

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 10/09/2018

Reviewed on 01/19/2017

**\* 1 Identification**

- **Product identifier**
- **Trade name:** HydroSeal® Activator/Cleaner
- **Article number:** ACTVTR
- **CAS Number:**  
141-78-6
- **EC number:**  
205-500-4
- **Index number:**  
607-022-00-5
- **Application of the substance / the mixture** Cleaning agent/ Cleaner
- **Details of the supplier of the safety data sheet**
- **Supplier:**  
American Hydrotech, Inc.  
541 N. Fairbanks, Suite 2700  
Chicago, Illinois 60611  
USA  
Tel.: (312) 337-4998  
Fax: (312) 661-0731  
Internet: [www.hydrotechusa.com](http://www.hydrotechusa.com)
- **Emergency telephone number:**  
For Chemical Emergency  
Spill Leak Fire Exposure or Accident  
  
PERS #11540 - (800) 633-8253

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.  
STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

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**Hazard pictograms**


GHS02 GHS07

**Signal word** Danger

**Hazard-determining components of labeling:**

ethyl acetate

**Hazard statements**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing vapours.

P280 Wear protective gloves/ eye protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P312 Call a poison center/doctor if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Classification system:**
**NFPA ratings (scale 0 - 4)**


Health = 2

Fire = 3

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**


Health = 2

Fire = 3

Reactivity = 0

**Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).

**vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

## 3 Composition/information on ingredients

**Chemical characterization: Substances**
**CAS No. Description**

141-78-6 ethyl acetate

**Identification number(s)**
**EC number:** 205-500-4

**Index number:** 607-022-00-5

**Additonal information:** \* see section 15

## 4 First-aid measures

**Description of first aid measures**
**General information:**

Immediately remove any clothing soiled by the product.

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Take affected persons out of danger area and lay down.

Do not leave affected persons unattended.

Personal protection for the First Aider.

**• After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**• After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Possible after prolonged skin contact defatting. Skin cream after prolonged skin contact.

If skin irritation continues, consult a doctor.

**• After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**• After swallowing:**

Rinse mouth.

Do not induce vomiting; immediately call for medical help.

**• Information for doctor:****• Most important symptoms and effects, both acute and delayed**

Headache

Dizziness

Dizziness

Unconsciousness

Nausea

Irritant to skin, eyes and respiratory system.

Gastric or intestinal disorders

**• Danger**

Danger of pulmonary edema.

After swallowing and subsequent vomiting, aspiration into the lungs, which can lead to chemical Pneumonie or suffocation.

**• Indication of any immediate medical attention and special treatment needed**

May cause drowsiness and dizziness.

**5 Fire-fighting measures****• Extinguishing media****• Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**• For safety reasons unsuitable extinguishing agents:** Water with full jet**• Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

Because of the high vapor pressure, temperature increase risk of bursting of the vessels.

In case of fire, the following can be released:

Carbon monoxide (CO)

CO<sub>2</sub>

**• Advice for firefighters****• Protective equipment:**

Wear fully protective suit.

Wear self-contained respiratory protective device.

**• Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

If without risk, remove containers from the danger zone.

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## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation



Keep away from ignition sources

Avoid static electricity.

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Suppress gases/fumes/haze with water spray.

Inform respective authorities in case of seepage into water course or sewage system.

Prevent seepage into sewage system, workpits and cellars.

· **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

Dispose of the collected material according to regulations.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

1,200 ppm

· **PAC-2:**

1,700 ppm

· **PAC-3:**

10000\*\* ppm

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Keep receptacles tightly sealed.

Prolonged or repeated contact with skin.

Ensure good ventilation/exhaustion at the workplace.

Avoid splashes or spray in enclosed areas.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

at least 7-fold air changes per hour

· **Information about protection against explosions and fires:**

Highly volatile, flammable constituents are released during processing.

Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Only explosion-proof equipment.

Use explosion-proof apparatus / fittings and spark-proof tools.

Protect against electrostatic charges.

Do not spray on a naked flame or any incandescent material.

Handle only outside or in explosion protected rooms.

