

## Safety Data Sheet MI-KU THERM

Safety Data Sheet dated 10/10/2024, version 3

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

1.1. Product identifier

Mixture identification:

Trade name: MI-KU THERM  
Trade code: N958

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

Recommended use:

Coating material

1.3. Details of the supplier of the safety data sheet

Company:

SAN MARCO GROUP S.P.A.  
Via Alta 10  
30020 MARCON (VE) - Italy -  
Forli back office  
T. +39 0543 401840

Competent person responsible for the safety data sheet:

sicurezza.prodotti@sanmarcogroup.it

1.4. Emergency telephone number

Technical information: San Marco Group spa / Forli back office +39 0543 401840 (Monday – Friday 8.00-12.00 ; 13.30-17.30)

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### SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

None

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.

P501 Dispose of contents / container in accordance with national regulations.

Special Provisions:

EUH208 Contains 3-iodo-2-propynyl butylcarbamate. May produce an allergic reaction.

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH208 Contains reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq$  0.1%

Other Hazards:

No other hazards

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### SECTION 3: Composition/information on ingredients

3.1. Substances

N958/3

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N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 0.1% - < 0.25%	3-iodo-2-propynyl butylcarbamate	Index number: 616-212-00-7 CAS: 55406-53-6 EC: 259-627-5	<ul style="list-style-type: none"> <li>⚠ 3.1/3/Inhal Acute Tox. 3 H331</li> <li>⚠ 3.1/4/Oral Acute Tox. 4 H302</li> <li>⚠ 3.9/1 STOT RE 1 H372</li> <li>⚠ 3.3/1 Eye Dam. 1 H318</li> <li>⚠ 3.4.2/1 Skin Sens. 1 H317</li> <li>⚠ 4.1/A1 Aquatic Acute 1 H400 M=10.</li> <li>⚠ 4.1/C1 Aquatic Chronic 1 H410 M=1.</li> </ul>
>= 0.01% - < 0.05%	1,2-benzisothiazol- 3(2H)-one	Index number: 613-088-00-6 CAS: 2634-33-5 EC: 220-120-9	<ul style="list-style-type: none"> <li>⚠ 3.1/2/Inhal Acute Tox. 2 H330</li> <li>⚠ 3.2/2 Skin Irrit. 2 H315</li> <li>⚠ 3.3/1 Eye Dam. 1 H318</li> <li>⚠ 3.4.2/1 Skin Sens. 1 H317</li> <li>⚠ 3.1/4/Oral Acute Tox. 4 H302</li> <li>⚠ 4.1/A1 Aquatic Acute 1 H400 M=1.</li> <li>⚠ 4.1/C2 Aquatic Chronic 2 H411 M=1.</li> </ul> <p>Specific Concentration Limits: C &gt;= 0,05%: Skin Sens. 1 H317</p> <p>Acute Toxicity Estimate: ATE - Oral 450 mg/kg bw ATE - Inhalation (Dust/mist) 0,21 mg/l</p>
>= 0. 00015% - < 0. 0015%	reaction mass of 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2- methyl-2H-isothiazol-3- one [EC no. 220-239-6] (3:1)	Index number: 613-167-00-5 CAS: 55965-84-9	<ul style="list-style-type: none"> <li>⚠ 3.1/2/Inhal Acute Tox. 2 H330</li> <li>⚠ 3.1/2/Dermal Acute Tox. 2 H310</li> <li>⚠ 3.1/3/Oral Acute Tox. 3 H301</li> <li>⚠ 3.2/1C Skin Corr. 1C H314</li> <li>⚠ 3.3/1 Eye Dam. 1 H318</li> <li>⚠ 3.4.2/1 Skin Sens. 1 H317</li> <li>⚠ 4.1/A1 Aquatic Acute 1 H400 M=100.</li> <li>⚠ 4.1/C1 Aquatic Chronic 1 H410 M=100.</li> </ul> <p>EUH071</p> <p>Specific Concentration Limits: C &gt;= 0,6%: Skin Corr. 1C H314 0,06% &lt;= C &lt; 0.6%: Skin Irrit. 2 H315 C &gt;= 0,6%: Eye Dam. 1 H318 0,06% &lt;= C &lt; 0.6%: Eye Irrit. 2 H319 C &gt;= 0,0015%: Skin Sens. 1A H317</p> <p>Acute Toxicity Estimate: ATE - Oral 66 mg/kg bw ATE - Dermal 141 mg/kg bw ATE - Inhalation (Dust/mist) 0,17 mg/l</p>

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#### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

Treatment:

None

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#### SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

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.

