SAFETY DATA SHEET

Version: 1.1
Revision Date: 2016-09-13
Print Date: 2016-09-13

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

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product Number:</th>
<th>B0136</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name:</td>
<td>Di-tert-butylcyclopentadiene</td>
</tr>
<tr>
<td>CAS Registry Nr:</td>
<td>120937-44-2</td>
</tr>
</tbody>
</table>

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

Laboratory chemicals, Manufacture of substances.

1.3 Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Company:</th>
<th>Chemodex AG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CH - 9000 St. Gallen</td>
</tr>
<tr>
<td></td>
<td>Switzerland, Europe</td>
</tr>
<tr>
<td></td>
<td>Tel: +41 71 244 48 25</td>
</tr>
<tr>
<td></td>
<td>Fax: +41 71 244 48 26</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:info@chemodex.com">info@chemodex.com</a></td>
</tr>
<tr>
<td></td>
<td>Website: <a href="http://www.chemodex.com">www.chemodex.com</a></td>
</tr>
</tbody>
</table>

1.4 Emergency telephone number

Tox Info Suisse: +41 44 251 51 51

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with (EC) No. 1272/2008 [EU-GHS/CLP]

<table>
<thead>
<tr>
<th>Toxicity Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids (Category 2)</td>
<td>H225</td>
</tr>
<tr>
<td>Skin irritation (Category 2)</td>
<td>H315</td>
</tr>
<tr>
<td>Eye irritation (Category 2A)</td>
<td>H319</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure (Category 3), Respiratory system</td>
<td>H335</td>
</tr>
</tbody>
</table>
2.2 Label elements

**Labelling according Regulation (EC) No. 1272/2008**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>![Pictogram]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Danger</td>
</tr>
</tbody>
</table>

**Hazard statement(s)**

<table>
<thead>
<tr>
<th>H225</th>
<th>Highly flammable liquid and vapour.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

**Precautionary statement(s)**

<table>
<thead>
<tr>
<th>P210</th>
<th>Keep away from heat/sparks/open flames/hot surfaces. No smoking.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P233</td>
<td>Keep container tightly closed.</td>
</tr>
<tr>
<td>P240</td>
<td>Ground/bond container and receiving equipment</td>
</tr>
<tr>
<td>P241</td>
<td>Use explosion-proof electrical/ventilating/lighting/equipment.</td>
</tr>
<tr>
<td>P242</td>
<td>Use only non-sparking tools.</td>
</tr>
<tr>
<td>P243</td>
<td>Take precautionary measures against static discharge.</td>
</tr>
<tr>
<td>P261</td>
<td>Avoid breathing dust/fume/gas/mist/vapours/spray</td>
</tr>
<tr>
<td>P264</td>
<td>Wash skin thoroughly after handling.</td>
</tr>
<tr>
<td>P271</td>
<td>Use only outdoors or in a well-ventilated area</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves/protective clothing/eye protection/face protection.</td>
</tr>
<tr>
<td>P303 + P361 + P353</td>
<td>IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.</td>
</tr>
<tr>
<td>P304 + P340</td>
<td>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</td>
</tr>
<tr>
<td>P305 + P351 + P338</td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P312</td>
<td>Call a POISON CENTER/doctor if you feel unwell.</td>
</tr>
<tr>
<td>P321</td>
<td>Specific treatment (see supplemental first aid instructions on this label).</td>
</tr>
<tr>
<td>P332 + P313</td>
<td>If skin irritation occurs: Get medical advice/attention.</td>
</tr>
<tr>
<td>P337 + P313</td>
<td>If eye irritation persists: Get medical advice/attention.</td>
</tr>
<tr>
<td>P362</td>
<td>Take off contaminated clothing and wash before reuse</td>
</tr>
<tr>
<td>P370 + P378</td>
<td>In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.</td>
</tr>
<tr>
<td>P403 + P233</td>
<td>Store in a well-ventilated place. Keep container tightly closed.</td>
</tr>
<tr>
<td>P403 + P235</td>
<td>Store in a well-ventilated place. Keep cool.</td>
</tr>
<tr>
<td>P405</td>
<td>Store locked up.</td>
</tr>
<tr>
<td>P501</td>
<td>Dispose of contents/container to an approved waste disposal plant.</td>
</tr>
</tbody>
</table>