Protect from heat.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
 Store only in the original receptacle.  
 Laws and regulations for storage and handling of water hazarding.  
 Regulations for storage of flammable liquids.  
 Store in a cool location.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
 Store in cool, dry conditions in well sealed receptacles.  
 For gaskets and sealants could use: PTFE.  
 Suitable storage materials are: Stainless carbon steel, stainless steel.  
 Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:**  
 Ensure adequate ventilation at the workplace.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

**141-78-6 ethyl acetate (50-100%)**

|     |   |
|-----|---|
| PEL | Long-term value: 1400 mg/m <sup>3</sup> , 400 ppm |
| REL | Long-term value: 1400 mg/m <sup>3</sup> , 400 ppm |
| TLV | Long-term value: 1440 mg/m <sup>3</sup> , 400 ppm |

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls** Ensure adequate ventilation at the workplace.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Avoid contact with the eyes and skin.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Use skin protection cream for skin protection.
- Keep away from foodstuffs, beverages and feed.
- Do not carry product impregnated cleaning cloths in trouser pockets.
- Do not eat, drink, smoke or sniff while working.
- Avoid contact with the eyes.

- **Breathing equipment:**

Short term filter device:



Filter A/P2

- **Protection of hands:**

- Solvent resistant gloves
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Check protective gloves prior to each use for their proper condition.
- Solvent resistant gloves.
- Check the permeability prior to each renewed use of the glove.
- To avoid skin problems reduce the wearing of gloves to the required minimum.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· **Material of gloves**



Butyl rubber gloves - butyl  
Recommended thickness of the material:  $\geq 0.7$  mm  
e.g. KCL BUTOJET

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

Our Recommendation is mainly on a one-time use as a short-term protection Liquid splashes. For other applications, you should contact a glove manufacturer.

At the first sign of wear protective gloves should be replaced.

Permeation / Breakthrough time:  $\geq 120$  min (EN 374)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Butyl rubber, BR

· **For the permanent contact gloves made of the following materials are suitable:** Butyl rubber, BR

· **Not suitable are gloves made of the following materials:**

Fluorocarbon rubber (Viton)

Natural rubber, NR

Chloroprene rubber, CR

Nitrile rubber, NBR

PVC gloves

Leather gloves

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

Solvent resistant protective clothing



Protective work clothing

· **Limitation and supervision of exposure into the environment**

Not discharge into drains / surface water bodies / groundwater.

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Color: Colorless

· **Odor:** Fruit-like

· **Odor threshold:** 0.006 - 0.686 mg/l (gas in air)

· **pH-value:** Slightly alkaline

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|   |  |
|---|--|
| · <b>Change in condition</b>                      |  |
| <b>Melting point/Melting range:</b>               | -84 °C (-119.2 °F) (DIN 51751)                   |
| <b>Boiling point/Boiling range:</b>               | 74-78 °C (165.2-172.4 °F) (DIN 53757)            |
| · <b>Flash point:</b>                             | -4--1 °C (24.8-30.2 °F) (DIN 51755)              |
| · <b>Flammability (solid, gaseous):</b>           | No data available.                               |
| · <b>Ignition temperature:</b>                    | ≥425 °C (≥797 °F) (DIN 51794)                    |
| · <b>Auto igniting:</b>                           | Product is not selfigniting.                     |
| · <b>Danger of explosion:</b>                     | Not determined.                                  |
| · <b>Explosion limits:</b>                        |  |
| <b>Lower:</b>                                     | 2.1 Vol %  |
| <b>Upper:</b>                                     | 11.5 Vol %                                       |
| · <b>Oxidizing properties</b>                     | not classified as oxidizing                      |
| · <b>Vapor pressure at 20 °C (68 °F):</b>         | ~100 hPa (~75 mm Hg)                             |
| · <b>Density at 20 °C (68 °F):</b>                | 0.9 g/cm <sup>3</sup> (7.51 lbs/gal) (DIN 51757) |
| · <b>Evaporation rate</b>                         | 4,5 (n-BuAc = 1)                                 |
| · <b>Solubility in / Miscibility with</b>         |  |
| <b>Water at 20 °C (68 °F):</b>                    | ~80 g/l<br>Not miscible or difficult to mix.     |
| · <b>Partition coefficient (n-octanol/water):</b> | 0,66 - 0,68 log POW                              |
| · <b>Viscosity:</b>                               |  |
| <b>Dynamic at 20 °C (68 °F):</b>                  | ~0.45 mPas (EN ISO 2555)                         |
| <b>Kinematic:</b>                                 | No data available.                               |
| <b>Organic solvents:</b>                          | 100.0 %  |
| <b>VOC content:</b>                               | 100.00 %   |
|   | 900.0 g/l / 7.51 lb/gal                          |
| · <b>Other information</b>                        | No further relevant information available.       |

## 10 Stability and reactivity

- **Reactivity** see Section 10.2
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
At atmospheric pressure distilled without decomposition.  
Avoid: heat, flames, sparks.  
No decomposition if used according to specifications.  
Shock, avoid friction, heat, sparks, static electricity.
- **Possibility of hazardous reactions**  
Used empty containers may contain product gases which form explosive mixtures with air.  
Develops readily flammable gases / fumes.  
Danger of receptacles bursting because of high vapor pressure if heated.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**  
Highly oxidizing agents  
strong acids  
Alkalis (bases, alkalis)  
metals
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

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**Additional information:**

Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan to the workplace may be present.

## 11 Toxicological information

· **Information on toxicological effects** There were no toxicological findings to the mixture.

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**ATE (Acute Toxicity Estimate)**

|            |         |                      |
|------------|---------|----------------------|
| Oral       | LD50    | 4,934 mg/kg (rabbit) |
| Inhalative | LC50/4h | 56 mg/l (rat)        |

**141-78-6 ethyl acetate**

|            |         |                                 |
|------------|---------|---------------------------------|
| Oral       | LD50    | 4,934 mg/kg (rabbit) (OECD 401) |
| Dermal     | LD50    | >18,000 mg/kg (rabbit)          |
|            | LC50    | >18,000 mg/kg (rat)             |
| Inhalative | LC50/4h | 56 mg/l (rat)                   |

· **Specific symptoms in biological assay:**

Mice that were exposed for 7 days 6 hours per 4300 ppm developed, slight blood changes, and loss of appetite. Rabbits that were exposed for 40 days one hour per day 4400 ppm, developed secondary anemia, blood effects and minor Milzerweiterung. There was no evidence of carcinogenicity in mice were observed.

· **Primary irritant effect:**

· **on the skin:** Prolonged or repeated skin contact may defat the skin and result in skin irritation.

· **on the eye:** Short-term, reversible irritation.

· **Sensitization:** No sensitizing effects known.

· **Other information (about experimental toxicology):** Ames test: negative

· **Subacute to chronic toxicity:**

In vitro mutagenicity:

Ames test: negative - with and without metabolic activation method: OECD 471

Cytogenicity assay in Chinese hamster cells: negative - with and without metabolic activation - Method: OECD 473

Mouse lymphoma cell gene mutation: negative - with and without metabolic activation - Method: OECD 476 (Reference substance: Ethanol)

in vivo Mutagenicity:

Mammalian Erythrocyte Micronucleus test in Chinese hamster and male mice: negative - Method: OECD 474

Carcinogenic effects: No evidence of carcinogenicity, reproductive toxicity: No effects on fertility (Reference substance: Ethanol)

Routes of exposure oral gavage (species mouse, Method OECD 416)

NOAEL: 26400 mg / kg bw / day (for ethyl acetate on a molar basis)

Rat species, type of study Two-generation study

Development Damaging effects: No teratogenic, maternally or developmental effects (Reference substance: Ethanol)

Rat species, method OECD 414, NOAEC: 73,300 mg / Type of study Prenatal Developmental

Repeated exposure: No negative impact.

Routes of exposure oral gavage: rat species, method EPA OTS 795.2600, NOAEL: 900 mg / kg bw / day

Repeated exposure: No negative impact

Inhalation routes of exposure: rat species, method EPA OTS 798.2450, NOEC 1.28 mg / l, 90-day

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inhalation study

subchronic toxicity study

· **Additional toxicological information:**

Inhalation of concentrated vapors may lead to anesthesia-like conditions and headache, dizziness, etc.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

**141-78-6 ethyl acetate**

|          |  |
|----------|--|
| EC50/24h | 3,090 mg/l (daphnia magna) (DIN 38412, Part 11)                  |
| EC50/48h | 164 mg/l (daphnia magna)<br>3,300 mg/l (scenedesmus subspicatus) |
| LC50/96h | 230 mg/l (fish)<br>455 mg/l (pimephales promelas)                |
| NOEC/72h | >100 mg/l (Alge (Desmodesmus subspicatus)) (OECD 201)            |
| NOEC/21d | 2.4 mg/l (daphnia magna)   |

· **Persistence and degradability** Easily biodegradable

· **Other information:**

DOC: > 70 %

Biodegradability 100% in 28 days (OECD 301 D)

· **Behavior in environmental systems:**

· **Bioaccumulative potential**

log P (o/w): 0,66 - 0,68

Due to the distribution coefficient n-octanol/water an appreciable enrichment (bioaccumulation) in organisms is not to be expected (log P (o / w): 1-3).