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#### SECTION 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

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

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#### SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals

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in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

#### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

#### 7.3. Specific end use(s)

None in particular

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

#### 8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	various	--	--
Odour:	characteristic	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	N.A.	--	--
Lower and upper	N.A.	--	--

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explosion limit:			
Flash point:	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	9	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:		--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.71 kg/l	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information  
No other relevant information

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#### SECTION 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  
None
- 10.4. Conditions to avoid  
Stable under normal conditions.
- 10.5. Incompatible materials  
None in particular.
- 10.6. Hazardous decomposition products  
None.

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#### SECTION 11: Toxicological information

- 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008  
Toxicological information of the product:  
MI-KU THERM
  - a) acute toxicity  
Not classified  
No data available for the product
  - b) skin corrosion/irritation

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- Not classified
- No data available for the product
- c) serious eye damage/irritation
  - Not classified
  - No data available for the product
- d) respiratory or skin sensitisation
  - Not classified
  - No data available for the product
- e) germ cell mutagenicity
  - Not classified
  - No data available for the product
- f) carcinogenicity
  - Not classified
  - No data available for the product
- g) reproductive toxicity
  - Not classified
  - No data available for the product
- h) STOT-single exposure
  - Not classified
  - No data available for the product
- i) STOT-repeated exposure
  - Not classified
  - No data available for the product
- j) aspiration hazard
  - Not classified
  - No data available for the product

Toxicological information of the main substances found in the product:

3-iodo-2-propynyl butylcarbamate - CAS: 55406-53-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 1056 mg/kg - Notes: female

Test: LD50 - Route: Oral - Species: Rat 1795 mg/kg - Notes: male

Test: LC50 - Route: Inhalation Dust - Species: Rat 0.67 g/m<sup>3</sup> - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: porcellino d'india

i) STOT-repeated exposure:

Route: Inhalation - Notes: Cat. 1 (larynx)

1,2-benzisothiazol-3(2H)-one - CAS: 2634-33-5

a) acute toxicity

ATE - Oral 450 mg/kg bw

ATE - Inhalation (Dust/mist) 0,21 mg/l

reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and

2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) - CAS: 55965-84-9

a) acute toxicity

ATE - Oral 66 mg/kg bw

ATE - Dermal 141 mg/kg bw

ATE - Inhalation (Dust/mist) 0,17 mg/l

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq$  0.1%

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## SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

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The product is classified: Aquatic Chronic 3 - H412

3-iodo-2-propynyl butylcarbamate - CAS: 55406-53-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 0.05 mg/l - Notes: 21 d (Daphnia magna)

Endpoint: NOEC - Species: Fish 0.0084 mg/l - Notes: 35 d (Pimephales promeleas)

Endpoint: NOEC - Species: Fish 0.049 mg/l - Duration h: 96 - Notes: (Rainbow trout)

Endpoint: EC50 - Species: Algae 0.022 mg/l - Duration h: 72 - Notes: (Scenedesmus subspicatus)

1,2-benzisothiazol-3(2H)-one - CAS: 2634-33-5

a) Aquatic acute toxicity:

Endpoint: EC10 - Species: Algae 0.04 mg/l - Duration h: 72 - Notes: (Selenastrum capricornutum) (OECD 201)

Endpoint: EC50 - Species: Algae 0.11 mg/l - Duration h: 72 - Notes: (Selenastrum capricornutum) (OECD 201) S2238

Endpoint: EC50 - Species: Daphnia 3.27 mg/l - Duration h: 48 - Notes: (OECD 202) S 2240

Endpoint: LC50 - Species: Fish 1.6 mg/l - Duration h: 96 - Notes: (Oncorhynchus mykiss) (OECD 203) S 2746

