SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: tert-Butyl methyl ether
Cat No.: 378720000; 378720010; 378720025; 378720100
Synonyms: 2-Methyl-2-methoxy propane; MTBE; Methyl tert-butyl ether
CAS-No: 1634-04-4
EC-No.: 216-653-1
Molecular Formula: C5 H12 O
Reach Registration Number: -

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

Recommended Use: Laboratory chemicals.
Sector of use: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category: PC21 - Laboratory chemicals
Process categories: PROC15 - Use as a laboratory reagent
Environmental release category: ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company: UK entity/business name
Fisher Scientific UK
Bishop Meadow Road, Loughborough,
Leicestershire LE11 5RG, United Kingdom

EU entity/business name
Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium

E-mail address: begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No.US: 001-800-424-9300 / Europe: 001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008
Physical hazards
SAFETY DATA SHEET

tert-Butyl methyl ether

Revision Date 17-Dec-2020

2.2. Label elements

Signal Word Danger

Hazard Statements
H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation

Precautionary Statements
P240 - Ground and bond container and receiving equipment
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Full text of Hazard Statements: see section 16

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>1634-04-4</td>
<td>EEC No. 216-653-1</td>
<td>&gt;95</td>
<td>Skin Irrit. 2 (H315) Flam. Liq. 2 (H225)</td>
</tr>
</tbody>
</table>

Reach Registration Number -

Full text of Hazard Statements: see section 16
SAFETY DATA SHEET

tert-Butyl methyl ether

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact  Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact  Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

Ingestion  Do NOT induce vomiting. Get medical attention.

Inhalation  Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

Self-Protection of the First Aider  Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician  Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media  Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons  Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products  Carbon monoxide (CO), Carbon dioxide (CO2).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

6.2. Environmental precautions

ACR37872
Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Use only under a chemical fume hood. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Flammables area. Keep away from heat, sparks and flame. Keep container tightly closed in a dry and well-ventilated place. May form explosive peroxides on prolonged storage.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)
Class 3

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>The United Kingdom</th>
<th>European Union</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>STEL: 100 ppm 15 min</td>
<td>TWA: 50 ppm (8h)</td>
<td>TWA: 50 ppm 8 hr.</td>
</tr>
<tr>
<td></td>
<td>STEL: 367 mg/m³ 15 min</td>
<td>TWA: 183.5 mg/m³ (8h)</td>
<td>TWA: 183.5 mg/m³ 8 hr.</td>
</tr>
<tr>
<td></td>
<td>TWA: 50 ppm 8 hr</td>
<td>STEL: 100 ppm (15min)</td>
<td>STEL: 100 ppm 15 min</td>
</tr>
<tr>
<td></td>
<td>TWA: 183.5 mg/m³ 8 hr</td>
<td>STEL: 367 mg/m³ (15min)</td>
<td>STEL: 367 mg/m³ 15 min</td>
</tr>
</tbody>
</table>

Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours
MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography
MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL)  No information available

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)  No information available.

8.2. Exposure controls

Engineering Measures
Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment
Eye Protection  Wear safety glasses with side shields (or goggles) (European standard - EN 166)
Hand Protection  Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile rubber</td>
<td>&lt; 211 minutes</td>
<td>0.38 mm</td>
<td>Level 4</td>
<td>Permeation rate 1 µg/cm2/min</td>
</tr>
<tr>
<td>Viton (R)</td>
<td>&lt; 152 minutes</td>
<td>0.7 mm</td>
<td>Level 4</td>
<td>Permeation rate 17 µg/cm2/min</td>
</tr>
<tr>
<td>Neoprene</td>
<td></td>
<td></td>
<td>EN 374</td>
<td>As tested under EN374-3 Determination of Resistance to Permeation by Chemicals</td>
</tr>
<tr>
<td>Natural rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin and body protection  Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection  No protective equipment is needed under normal use conditions.

