

## C10C

**WORKING-UP PITCH, ASPHALT, BITUMEN, TAR; PYROLIGNEOUS ACID (compositions of bituminous materials [C08L 95/00](#); carbon filaments by decomposition of organic filaments [D01F 9/14](#))**

### Definition statement

*This place covers:*

Working-up, e.g. processing, of tar, pitch, asphalt or bitumen, including use of techniques such as distillation, heat-treatment, water removal or extraction with selective solvents.

Working up implies improvement of the material.

Production of pyroligneous acid.

### Relationships with other classification places

This application related subclass covers techniques specially adapted to working up of tar, pitch, asphalt or bitumen, or the production of pyroligneous acid, even though some of the techniques per se are covered by subclasses such as [C10B](#), [C10G](#). For example, coking bitumen, tar or the like is covered by [C10B 55/00](#)

[B01D](#) covers distillation in general, e.g. distillation column will be classified in [B01D](#) and a process for working-up tar, by distillation, will be classified in [C10C](#).

### References

#### Limiting references

*This place does not cover:*

Working up pyroligneous acid for production of acetic acid	<a href="#">(C07C 51/42, C07C 53/08)</a>
Carbonisation of wood	<a href="#">C10B 53/02</a>
Obtaining hydrocarbon oils	<a href="#">C10G</a>
Deasphalting hydrocarbon oils	<a href="#">C10G 21/00</a>
Dewatering of hydrocarbon oils	<a href="#">C10G 33/00</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Smoke flavours	<a href="#">A23L 27/27</a>
Shaped ceramic products containing a carbonisable binder	<a href="#">C04B 35/532</a>
Coumarone resins	<a href="#">C08F 244/00</a>
Compositions of bituminous materials	<a href="#">C08L 95/00</a>
Coating compositions based on bituminous materials, e.g. asphalt, tar, pitch	<a href="#">C09D 195/00</a>
Obtaining natural resins or turpentine	<a href="#">C09F</a>
Adhesives based on bituminous materials, e.g. asphalt, tar, pitch	<a href="#">C09J 195/00</a>
Anodes for electrolytic production of aluminium	<a href="#">C25C 3/125</a>
Making carbon filaments by decomposition of organic filaments	<a href="#">D01F 9/14</a>

Machines for road construction or repair	<a href="#">E01C</a>
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### Special rules of classification

In the absence of an indication to the contrary, classification is made in the last appropriate place ("last place rule").

The main group [C10C 1/00](#) only covers working-up coal tar.

Working-up petroleum (oil) tar is covered by [C10C 3/00](#).

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Tar	Tar is a black thermoplastic material produced by the destructive distillation of coal – sometimes referred to as coal tar. Is also a residue in the manufacture of coal gas and coke. May also be derived from plants such as pine trees.
Pitch	Pitch is the name of a large number of highly viscous liquids which appear solid. Pitch may be made from petroleum or plant sources. Petroleum derived pitch is also known as bitumen whereas plant derived pitch is known as resin. Pitch derived from plant resin however is known as rosin. Tar and pitch are often used interchangeably. However, pitch is considered to be more solid whilst tar is considered to be more liquid.
Asphalt	Asphalt is a sticky, black and highly viscous liquid or semi solid that is present in crude petroleum and in some natural deposits sometimes termed asphaltum. In US terminology asphalt (or asphalt cement) is the carefully refined residue from the distillation process of selected crude oils. Outside of the US, the product is called bitumen.
Bitumen	Bitumen is a mixture of organic liquids that are highly viscous, black, sticky, entirely soluble in carbon disulfide and composed primarily of highly condensed polycyclic aromatic hydrocarbons.
Pyroligneous acid	Pyroligneous acid, also called wood vinegar, is a dark liquid produced by the destructive distillation of wood. Its principal components are acetic acid and methanol. It was once used as a commercial source for acetic acid.

### Synonyms and Keywords

*In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:*

"wood vinegar", "pyrolysis oil" and "bio-oil"	"pyroligneous acid"
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## **C10C 5/00**

**Production of pyroligneous acid {distillation of wood, dry distillation of organic waste} (carbonisation of wood [C10B](#))**

### **Definition statement**

*This place covers:*

- Production of pyroligneous acid
- Distillation or destructive distillation of wood resulting in charcoal and liquid condensates

### **Relationships with other classification places**

Carbonisation of wood resulting in charcoal, main product and volatile constituents being not recovered is classified in [C10B](#)