1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: Acetyl Acetone
Use of substance / preparation
Industrial.
Intermediate chemical.
All other areas of application to be agreed with the Application Engineering/ Technical Marketing Department of the manufacturer.

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker Chemical Corporation
3301 Sutton Road
Adrian, MI 49221-9397
USA

Customer information: WACKER BIOSOLUTIONS
Tel +1 517 264-8500, Fax +1 517 264-8795
Hours of operation:
Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate Website: www.wacker.com

Emergency telephone no. (24h): (517) 264-8500
Transportation emergency: (800) 424-9300 (CHEMTREC, USA)
(703) 527-3887 (CHEMTREC, international)

This SDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (GHS):

<table>
<thead>
<tr>
<th>Classification (GHS):</th>
<th>Category</th>
<th>Route of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous to the aquatic environment</td>
<td>acute, category 3</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Category 3</td>
<td>by inhalation / vapour</td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Category 3</td>
<td>dermal</td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Category 4</td>
<td>oral</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
<td></td>
</tr>
</tbody>
</table>

2.2 Label elements

Labelling (GHS):

Pictogram(s):

Signal Word: Danger

H-Code Hazard Statements
H226 Flammable liquid and vapour.
H302 Harmful if swallowed
H311+H331 Toxic in contact with skin or if inhaled.
H402 Harmful to aquatic life.
P-Code  Precautionary Statements
P210   Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233   Keep container tightly closed.
P243   Take precautionary measures against static discharge.
P261   Avoid breathing vapours/spray.
P271   Use only outdoors or in a well-ventilated area.
P370+P378  In case of fire: Use extinguishing powder, alcohol-resistant foam or carbon dioxide to extinguish.
P302+P352  IF ON SKIN: Wash with plenty of water/soap.
P304+P340  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311   Call a POISON CENTER/doctor.
P302+P352  IF ON SKIN: Wash with plenty of water/soap.
P304+P340  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311   Call a POISON CENTER/doctor.
P403+P235  Store in a well-ventilated place. Keep cool.
P501   Dispose of contents/container to waste disposal.

2.3 Other hazards
| No data available.

3. Composition/information on ingredients

3.1 Chemical characterization (substance)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>123-54-6</td>
<td>ketone</td>
</tr>
</tbody>
</table>

3.2 Information on ingredients:

<table>
<thead>
<tr>
<th>Type</th>
<th>CAS No.</th>
<th>Substance</th>
<th>Content [wt. %]</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>INHA</td>
<td>123-54-6</td>
<td>2,4-Pentanediione</td>
<td>&lt;=100.0</td>
<td></td>
</tr>
</tbody>
</table>


Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

4. First-aid measures

4.1 General information:
Get medical attention immediately. Remove contaminated clothing and shoes. Show label.

4.2 After inhalation
If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.

4.3 After contact with the skin
If contact with skin, immediately flush skin with plenty of water for at least 15 min.

4.4 After contact with the eyes
If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

4.5 After swallowing
If swallowed, do not induce vomiting. Danger of aspiration. If conscious, have them rinse their mouth with water but do not give anything to drink. Get medical attention immediately. Designate the product.

4.6 Advice for the physician
Treat symptomatically.
5. Fire-fighting measures

5.1 Flammable properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value:</th>
<th>Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>34 °C (93 °F)</td>
<td>(DIN 51755)</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>139.5 °C (283 °F)</td>
<td>(EU-GL.A.2)</td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>2.4 % (V)</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>11.4 % (V)</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>383 °C (721 °F)</td>
<td>(EU-GL.A.15)</td>
</tr>
<tr>
<td>NFPA Hazard Class (comb./flam.liquid)</td>
<td>IC</td>
<td></td>
</tr>
</tbody>
</table>

5.2 Fire and explosion hazards:

Warning! Flammable liquid and vapor. Consider possible formation of explosive mixtures with air, for example in uncleaned containers.

5.3 Recommended extinguishing media:

water-mist, carbon dioxide, dry chemical or foam-type extinguishing media.

5.4 Unsuitable extinguishing media:

none known

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases organic decomposition products.

5.6 Fire fighting procedures:

Use water spray (not stream) to fight fires. Fire fighters should wear full protective clothing including a self-contained breathing apparatus. Cool endangered containers with water.

6. Accidental release measures

6.1 Precautions:

Wear personal protection equipment (see section 8). Avoid inhaling mists and vapours.

HAZWOPER PPE Level: C

6.2 Containment:

Contain any fluid that runs out using suitable material (e.g. earth). Prevent material from entering sewers or surface waters. Dispose of in prescribed marked containers. Observe local/state/federal regulations.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

6.3 Methods for cleaning up

Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Contain larger amounts and pump up into suitable containers.

6.4 Further information:

Eliminate all sources of ignition.

7. Handling and storage

7.1 Handling

Precautions for safe handling:

Ensure adequate ventilation.

Precautions against fire and explosion:

Keep away from sources of ignition and do not smoke. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. During transfusion electrostatic charging possible. Take precautionary measures against electrostatic charging. Keep away from heat, sparks and flame.
7.2 Storage

Conditions for storage rooms and vessels:
Do not store in iron containers.

Advice for storage of incompatible materials:
Do not store together with fire-promoting and spontaneously inflammable substances or with highly inflammable solids.

Further information for storage:
Keep in the original container in a cool well ventilated place. Keep container dry and tightly closed.

8. Exposure controls and personal protection

8.1 Engineering controls

Ventilation:
General ventilation sufficient to provide 1 CFM per square foot of floor area or 6 room air exchanges per hour is recommended.

Local exhaust:
Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

8.2 Associate substances with specific control parameters such as limit values

Maximum airborne concentrations at the workplace:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Material</th>
<th>Type</th>
<th>mg/m³</th>
<th>ppm</th>
<th>Dust fract.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>none known</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.3 Personal protection equipment (PPE)

Respiratory protection:
Respiratory protection is only necessary if long term or high level exposures are likely to occur. A NIOSH approved air purifying respirator equipped with universal multi-contaminant multi-gas/vapor cartridges is recommended if overexposure to chemical vapors could occur.

Hand protection:
butyl rubber protective gloves

Eye protection:
chemical safety goggles

Other protective clothing or equipment:
Additional skin protection, such as SARANEX coated Tyvek apron, over-sleeves, lab coat, coveralls, or protective suit should be worn if splashing could occur. Provide emergency shower and eye-bath.

8.4 General hygiene and protection measures:

Do not eat, drink or smoke when handling. Do not breathe dust/vapor/mist/gas/aerosol. Avoid contact with eyes, skin and clothing. Wash hands at the end of work and before eating.

9. Physical and chemical properties

9.1 Appearance

Physical state / form: liquid
Colour: colourless
Odour: ester-like

9.2 Safety parameters

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point / melting range</td>
<td>-47.5 - -17.6 °C (-53 - 0 °F)</td>
<td>(EG-RL.A.1)</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>139.5 °C (283 °F)</td>
<td>(EU-GL.A.2)</td>
</tr>
<tr>
<td>Flash point</td>
<td>34 °C (93 °F)</td>
<td>(DIN 51755)</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>383 °C (721 °F)</td>
<td>(EU-GL.A.15)</td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>2.4 %(V)</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>11.4 %(V)</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>40.4 hPa at 50 °C (122 °F)</td>
<td>(OECD 104)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>21.8 hPa at 38 °C (100 °F)</td>
<td>(OECD 104)</td>
</tr>
</tbody>
</table>
Vapour pressure: 7.9 hPa at 20 °C (68 °F) (OECD 104)
Density: 0.9732 g/cm³ at 20 °C (68 °F) (EU-GL.A.3)
Water solubility / miscibility: 154.5 g/l at 20 °C (68 °F) (OECD 105)
pH-Value: 3.2 at 22 °C (71 °F) (175 g/l H₂O) (EU-GL.A.8)
Partition coefficient: n-octanol/water: 0.68 (Log p<sub>OW</sub>)
Viscosity (dynamic): not determined

9.3 Further information

Odour limit: 13 mg/m³
Thermal decomposition: Distillable without decomposition at normal pressure.
Thermal decomposition: 293 - 389 °C (559 - 732 °F)

10. Stability and reactivity

10.1 General information:
If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

10.2 Conditions to avoid
none known.

10.3 Materials to avoid
oxidizing agents, amines, strong bases.

10.4 Hazardous decomposition products
If stored and handled properly: none known.

10.5 Further information:
In use, may form flammable/explosive vapour-air mixture.
Hazardous polymerization cannot occur.

11. Toxicological information

11.1 Information on toxicological effects

11.1.1 Acute toxicity
Assessment:
After single oral exposure moderate toxic effects are to be expected. After single dermal exposure distinct toxic effects are to be expected. After short-term inhalative exposure distinct toxic effects are to be expected.

Product details:

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Result/Effect</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD&lt;sub&gt;50&lt;/sub&gt;: 570 mg/kg</td>
<td>rat</td>
<td>test report</td>
</tr>
<tr>
<td>dermal</td>
<td>LD&lt;sub&gt;50&lt;/sub&gt;: 790 mg/kg</td>
<td>rat</td>
<td>test report</td>
</tr>
<tr>
<td>by inhalation (vapour)</td>
<td>LC&lt;sub&gt;50&lt;/sub&gt;: 5.1 mg/l; 4 h</td>
<td>rat</td>
<td>test report</td>
</tr>
</tbody>
</table>

11.1.2 Skin corrosion/irritation
Assessment:
Based on the available data a clinically relevant skin irritation hazard is not expected.

Product details:

<table>
<thead>
<tr>
<th>Result/Effect</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>not irritating</td>
<td>rabbit</td>
<td>test report</td>
</tr>
</tbody>
</table>

11.1.3 Serious eye damage / eye irritation
Assessment:
Based on the available data a clinically relevant eye irritation hazard is not expected.
11.1.4 Respiratory or skin sensitization

Assessment:
Based on the available data a sensitization reaction is not expected from this product.

Product details:

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Result/Effect</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>dermal</td>
<td>not sensitizing</td>
<td>mouse; LLNA (local lymph node assay)</td>
<td>test report</td>
</tr>
</tbody>
</table>

11.1.5 Germ cell mutagenicity

Assessment:
After acute inhalation in animals not mutagenic.

Product details:

<table>
<thead>
<tr>
<th>Result/Effect</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>negative</td>
<td>mutation assay (in vitro) bacterial cells</td>
<td>test report OECD 471</td>
</tr>
<tr>
<td>positive</td>
<td>Assay for sister chromatid exchange (in vitro) mammalian cells</td>
<td>test report OECD 479</td>
</tr>
<tr>
<td>positive</td>
<td>chromosome aberration assay (in vitro) mammalian cells</td>
<td>literature OECD 473</td>
</tr>
<tr>
<td>negative</td>
<td>mutation assay (in vitro) mammalian cells</td>
<td>test report OECD 476</td>
</tr>
<tr>
<td>positive</td>
<td>micro nucleus assay (in vivo)</td>
<td>test report OECD 474</td>
</tr>
<tr>
<td>negative</td>
<td>chromosome aberration assay (in vivo)</td>
<td>test report OECD 483</td>
</tr>
<tr>
<td>negative</td>
<td>chromosome aberration assay (in vivo)</td>
<td>test report OECD 475</td>
</tr>
<tr>
<td>inconclusive</td>
<td>mutation assay (in vivo)</td>
<td>test report OECD 478</td>
</tr>
<tr>
<td>negative</td>
<td>Comet assay</td>
<td>test report</td>
</tr>
<tr>
<td>negative</td>
<td>Comet assay</td>
<td>test report</td>
</tr>
</tbody>
</table>

11.1.6 Carcinogenicity

Assessment:
For this endpoint no toxicological test data is available for the whole product.

11.1.7 Reproductive toxicity

Assessment:
Animal tests have shown no indications of possibility of damage to embryo.

Product details:

<table>
<thead>
<tr>
<th>Result/Effect (Examinations of developmental toxicity and teratogenicity)</th>
<th>Species/Test system</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAEC (developmental): 0.21 mg/l</td>
<td>rat; 6 hours/day</td>
<td>test report OECD 414</td>
</tr>
</tbody>
</table>

11.1.8 Specific target organ toxicity (single exposure)

Assessment:
Vapours may be narcotising.

11.1.9 Specific target organ toxicity (repeated exposure)
11.1.10 Aspiration hazard

Assessment:
Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Further toxicological information

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. 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. 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.

Other information: Human patch test: No indication for skin sensitization.

12. Ecological information

12.1 Toxicity

Assessment:
Harmful to aquatic organisms.

Product details:

Result/Effect | Species/Test system | Source
---|---|---
LC₅₀: 104 mg/l | static minnow (Pimephales promelas) (96 h) | literature
EC₅₀: 25.9 mg/l | static Daphnia magna (48 h) | test report OECD 202
C₅₀: 83.2 mg/l | Pseudokirchneriella subcapitata (72 h) | test report OECD 201
EC₁₀: 13.2 mg/l | Pseudomonas putida (3 h) | test report
EC₅₀: 107.6 mg/l | Pseudomonas putida (3 h) | test report
NOEC (lethal and sub-lethal effects): 10 mg/l | minnow (Pimephales promelas) (34 d) | test report OECD 210
LOEC (lethal and sub-lethal effects): 22 mg/l | minnow (Pimephales promelas) (34 d) | test report OECD 210
NOEC (reproduction): 18 mg/l | Daphnia magna (21 d) | test report OECD 211

12.2 Persistence and degradability

Product details:

Biodegradation:

Result | Test system/Method | Source
---|---|---
> 80 % / 28 d readily biodegradable | no data available | literature OECD 301C

BOD₅/COD

Result | Source
---|---
BOD₅-Value: 1,340 mg O₂/l Substance | test report
COD-Value: 1,787 mg O₂/g Substance | test report
BOD₅/COD: 0.75 | no data available
12.3 Bioaccumulative potential

Assessment:
Bioaccumulation is not expected to occur.

12.4 Mobility in soil

Assessment:
No data known.

12.5 Other adverse effects

none known

13. Disposal considerations

13.1 RCRA Waste Classification:

<table>
<thead>
<tr>
<th></th>
<th>D001 (Ignitable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This classification applies only to the material as it was originally produced.</td>
<td></td>
</tr>
</tbody>
</table>

13.2 Product disposal

Recommendation:
Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

13.3 Packaging disposal

Recommendation:
Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

14. Transport information

14.1 US DOT & CANADA TDG SURFACE

<table>
<thead>
<tr>
<th>Valuation</th>
<th>Dangerous Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Pentane-2,4-dione</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>6.1</td>
</tr>
<tr>
<td>UN no.</td>
<td>2310</td>
</tr>
<tr>
<td>Packaging Group</td>
<td>III</td>
</tr>
</tbody>
</table>
| Label                     | **TL:flammable liquid/3**
|                           | **TL:toxic "skull and crossbones"/6** |
| NAERG Guide               | 131             |

14.2 Transport by sea IMDG-Code

<table>
<thead>
<tr>
<th>Valuation</th>
<th>Dangerous Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>6.1</td>
</tr>
<tr>
<td>Packaging Group</td>
<td>III</td>
</tr>
<tr>
<td>UN no.</td>
<td>2310</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Pentane-2,4-dione</td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>no</td>
</tr>
</tbody>
</table>

14.3 Air transport ICAO-TI/IATA-DGR

<table>
<thead>
<tr>
<th>Valuation</th>
<th>Dangerous Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>6.1</td>
</tr>
<tr>
<td>UN no.</td>
<td>2310</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Pentane-2,4-dione</td>
</tr>
<tr>
<td>Packaging Group</td>
<td>III</td>
</tr>
</tbody>
</table>
15. Regulatory information

15.1 U.S. Federal regulations

TSCA inventory status and TSCA information:
This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA SNUR (Significant New Use Rule):

TSCA 12(b) Export Notification:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>Reporting required under TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>123-54-6</td>
<td>2,4-Pentanedione</td>
<td>One time export notification under TSCA 5(a)(2) required.</td>
</tr>
</tbody>
</table>

CERCLA Regulated Chemicals:
This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:
This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:
Fire hazard. Immediate (acute) health hazard. Delayed (chronic) health hazard.

SARA 313 Chemicals:
This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants):
This material does not contain any hazardous air pollutants.

15.2 U.S. State regulations

California Proposition 65 Carcinogens:
This material does not contain any chemicals known to the State of California to cause cancer.

California Proposition 65 Reproductive Toxins:
This material does not contain any chemicals known to the State of California to cause reproductive effects.

Massachusetts Substance List:
123-54-6 2,4-Pentanedione

New Jersey Right-to-Know Hazardous Substance List:
123-54-6 2,4-Pentanedione

Pennsylvania Right-to-Know Hazardous Substance List:
123-54-6 2,4-Pentanedione

15.3 Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the SDS contains all the information required by the CPR.

WHMIS Hazard Classes:
B2, D1B, D2B

DSL Status:
This material or its components are listed on the Canadian Domestic Substances List.

Non-DSL Chemicals:
This material does not contain any non-DSL chemicals.

15.4 Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

South Korea (Republic of Korea) ................... : ECL (Existing Chemicals List):
This product is listed in, or complies with, the substance inventory.

Japan ................................................. : ENCS (Handbook of Existing and New Chemical Substances):
This product is listed in, or complies with, the substance inventory.

Australia ......................................... : AICS (Australian Inventory of Chemical Substances):
This product is listed in, or complies with, the substance inventory.
16. Other information

16.1 Additional information:

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

16.2 Glossary of Terms:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>hPa</td>
<td>Hectopascals</td>
</tr>
<tr>
<td>mPa’s</td>
<td>Milli Pascal-Seconds</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per Million</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Identification System</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>DSL</td>
<td>Domestic Substance List</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippine Inventory of Chemicals and Chemical Substances</td>
</tr>
<tr>
<td>TCSI</td>
<td>Taiwan Chemical Substance Inventory</td>
</tr>
<tr>
<td>REACH</td>
<td>Regulation (EC) No 1907/2006</td>
</tr>
</tbody>
</table>

Flash point determination methods:

- ASTM D656
- ASTM D92, DIN 51376, ISO 2592
- ASTM D93, DIN 51758, ISO 2719
- ASTM D3278, DIN 55680, ISO 3679
- DIN 51755

Common name:

- Tagliabue (Tag) closed cup
- Cleveland open cup
- Pensky-Martens closed cup
- Set aflash or Rapid closed cup
- Abel-Pensky closed cup

16.3 Conversion table:

Pressure: 
- 1 hPa * 0.75 = 1 mm Hg = 1 torr
- 1 bar = 1000 hPa

Viscosity:
- 1 mPa*s = 1 centipoise (cP)