Background document for pitch, coal tar, high temp.

Document developed in the context of ECHA’s 6th recommendation for the inclusion of substances in Annex XIV

ECHA is required to regularly prioritise the substances from the Candidate List and to submit to the European Commission recommendations of substances that should be subject to authorisation. This document provides background information on the prioritisation of the substance, as well as on the determination of its draft entry in the Authorisation List (Annex XIV of the REACH Regulation). Information comprising confidential comments submitted during public consultation, or relating to content of Registration dossiers which is of such nature that it may potentially harm the commercial interest of companies if it was disclosed, is provided in a confidential annex to this document.

1. Identity of the substance

Chemical name: Pitch, coal tar, high temp.
EC Number: 266-028-2
CAS Number: 65996-93-2
IUPAC Name: Not applicable

2. Background information for prioritisation

Priority was assessed by using the General approach for prioritisation of SVHCs for inclusion in the list of substances subject to authorisation¹. Results of the prioritisation of all substances included in the Candidate List on 20 June 2013 or before and not yet included or recommended in Annex XIV of the REACH Regulation is available at http://echa.europa.eu/documents/10162/13640/prioritisation_results_6th_rec_en.pdf

The prioritisation results of the substances included in the draft 6th recommendation have been updated as necessary after the public consultation. The updated results are available at http://echa.europa.eu/documents/10162/13640/updated_prioritisation_results_6th_axiv_rec_en.pdf.

2.1. Intrinsic properties

Pitch, coal tar, high temp. (CTPHT) was identified as a Substance of Very High Concern (SVHC) according to article 57 a, d and e of Regulation (EC) No 1907/2006 (REACH) and was therefore included in the Candidate List for authorisation on 13 January 2010, following ECHA’s decision ED/68/2009.

CTPHT is classified in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008 as Carcinogenic, Category 1B, H350 (“May cause cancer”).

In addition, on the basis of the PBT and vPvB properties of some of its PAH-constituents, CTPHT fulfils the PBT and the vPvB criteria according to article 57 d and e of the REACH Regulation.

2.2. Volume used in the scope of authorisation

The amount of CTPHT manufactured and/or imported into the EU is according to registration data in the lower part of the range 1,000,000 - 10,000,000 t/y\(^2\). A small share of the tonnage is reported as being exported outside the EU.

One sector association commenting during the public consultation on the draft 6\(^{th}\) recommendation (ComRef, 2015) indicates an actual tonnage manufactured and/or imported in EU of approximately 800,000 – 900,000 t/y, of which 320,000 t are directly exported (data collection from year 2013).

Some uses appear not to be in the scope of authorisation, such as the use as intermediate in the manufacture of carbon black.

Based on registrations and further information sources the volume for uses in the scope of authorisation (e.g. formulation of mixtures, uses in clay targets, uses in mixtures for corrosion protection, uses in metallurgic smelting, uses in refractory products) is estimated to be >10,000 t/y.

2.3. Wide-dispersiveness of uses

Registered uses of CTPHT in the scope of authorisation include:

- uses at industrial sites (formulation of mixtures; use as binding agent in metallurgic smelting, refractories and for clay pigeons; formulation and use as anti-corrosion agent in (specialty) coatings, paints and adhesives), and
- uses by professional workers (e.g. use as anti-corrosion agent in (specialty) coatings, paints, adhesives and sealants).

Furthermore, the substance is used in articles (e.g. clay targets, coated articles) in volumes > 10 t/y.

\(^{2}\) Registration information last consulted on 1 December 2014
### 2.4. Conclusions and justification

<table>
<thead>
<tr>
<th>Verbal descriptions and Scores</th>
<th>Volume (V)</th>
<th>Wide dispersiveness of uses (WDU)</th>
<th>Total Score ((= IP + V + WDU))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inherent properties (IP)</strong></td>
<td></td>
<td>CTPHT is used at industrial sites and by professional workers.</td>
<td>42</td>
</tr>
<tr>
<td>CTPHT is classified as carcinogenic Cat. 1B and is identified as PBT and vPvB (meeting the criteria 57 a, d and e)</td>
<td>The amount of CTPHT used in the scope of authorisation is &gt; 10,000 t/y.</td>
<td>Initial score: 10 Furthermore, the substance is used in articles in volumes &gt; 10 t/y.</td>
<td>Refined score: 12</td>
</tr>
<tr>
<td>Score: 15</td>
<td>Score: 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

On the basis of the prioritisation criteria, Pitch, coal tar, high temp. receives high priority among the substances in the Candidate List (refer to link to the prioritisation results above). Therefore, Pitch, coal tar, high temp. is recommended for inclusion in Annex XIV.