2.3 Other hazards

**Supplemental Hazard Statements:** none
SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di-tert-butylcyclopentadiene</td>
<td>Flam. Liq. 2; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H225, H315, H319, H335</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding
quantities of water.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen fluoride, silicon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and material for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Protect from light and moisture. Store at -20°C. Store under inert gas
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, Flame retardant antistatic protective clothing,. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance: Transparent to yellow oil
b) Odour: No data available
### c) Odour Threshold:
No data available

### d) pH:
No data available

### e) Melting point/freezing point:

<table>
<thead>
<tr>
<th>f) Boiling point</th>
<th>60-61°C / 4 torr</th>
</tr>
</thead>
</table>

### g) Flash point:
No data available

### h) Evaporation rate:
No data available

### i) Flammability (solid, gas):
No data available

### j) Upper/lower flammability or explosive limits:
No data available

### k) Vapour pressure:
No data available

### l) Vapour density:
No data available

### m) Relative density:
0.836 g/mL at 20 °C (lit.)

### n) Solubility:
Soluble in acetone or methanol.

### o) Partition coefficient (n-octanol/water):
No data available

### p) Auto-ignition temperature:
No data available

### q) Decomposition temperature:
No data available

### r) Viscosity:
No data available

### s) Explosive properties:
No data available

### t) Oxidizing properties:
No data available

### 9.2 Other information
No data available

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
No data available

#### 10.2 Chemical stability
Stable for at least 2 years under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### 10.5 Incompatible materials
Strong oxidizing agents

#### 10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides Hazardous
decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**
No data available

**Skin corrosion/irritation**
No data available

**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**Carcinogenicity**

- **IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- **OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
No data available

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Additional Information**

- **RTECS:** Not available
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

CDX-B0136-SDS-V1.1
7/10
www.chemodex.com
12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**
Dispose of as unused product.

SECTION 14: Transport information

**ADR/RID**

<table>
<thead>
<tr>
<th>UN number:</th>
<th>UN3295</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class:</td>
<td>3</td>
</tr>
<tr>
<td>Packing group:</td>
<td>Packing Group II</td>
</tr>
<tr>
<td>Proper shipping name:</td>
<td>Hydrocarbons, liquid, n.o.s.</td>
</tr>
<tr>
<td>Poison Inhalation Hazard:</td>
<td>No</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th>UN number:</th>
<th>UN3295</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class:</td>
<td>3</td>
</tr>
<tr>
<td>Packing group:</td>
<td>Packing Group II</td>
</tr>
<tr>
<td>Proper shipping name:</td>
<td>HYDROCARBONS, LIQUID, N.O.S.</td>
</tr>
<tr>
<td>EMS-No:</td>
<td>F-E, S-D</td>
</tr>
</tbody>
</table>

**IATA**

<table>
<thead>
<tr>
<th>UN number:</th>
<th>3295</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class:</td>
<td>3</td>
</tr>
<tr>
<td>Packing group:</td>
<td>Packing Group II</td>
</tr>
<tr>
<td>Proper shipping name:</td>
<td>Hydrocarbons, liquid, n.o.s.</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user
No data available
14.7 Further information
No data available

SECTION 15: Regulatory information

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Di-tert-butylcyclopentadiene CAS-No. 120937-44-2 Revision Date

New Jersey Right To Know Components
Di-tert-butylcyclopentadiene CAS-No. 120937-44-2 Revision Date

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
Eye Irrit. Eye irritation Flam. Liq. Flammable liquids
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Skin Irrit. Skin irritation
STOT SE Specific target organ toxicity - single exposure

HMIS Rating
Health hazard: 2
Chronic Health Hazard:
Flammability: 3
Physical Hazard 0

NFPA Rating
Health hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0

Further information
CDX-B0136-SDS-V1.1
9:10
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