Large scale/emergency use  Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Small scale/Laboratory use  Maintain adequate ventilation
SAFETY DATA SHEET

tert-Butyl methyl ether

Environmental exposure controls
No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Petroleum distillates</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-110 °C / -166 °F</td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>54 - 56 °C / 129.2 - 132.8 °F</td>
</tr>
<tr>
<td>Flammability (liquid)</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>Lower 1.6 vol%</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-28 °C / -18.4 °F</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>224 - °C / 435.2 - °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.36 mPa.s at 20 °C</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>51 g/L (20°C)</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>log Pow</td>
</tr>
<tr>
<td>Component</td>
<td>Methyl tert-butyl ether</td>
</tr>
<tr>
<td>log Pow</td>
<td>1.06</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>268 mbar @ 20 °C</td>
</tr>
<tr>
<td>Density / Specific Gravity</td>
<td>0.740</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>0.2</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable (liquid)</td>
</tr>
</tbody>
</table>

9.2. Other information

| Molecular Formula | C5 H12 O |
| Molecular Weight | 88.15 |
| Explosive Properties | Vapors may form explosive mixtures with air |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known, based on information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid

10.5. Incompatible materials
10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;
   Oral
   Based on available data, the classification criteria are not met
   Dermal
   Based on available data, the classification criteria are not met
   Inhalation
   Based on available data, the classification criteria are not met

<table>
<thead>
<tr>
<th>Component</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>LD₅₀ = 2963 mg/kg (Rat)</td>
<td>LD₅₀ = 10000 mg/kg (Rabbit)</td>
<td>LC₅₀ = 85 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;
   Respiratory
   Based on available data, the classification criteria are not met
   Skin
   Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;
   Based on available data, the classification criteria are not met
   Mutagenic effects have occurred in experimental animals

(f) carcinogenicity;
   Based on available data, the classification criteria are not met
   The table below indicates whether each agency has listed any ingredient as a carcinogen
   Limited evidence of a carcinogenic effect

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met
   Target Organs
   None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Other Adverse Effects
Tumorigenic effects have been reported in experimental animals.

Symptoms / effects, both acute and delayed
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

11.2. Information on other hazards
Endocrine Disrupting Properties
Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>887 mg/L LC50 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 mg/L LC50 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>929 mg/L LC50 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>672 mg/L LC50 96 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC50: = 542 mg/L, 48h</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Daphnia magna)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>800 mg/L EC50 &gt; 72 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>184 mg/L EC50 = 96 h</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Microtox</th>
<th>M-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 = 11.4 mg/L 30 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 = 8.23 mg/L 5 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 = 9.67 mg/L 15 min</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Persistence
Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential
Bioaccumulation is unlikely

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>1.06</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

12.5. Results of PBT and vPvB assessment
Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties
Endocrine Disruptor Information

<table>
<thead>
<tr>
<th>Component</th>
<th>EU - Endocrine Disrupters Candidate List</th>
<th>EU - Endocrine Disruptors - Evaluated Substances</th>
<th>Japan - Endocrine Disruptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group III Chemical</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.7. Other adverse effects
Persistent Organic Pollutant
Ozone Depletion Potential
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from Residues/Unused Products
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and...
empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)**
According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information**
Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

### SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**
14.1. UN number: UN2398
14.2. UN proper shipping name: METHYL tert-BUTYL ETHER
14.3. Transport hazard class(es): 3
14.4. Packing group: II

**ADR**
14.1. UN number: UN2398
14.2. UN proper shipping name: METHYL tert-BUTYL ETHER
14.3. Transport hazard class(es): 3
14.4. Packing group: II

**IATA**
14.1. UN number: UN2398
14.2. UN proper shipping name: METHYL tert-BUTYL ETHER
14.3. Transport hazard class(es): 3
14.4. Packing group: II
14.5. Environmental hazards: No hazards identified
14.6. Special precautions for user: No special precautions required
14.7. Maritime transport in bulk according to IMO instruments: Not applicable, packaged goods

### SECTION 15: REGULATORY INFORMATION

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

**International Inventories**
X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>216-653-1</td>
<td>-</td>
<td></td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-2364 8</td>
</tr>
</tbody>
</table>

Not applicable

National Regulations

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tert-Butyl methyl ether

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WGK Classification
See table for values

<table>
<thead>
<tr>
<th>Component</th>
<th>Germany - Water Classification (VwVwS)</th>
<th>Germany - TA-Luft Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>WGK1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>France - INRS (Tables of occupational diseases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>Tableaux des maladies professionnelles (TMP) - RG 84</td>
</tr>
</tbody>
</table>

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date 28-May-2009
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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet