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

**1.1 Product identifier**

**Trade name** ***Hexanes, mixed isomers, ACS***

**Stock number:** 33321
**CAS Number:** 92112-69-1
**1.2 Relevant identified uses of the substance or mixture and uses advised against.** No further relevant information available.
**Identified use:** SU24 Scientific research and development

**1.3 Details of the supplier of the safety data sheet**
**Manufacturer/Supplier:**
Thermo Fisher (Kandel) GmbH
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
**Informing department:** Product safety Tel + +049 (0) 7275 988687-0
**1.4 Emergency telephone number:**
Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture**
**Classification according to Regulation (EC) No 1272/2008**


GHS02 flame

| | | |
|---|---|---|
| Flam. Liq. 2 | H225 | Highly flammable liquid and vapour. |


GHS08 health hazard

| | | |
|---|---|---|
| Repr. 2 | H361f | Suspected of damaging fertility. |
| STOT RE 2 | H373 | May cause damage to the peripheral nervous system, the lung, the kidneys, the liver, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Inhalation. |
| Asp. Tox. 1 | H304 | May be fatal if swallowed and enters airways. |


GHS09 environment

| | | |
|---|---|---|
| Aquatic Chronic 2 | H411 | Toxic to aquatic life with long lasting effects. |


GHS07

| | | |
|---|---|---|
| Skin Irrit. 2 | H315 | Causes skin irritation. |
| STOT SE 3 | H336 | May cause drowsiness or dizziness. |

**Other hazards that do not result in classification** No information known.

**2.2 Label elements**
**Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
**Hazard pictograms**


GHS02 GHS07 GHS08 GHS09

**Signal word** Danger

**Hazard-determining components of labelling:**
n-Hexane
3-Methylpentane
**Hazard statements**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H361f Suspected of damaging fertility.
H336 May cause drowsiness or dizziness.
H373 May cause damage to the peripheral nervous system, the lung, the kidneys, the liver, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
**Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
**2.3 Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** Not applicable.
**vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures**

**Dangerous components:**

| | | |
|---|---|---|
| CAS: 110-54-3<br>EINECS: 203-777-6<br>Index number: 601-037-00-0 | n-Hexane<br>Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336 | 65,0% |

(Contd. on page 2)

**Trade name *Hexanes, mixed isomers, ACS***

(Contd. of page 1)

| | | |
|---|---|---|
| CAS: 96-14-0<br>EINECS: 202-481-4<br>Index number: 601-007-00-7 | 3-Methylpentane<br>Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336 | 25,0% |
| CAS: 107-83-5<br>EINECS: 203-523-4<br>Index number: 601-007-00-7 | 2-Methylpentane<br>Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336 | 5,0% |
| CAS: 96-37-7<br>EINECS: 202-503-2 | Methylcyclopentane<br>Flam. Liq. 2, H225; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 | 4,999% |

**Additional information** None known.

| **Non-Hazardous Ingredients** | | |
|---|---|---|
| CAS: 71-43-2<br>EINECS: 200-753-7<br>Index number: 601-020-00-8 | Benzene<br>Flam. Liq. 2, H225; Muta. 1B, H340; Carc. 1A, H350; STOT RE 1, H372; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Eye Irrit. 2, H319 | 0,001% |

## *SECTION 4: First aid measures*

**4.1 Description of first aid measures**
**After inhalation**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.
**After skin contact**
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
**After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
**After swallowing** Seek medical treatment.
**4.2 Most important symptoms and effects, both acute and delayed**
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.
May cause damage to the peripheral nervous system, the lung, the kidneys, the liver, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
**4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

## *SECTION 5: Firefighting measures*

**5.1 Extinguishing media**
**Suitable extinguishing agents** Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.
**5.2 Special hazards arising from the substance or mixture**
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
**5.3 Advice for firefighters**
**Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.

## *SECTION 6: Accidental release measures*

**6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
**6.2 Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.
**6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
**Prevention of secondary hazards:** Keep away from ignition sources.
**6.4 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 information on disposal.

## *SECTION 7: Handling and storage*

**7.1 Precautions for safe handling**
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
**Information about protection against explosions and fires:**
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.

**7.2 Conditions for safe storage, including any incompatibilities**
**Storage**
**Requirements to be met by storerooms and containers:** Store in cool location.
**Information about storage in one common storage facility:** Store away from oxidising agents.
**Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
**7.3 Specific end use(s)** No further relevant information available.

## *SECTION 8: Exposure controls/personal protection*

**Additional information about design of technical systems:**
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**8.1 Control parameters**

| **Components with critical values that require monitoring at the workplace:** | |
|---|---|
| **110-54-3 n-Hexane (65,0%)** | |
| AGW (Germany) | Long-term value: 180 mg/m³, 50 ppm<br>8(II);DFG, EU, Y |
| PEL (USA) | Long-term value: 1800 mg/m³, 500 ppm |
| REL (USA) | Long-term value: 180 mg/m³, 50 ppm |
| TLV (USA) | Long-term value: 176 mg/m³, 50 ppm<br>Skin; BEI |

(Contd. on page 3)

**Trade name *Hexanes, mixed isomers, ACS***

(Contd. of page 2)

| | |
|---|---|
| **96-14-0 3-Methylpentane (25,0%)** | |
| AGW (Germany) | Long-term value: 1800 mg/m³, 500 ppm<br>2(II);DFG |
| REL (USA) | Long-term value: 350 mg/m³, 100 ppm<br>Ceiling limit: 1800* mg/m³, 510* ppm<br>*15-min |
| TLV (USA) | Short-term value: 3500 mg/m³, 1000 ppm<br>Long-term value: 1760 mg/m³, 500 ppm |
| **107-83-5 2-Methylpentane (5,0%)** | |
| AGW (Germany) | Long-term value: 1800 mg/m³, 500 ppm<br>2(II);DFG |
| REL (USA) | Long-term value: 350 mg/m³, 100 ppm<br>Ceiling limit: 1800* mg/m³, 510* ppm<br>*15-min |
| TLV (USA) | Short-term value: 3500 mg/m³, 1000 ppm<br>Long-term value: 1760 mg/m³, 500 ppm |
| **96-37-7 Methylcyclopentane (4,999%)** | |
| AGW (Germany) | Long-term value: 1800 mg/m³, 500 ppm<br>2(II);DFG |
| REL (USA) | Long-term value: 350 mg/m³, 100 ppm<br>Ceiling limit: 1800* mg/m³, 510* ppm<br>*15-min |
| TLV (USA) | Short-term value: 3500 mg/m³, 1000 ppm<br>Long-term value: 1760 mg/m³, 500 ppm |
| **71-43-2 Benzene (0,001%)** | |
| MAK (Germany) | vgl.Abschn.XIII |
| TRGS 910 (Germany) | Short-term value: 1,9 mg/m³, 0,6 ppm<br>Long-term value: 0,2 mg/m³, 0,06 ppm<br>8 |
| TRK (TRGS 900) (Germany) | Long-term value: 3,2 mg/m³, 1 ppm |
| PEL (USA) | Short-term value: 15* mg/m³, 5* ppm<br>Long-term value: 3* mg/m³, 1* ppm<br>*table Z-2 for exclusions in 29CFR1910,1028(d) |
| REL (USA) | Short-term value: 1 ppm<br>Long-term value: 0,1 ppm<br>See Pocket Guide App. A |
| TLV (USA) | Short-term value: 8 mg/m³, 2,5 ppm<br>Long-term value: 1,6 mg/m³, 0,5 ppm<br>Skin; BEI |

| | |
|---|---|
| **Ingredients with biological limit values:** | |
| **110-54-3 n-Hexane (65,0%)** | |
| BGW (Germany) | 5 mg/l<br>Untersuchungsmaterial: Urin<br>Probennahmezeitpunkt: Expositionsende bzw. Schichtende<br>Parameter: 2,5-Hexandion plus 4,5-Dihydroxy-2-hexanon (nach Hydrolyse) |
| BEI (USA) | 0,4 mg/L<br>Medium: urine<br>Time: end of shift at end of workweek<br>Parameter: 2,5-Hexanedione without hydrolysis |
| **71-43-2 Benzene (0,001%)** | |
| BEI (USA) | 25 µg/g creatinine<br>Medium: urine<br>Time: end of shift Parameter<br>Parameter: S-Phenylmercapturic acid (background<br><br>500 µg/g creatinine<br>Medium: urine<br>Time: end of shift<br>Parameter: t,t-Muconic acid (background) |

**Additional information:** No data

**8.2 Exposure controls**
**Personal protective equipment**
**General protective and hygienic measures**
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
**Breathing equipment:** Use breathing protection with high concentrations.
**Recommended filter device for short term use:**
Use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).
**Protection of hands:**
Check protective gloves prior to each use for their proper condition.
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.
**Material of gloves** Impervious gloves
**Penetration time of glove material (in minutes)** Not determined
**Eye protection:**
Face protection
Safety glasses with side shields / NIOSH (US) or EN 166(EU)
**Body protection:** Protective work clothing.

## *SECTION 9: Physical and chemical properties*

**9.1 Information on basic physical and chemical properties**
**General Information**
**Appearance:**
**Form:** Liquid
**Odour:** Not determined

(Contd. on page 4)

**Trade name *Hexanes, mixed isomers, ACS***

(Contd. of page 3)

| | |
|---|---|
| **Odour threshold:** | Not determined. |
| **pH-value:** | Not determined. |
| **Change in condition** | |
| **Melting point/freezing point:** | -95 °C |
| **Initial boiling point and boiling range:** | 65-70 °C |
| **Sublimation temperature / start:** | Not determined |
| **Flash point:** | <-23 °C |
| **Inflammability (solid, gaseous)** | Not determined. |
| **Ignition temperature:** | 240 °C |
| **Decomposition temperature:** | Not determined |
| **Self-inflammability:** | Product is not selfigniting. |
| **Explosive properties:** | Product is not explosive. However, formation of explosive air/steam mixtures is possible. |
| **Critical values for explosion:** | |
| **Lower:** | 1,2 Vol % |
| **Upper:** | 7,7 Vol % |
| **Steam pressure at 20 °C:** | 160 hPa |
| **Density at 20 °C** | 0,67 g/cm³ |
| **Relative density** | Not determined. |
| **Vapour density** | Not determined. |
| **Evaporation rate** | Not determined. |
| **Solubility in / Miscibility with** | |
| **Water:** | Not miscible or difficult to mix |
| **Partition coefficient: n-octanol/water:** | Not determined. |
| **Viscosity:** | |
| **dynamic:** | Not determined. |
| **kinematic:** | Not determined. |
| **Solvent content:** | |
| **Organic solvents:** | 65,0 % |
| **9.2 Other information** | No further relevant information available. |

## *SECTION 10: Stability and reactivity*

**10.1 Reactivity** No information known.
**10.2 Chemical stability** Stable under recommended storage conditions.
**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
**10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents
**10.4 Conditions to avoid** No further relevant information available.
**10.5 Incompatible materials:** Oxidising agents
**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

## *SECTION 11: Toxicological information*

**11.1 Information on toxicological effects**
**Acute toxicity** The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

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

| | | |
|---|---|---|
| **110-54-3 n-Hexane** | | |
| Oral | LD50 | 15840 mg/kg (rat) |
| Inhalative | LC50/4H | 48000 ppm/4H (rat) |
| **71-43-2 Benzene** | | |
| Oral | LD50 | 930 mg/kg (rat) |
| Dermal | LD50 | >9400 µL/kg (rabbit) |
| Inhalative | LC50/7H | 10000 ppm/7H (rat) |

**Skin irritation or corrosion:**
Causes skin irritation.
Causes skin irritation.
**Eye irritation or corrosion:** May cause irritation
**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
**Germ cell mutagenicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
**Carcinogenicity:**
EPA-II: Inadequate information to access carcinogenic potential.
This product contains a substance or substances listed as a carcinogen by one or more of the following agencies; IARC, NTP, OSHA, ACGIH and EPA. Since this product contains <0.1% of the substance/substances, the cancer warning has been omitted.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

**Reproductive toxicity:**
Suspected of damaging fertility or the unborn child.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

**Specific target organ system toxicity - repeated exposure:**
May cause damage to the peripheral nervous system, the lung, the kidneys, the liver, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Inhalation.

