None.

DNEL Exposure Limit Values

Not Available.

PNEC Exposure Limit Values

Not Available.

8.2. Exposure controls

Eye protection:

Goggles. Operate according good working practices.

Protection for skin:

Full suite. Operate according good working practices.

Protection for hands:

Disposable gloves. Operate according good working practices.

Respiratory protection:

Not needed for normal use. During the processing of the product the inhalation of the product and dust unlikely. Anyway, operate according good working practices.

Thermal Hazards:

Self-extinguishing.

Euroclass B.

Environmental exposure controls:.

Product Information Sheet

in accordance with Regulation (CE) n.1907/2006 (REACH)

K-FLEX ST

Local exhaust and general ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: solid
Odour: characteristic
pH: 7 (aqueous extraction)
Melting point: not applicable
Solid/gas flammability: Euroclass (EN 13501)
Water solubility: insoluble
Density: 40-150 kg/m³
Decomposition temperature: >200°C

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reaction may occur with strong oxidizing agent.

10.4. Conditions to avoid

Eliminate ignition sources.

10.5. Incompatible materials

Strong mineral acids (nitric acid, hydrochloric acid, sulfuric acid, hydrofluoric acid), bromine, chlorine, hydrogen peroxide, aniline, benzene, chloroform, Freon 11, fuel FAM, carbon tetrachloride, trichloroethylene and xylene (reaction moderate or intensive).

Avoid contact with strong oxidants

10.6. Hazardous decomposition products

Decomposition products in case of fire: carbon oxide (CO), carbon dioxide (CO₂), and alogens (Br, Cl).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information of the article:

Not Available.

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as not available:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

Product Information Sheet

in accordance with Regulation (CE) n.1907/2006 (REACH)

K-FLEX ST

12. ECOLOGICAL INFORMATION

- 12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment as a waste.
Ecotoxicological information of the article:
Not Available.
- 12.2. Persistence and degradability
Not Available.
- 12.3. Bioaccumulative potential
Not Available.
- 12.4. Mobility in soil
Not Available.
- 12.5. Results of PBT and vPvB assessment
None
- 12.6. Other adverse effects
None known to date.

13. DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods
Waste disposal according to local waste disposal regulation.
Preferebly waste disposal in landfill (solid waste).
For this product incineration is not recommended (due to the release of decomposition products) .
List I of Directive 76/464/EEC: Water pollution by discharges of certain dangerous substances.
Directive 80/68/EEC: on the protection of groundwater against pollution caused by certain dangerous substances.

14. TRANSPORT INFORMATION

- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
Not classified as dangerous in the meaning of transport regulations.
- 14.3. Transport hazard class(es)
Not classified as dangerous in the meaning of transport regulations.
- 14.4. Packing Group
Not classified as dangerous in the meaning of transport regulations.
- 14.5. Environmental hazards
Not classified as dangerous in the meaning of transport regulations.
- 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
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the article/mixture
Dir. 98/24/EC (Risk related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)

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K-FLEX ST

Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 830/2015
Regulation (EU) n. 1221/2015 (ATP 7 CLP)

Where applicable, refer to the following regulatory provisions :

Directive 76/464/EEC: Water pollution by discharges of certain dangerous substances
Directive 80/68/EEC: on the protection of groundwater against pollution caused by certain dangerous substances

VOC Regulations:

French Regulation DEVL1101903: VOC emission class A+

Compliance of AgBB/DIBt German Requirement of 2012.

Compliance of the Belgium Royal Decree to the indoor environment from construction product of 2012

15.2. Chemical Safety Assessment
No

16. OTHER INFORMATION

Based on the information received from suppliers, the product is an article according to REACH Regulation No. 1907/2006/CE and 2001/60/CE. It contains no substances included in Candidate List SVHC (Substances of Very High Concern) in quantities $\geq 0.1\%$ (w/w).
Thus, according to Regulation No. 1907/2006/CE, a full MSDS (Material Safety Data Sheet) is not necessary and it cannot be issued for articles free of SVHC substances

It is declared the presence, in the finished product, of accelerating and blowing substances (SVHC list) in traces ($<0.1\%$)

According to Article 33 of the REACH Regulation No. 1907/2006, any changes regarding the presence of SVHC will be promptly notified.

Sections changed since the previous version: 1

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECHA database

GESTIS Database

ACGIH Publication of 2012

Product Information Sheet

in accordance with Regulation (CE) n.1907/2006 (REACH)

K-FLEX ST

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
ICAO:	International Civil Aviation Organization.
IMDG:	International Maritime Code for Dangerous Goods.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
LGK	Storage classes (Germany only)
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.