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **CSB-value:** 1816 mg O<sub>2</sub>/g

· **BSB5-value:** 293 mg O<sub>2</sub>/g

· **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow product to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).

· **vPvB:** Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

· **Other adverse effects** No further relevant information available.

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### 13 Disposal considerations

· **Waste treatment methods**

Hazardous waste according to Waste Catalogue (EWC). If recycling is not possible, waste must be in compliance with local regulations to be removed.

· **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncured product residues are special waste.

Cured product residues are not hazardous waste.

Must be specially treated adhering to official regulations.



· **Waste disposal key:**

Please get in touch to arrange the waste code contact with the disposal of your choice.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

|   |                            |
|---|----------------------------|
| · <b>UN-Number</b>  |                            |
| · <b>DOT, ADR, IMDG, IATA</b>   | UN1173                     |
| · <b>UN proper shipping name</b>  |                            |
| · <b>DOT</b>  | Ethyl acetate              |
| · <b>ADR</b>  | 1173 Ethyl acetate         |
| · <b>IMDG, IATA</b>   | ETHYL ACETATE              |
| · <b>Transport hazard class(es)</b>   |                            |
| · <b>DOT</b>  |                            |
|  |                            |
| · <b>Class</b>  | 3 Flammable liquids        |
| · <b>Label</b>  | 3                          |
| · <b>ADR, IMDG, IATA</b>  |                            |
|  |                            |
| · <b>Class</b>  | 3 Flammable liquids        |
| · <b>Label</b>  | 3                          |
| · <b>Packing group</b>  |                            |
| · <b>DOT, ADR, IMDG, IATA</b>   | II                         |
| · <b>Environmental hazards:</b>   |                            |
| · <b>Marine pollutant:</b>  | No                         |
| · <b>Special precautions for user</b>   | Warning: Flammable liquids |
| · <b>Danger code (Kemler):</b>  | 33                         |
| · <b>EMS Number:</b>  | F-E,S-D                    |

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|  |   |
|--|---|
| <b>· Stowage Category</b>  | B   |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |
| <b>· Transport/Additional information:</b>                                       |   |
| <b>· ADR</b>   |   |
| <b>· Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| <b>· IMDG</b>  |   |
| <b>· Limited quantities (LQ)</b>   | 1L  |
| <b>· Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| <b>· UN "Model Regulation":</b>  | UN 1173 ETHYL ACETATE, 3, II  |

## 15 Regulatory information

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

**· Section 355 (extremely hazardous substances):**

Substance is not listed.

**· Section 313 (Specific toxic chemical listings):**

Substance is not listed.

**· TSCA (Toxic Substances Control Act):**

Substance is listed.

**· Proposition 65**

**· Chemicals known to cause cancer:**

Substance is not listed.

**· Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

**· Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

**· Chemicals known to cause developmental toxicity:**

Substance is not listed.

**· Cancerogenity categories**

**· EPA (Environmental Protection Agency)**

Substance is not listed.

**· TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**· GHS label elements** GHS label elements

**· National regulations:**

**· Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

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Employment restrictions concerning pregnant and lactating women must be observed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**\* 16 Other information**

These figures relate to the product as delivered.

Sector of Use

Relevant identified uses of the mixture

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU19 Building and construction work

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

SU21 Consumer uses: Private households / general public / consumers

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Training hints**

Teaching about hazards and precautions to hand the operating instructions (Technical Rule 555). Instruction must take place before the start of employment and at least annually thereafter.

- **Date of preparation / last revision** 10/09/2018 / 17

**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**· Sources**[www.gestis.de](http://www.gestis.de)[www.echa.eu](http://www.echa.eu)[logkow.cisti.nrc.ca](http://logkow.cisti.nrc.ca)

- **\* Data compared to the previous version altered.**