CETOP POSITION PAPER CONCERNING EC DIRECTIVE “PRESSURE EQUIPMENT” (2014/68/EU)

General statement:
Liquids or gases used in fluid power do not meet the definition in Article 13, paragraph 1 (a) and are therefore not classified as “Group 1” fluids.

Liquids or gases used in fluid power refer to fluids of group 2 (see Annex A).

Fluid power components and systems are:

Excluded from the PED (see also Commission PED Guideline A-19)
due to exclusion of Article 1 paragraph 2 (f) (e.g. Machinery Directive)
- piping and connecting devices for liquids of group 2 when DN ≤ 200 whatever the pressure is, and when DN > 200 and PS ≤ 500 bar
- piping and connecting devices for gas of group 2 when DN ≤ 100 or PS × DN ≤ 3500 bar
- pressure accessories (e.g. filter housing) no higher than category I
due to exclusion of Article 1 paragraph 2 (i)
- fluid power actuators (motors, cylinders, …)
- fluid power pumps
- fluid power control valves

Included in the PED
according to definitions (1), (2), (3) and (5) of Article 2
- accumulators
- piping and connecting devices for liquids of group 2 when DN > 200 and PS > 500 bar
- piping and connecting devices for gas of group 2 when DN > 100 and PS × DN > 3500 bar
- pressure accessories (e.g. filter housing) higher than category I

1Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED):
http://ec.europa.eu/DocsRoom/documents/17201
**EC Directive**  
"Pressure Equipment" (2014/68/EU)

**Fluid power components and systems**

<table>
<thead>
<tr>
<th>Type of components</th>
<th>Excluded from the PED</th>
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<tbody>
<tr>
<td>fluid power control valves</td>
<td>exclusion 2 (j) of article 1</td>
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<td>fluid power actuators (motors, cylinders, …)</td>
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<td>fluid power pumps</td>
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<tr>
<td>piping and connecting devices for liquids of group 2</td>
<td>when DN (\leq 200) whatever the pressure is, and when DN (&gt; 200) and PS (\leq 500) bar (exclusion 2 (f) of Article 1, e.g. machinery directive)</td>
<td>when DN (&gt; 200) and PS (&gt; 500) bar (definition (3) of Article 2 in combination with Annex II, Diagram 9)</td>
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<tr>
<td>piping and connecting devices for gas of group 2</td>
<td>when DN (\leq 100) or PS (\times) DN (\leq 3500) (exclusion 2 (f) of Article 1, e.g. machinery directive)</td>
<td>when DN (&gt; 100) and PS (\times) DN (&gt; 3500) (definition (3) of Article 2 in combination with Annex II, Diagram 7)</td>
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<td>pressure accessories (e.g. filter housing)</td>
<td>no higher than category I (exclusion 2 (f) of Article 1, e.g. machinery directive)</td>
<td>higher than category I (definition (5) of Article 2)</td>
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<tr>
<td>accumulators</td>
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<td>definition (2) of Article 2</td>
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Article 13 "Classification of pressure equipment" of the directive states:

"1. Pressure equipment referred to in Article 4(1) shall be classified by category in accordance with Annex II, according to an ascending level of hazard.

For the purposes of such classification fluids shall be divided into the following two groups:

(a) group 1 consisting of substances and mixtures, as defined in points (7) and (8) of Article 2 of Regulation (EC) No 1272/2008, that are classified as hazardous in accordance with the following physical or health hazard classes laid down in Parts 2 and 3 of Annex I to that Regulation:

(i) unstable explosives or explosives of Divisions 1.1, 1.2, 1.3, 1.4 and 1.5;

(ii) flammable gases, category 1 and 2;

(iii) oxidising gases, category 1;

(iv) flammable liquids, category 1 and 2;

(v) flammable liquids, category 3 where the maximum allowable temperature is above the flashpoint;

(vi) flammable solids, category 1 and 2;

(vii) self-reactive substances and mixtures, type A to F;

(viii) pyrophoric liquids, category 1;

(ix) pyrophoric solids, category 1;

(x) substances and mixtures which in contact with water emit flammable gases, category 1, 2 and 3;

(xi) oxidising liquids, category 1, 2 and 3;

(xii) oxidising solids, category 1, 2 and 3;

(xiii) organic peroxides types A to F;

(xiv) acute oral toxicity, category 1 and 2;

(xv) acute dermal toxicity, category 1 and 2;

(xvi) acute inhalation toxicity, category 1, 2 and 3;

(xvii) specific target organ toxicity – single exposure, category 1.

Group 1 comprises also substances and mixtures contained in pressure equipment with a maximum allowable temperature TS which exceeds the flashpoint of the fluid;

(b) group 2 consisting of substances and mixtures not referred to in point (a)."

CETOP POSITION ON CLASSIFICATION OF FLUID WITH REGARD TO ARTICLE 13 OF THE PRESSURE EQUIPMENT DIRECTIVE:

Hydraulic fluids that are classified in EN ISO 6743-4 “Lubricants, industrial oils and related products (Class L) – Classification - Part 4: Family H (Hydraulic systems)” do not meet the definitions given in Article 13, paragraph 1 (a) and are therefore not classified as ‘Group 1’ fluids.

When using any hydraulic fluid, the user should always refer to the material safety data sheet (MSDS), taking into account PED Commission Guideline B-41¹.

¹Guidelines related to the Pressure Equipment Directive 2014/68/EU (PED):
http://ec.europa.eu/DocsRoom/documents/17201