Endpoint: NOEC - Species: Daphnia 1.2 mg/l - Notes: 21 d (OECD 211) S 803

Endpoint: NOEC - Species: Fish 0.21 mg/l - Notes: 28 d (OECD 215) S 805

reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and

2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) - CAS: 55965-84-9

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 0.1 mg/l - Duration h: 48 - Notes: daphnia magna

Endpoint: EC50 - Species: Algae 0.048 mg/l - Duration h: 72 - Notes: pseudokirchneriella subcapitata

Endpoint: EC50 - Species: Fish 0.22 mg/l - Duration h: 96 - Notes: oncorhynchus mykiss

Endpoint: NOEC - Species: Algae 0.00064 mg/l - Duration h: 48 - Notes: skeletonema costatum

Endpoint: NOEC - Species: Daphnia 0.004 mg/l - Duration h: 504 - Notes: daphnia magna

Endpoint: NOEC - Species: Fish 0.098 mg/l - Duration h: 672 - Notes: oncorhynchus mykiss

Endpoint: NOEC - Species: Algae 0.0012 mg/l - Duration h: 72 - Notes: pseudokirchneriella subcapitata

12.2. Persistence and degradability

3-iodo-2-propynyl butylcarbamate - CAS: 55406-53-6

Biodegradability: Not persistent and Biodegradable

12.3. Bioaccumulative potential

1,2-benzisothiazol-3(2H)-one - CAS: 2634-33-5

Test: Kow - Partition coefficient 0.7 - Notes: (n-octanol/water) OECD 117 Log Kow (HPLC method)

Test: BCF - Bioconcentration factor 6.95 - Notes: (fish) OECD 305

reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and

2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) - CAS: 55965-84-9

Not bioaccumulative - Test: BCF - Bioconcentration factor 3.16 - Notes: (calculated) S 1177

Not bioaccumulative - Test: Kow - Partition coefficient 0.71 - Notes: (n-octanol/water) S 5

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

12.7. Other adverse effects

None

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#### SECTION 13: Disposal considerations

- 13.1. Waste treatment methods  
Recover if possible. In so doing, comply with the local and national regulations currently in force.
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#### SECTION 14: Transport information

- 14.1. UN number or ID number  
The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.
- 14.2. UN proper shipping name  
N.A.
- 14.3. Transport hazard class(es)  
N.A.
- 14.4. Packing group  
N.A.
- 14.5. Environmental hazards  
N.A.
- 14.6. Special precautions for user  
limited quantity:  
N.A.
- 14.7. Maritime transport in bulk according to IMO instruments  
N.A.
- 

#### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
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. 2020/878  
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. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Regulation (EU) n. 2020/217 (ATP 14 CLP)  
Regulation (EU) n. 2020/1182 (ATP 15 CLP)  
Regulation (EU) n. 2021/643 (ATP 16 CLP)  
Regulation (EU) n. 2021/849 (ATP 17 CLP)  
Regulation (EU) n. 2022/692 (ATP 18 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:  
Restrictions related to the product:  
Restriction 3  
Restrictions related to the substances contained:  
Restriction 75
- Where applicable, refer to the following regulatory provisions :  
Directive 2012/18/EU (Seveso III)



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Regulation (EC) nr 648/2004 (detergents).  
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):  
Seveso III category according to Annex 1, part 1  
None

15.2. Chemical safety assessment  
No Chemical Safety Assessment has been carried out for the mixture.

#### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H331 Toxic if inhaled.  
H302 Harmful if swallowed.  
H372 Causes damage to organs (larynx) through prolonged or repeated exposure.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H330 Fatal if inhaled.  
H315 Causes skin irritation.  
H411 Toxic to aquatic life with long lasting effects.  
H310 Fatal in contact with skin.  
H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
EUH071 Corrosive to the respiratory tract.  
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Dermal	Acute toxicity (dermal), Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Inhal	Acute toxicity (inhalation), Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1C	3.2/1C	Skin corrosion, Category 1C
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1

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Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878. Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.  
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

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.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.

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TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.