**Specific target organ system toxicity - single exposure:**
May cause respiratory irritation.
May cause drowsiness or dizziness.

**Aspiration hazard:** May be fatal if swallowed and enters airways.
**Subacute to chronic toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

## *SECTION 12: Ecological information*

**12.1 Toxicity**
**Aquatic toxicity:** No further relevant information available.
**12.2 Persistence and degradability** No further relevant information available.
**12.3 Bioaccumulative potential** No further relevant information available.
**12.4 Mobility in soil** No further relevant information available.
**Additional ecological information:**
**General notes:**
Do not allow product to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.

(Contd. on page 5)

**Trade name *Hexanes, mixed isomers, ACS***

(Contd. of page 4)

Avoid transfer into the environment.
**12.5 Results of PBT and vPvB assessment**
**PBT:** Not applicable.
**vPvB:** Not applicable.
**12.6 Other adverse effects** No further relevant information available.

## *SECTION 13: Disposal considerations*

**13.1 Waste treatment methods**
**Recommendation**
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.
**Uncleaned packagings:**
**Recommendation:** Disposal must be made according to official regulations.

## *SECTION 14: Transport information*

| | |
|---|---|
| **UN-Number** | |
| **ADR, IMDG, IATA** | UN1208 |
| **14.2 UN proper shipping name** | |
| **ADR** | 1208 HEXANES |
| **IMDG** | HEXANES, MARINE POLLUTANT |
| **IATA** | HEXANES |
| **14.3 Transport hazard class(es)** | |
| **ADR** | |
|  | |
| **Class** | 3 (F1) Flammable liquids. |
| **Label** | 3 |
| **IMDG** | |
|  | |
| **Class** | 3 Flammable liquids. |
| **Label** | 3 |
| **IATA** | |
|  | |
| **Class** | 3 Flammable liquids. |
| **Label** | 3 |
| **Packing group** | |
| **ADR, IMDG, IATA** | II |
| **14.5 Environmental hazards:** | Product contains environmentally hazardous substances: n-Hexane, anhydrous, 3-Methylpentane |
| **Marine pollutant:** | Symbol (fish and tree) |
| **14.6 Special precautions for user** | Warning: Flammable liquids. |
| **Kemler Number:** | 33 |
| **EMS Number:** | F-E,S-D |
| **Stowage Category** | E |
| **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** | Not applicable. |
| **Transport/Additional information:** | |
| **ADR** | |
| **Excepted quantities (EQ):** | E2 |
| **Limited quantities (LQ)** | 1L |
| **Excepted quantities (EQ)** | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| **Transport category** | 2 |
| **Tunnel restriction code** | D/E |
| **IMDG** | |
| **Limited quantities (LQ)** | 1L |
| **Excepted quantities (EQ)** | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| **UN "Model Regulation":** | UN 1208 HEXANES, 3, II |

## *SECTION 15: Regulatory information*

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

**Australian Inventory of Chemical Substances**
All ingredients are listed.

**Standard for the Uniform Scheduling of Medicines and Poisons**

| | | |
|---|---|---|
| 71-43-2 | Benzene | S7 |

**Directive 2012/18/EU**
**Named dangerous substances - ANNEX I** None of the ingredients is listed.
**Seveso category**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
**Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
**Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
**National regulations**
**Information about limitation of use:**
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning women of child-bearing age must be observed.

(Contd. on page 6)

**Trade name *Hexanes, mixed isomers, ACS***

(Contd. of page 5)

For use only by technically qualified individuals.
**Classification according to VbF:** A I
**Technical instructions (air):**

| Class | Share in % |
|---|---|
| I | 65,0 |

**Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
**Other regulations, limitations and prohibitive regulations**

**ELINCS (European List of Notified Chemical Substances)**
None of the ingredients is listed.

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.**
None of the ingredients are listed.

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**
None of the ingredients is listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)**
None of the ingredients is listed.

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

## *SECTION 16: Other information*

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Relevant phrases**
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to the peripheral nervous system, the lung, the kidneys, the liver, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
H411 Toxic to aquatic life with long lasting effects.
**Department issuing SDS:** Global Marketing Department
**Abbreviations and acronyms:**
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
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety and Health Administration (USA)
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2