### 3. Further information on uses

Registered uses of CTPHT includes:

- **Formulation steps in different industrial sectors such as:**
  - in the aluminium and/or Calcium carbide industry (formulation of green Södeberg briquettes, green anodes, collar paste)
  - in the refractory supply chain (formulation of green unshaped and shaped refractory products, impregnation of refractory products)
  - in the carbon and graphite industry (formulation of green cathodes, lining blocks and briquettes; formulation of green pastes)
  - in the active carbon supply chain (formulation of untempered products)
  - in the production of carbon black (formulation of mixtures where CTPHT is further used as intermediate)
  - for the formulation of clay targets
  - for the formulation of paints, coatings, sealant, waterproofing materials and adhesives
  - for the formulation of fuel (further uses in industrial heavy diesel engines)

- **Industrial end-uses such as:**
  - in the aluminium industry and/or Calcium carbide industry (black anodes production; aluminium production by the prebaked method; aluminium and calcium carbide production by the Södeberg method)
  - in the refractory supply chain (production of tempered shaped refractory products; end-use of refractory products)
  - in the carbon and graphite industry (production of black cathodes and lining blocks)
  - in the active carbon supply chain (production of tempered active carbon products)
  - in the metallurgic smelting industry for the production of metals and metal alloys
工业用途包括生产碳黑、生产粘土靶和使用颜料、涂层、密封剂、防水材料和粘合剂以及作为燃料/用于工业能源生产。

在钢电工业中的工业用途，用于生产纯物质和实验室活动的使用也已报告。

专业用途，如使用颜料、涂层、密封剂、防水材料和粘合剂。

生产碳黑

生产粘土靶

使用颜料、涂层、密封剂、防水材料和粘合剂

作为燃料/用于工业能源生产

工业用途在粘土靶或用于生产涂料、涂层、密封剂、防水材料和粘合剂的材料中。

在注册中，用途通过所谓的‘用途描述符’来描述。环境释放类别（ERCs）提供有关描述的用途是否可以被视为中间的：ERC6a（工业用途导致制造另一种物质（使用中间体））应用于描述中间用途。

以下用途按ERC6a报告：
- 在铝行业/钙化碳化物行业：黑色阳极生产
- 在耐火材料供应链：生产耐火材料产品
- 在碳和石墨行业：生产黑色电极和衬里块
- 在活性碳供应链：生产耐火活性碳产品
- 生产碳黑

其他用途使用ERCs不兼容中间用途的描述，例如生产金属和金属合金在冶金精炼行业的，铝和钙化碳化物的生产。

进一步的信息使用吨数每用途已在公众咨询的第6号建议（ComRef，2015）中提供，并在表1中总结。根据提交人，除了粘土靶的用途和在涂料、涂层、密封剂、防水材料和粘合剂的用途外，所有工业用途的CTPHT除用途外，用途的使用在粘土靶的生产用途和在涂料、涂层、密封剂、防水材料和粘合剂的用途外，用途的一般性豁免授权要求（例如，中间用途，用途在燃料）。

根据可用信息，ECHA认为某些用途可能不满足定义的用途。对于电极用途，已经收到证据支持它们可能满足中间用途的定义，因此分配给这个用途的体积没有考虑优先排名。然而，应意识到中间/非中间用途状态的这些用途是一个复杂的问题，应强调本优先化程序不采取正式立场，是否某些物质的用途被认为是中间用途的通知（第3(5)条）。

* e.g. ERC6b（工业用途的反应性加工辅助）
Table 1: Summary of CTPHT uses and tonnage per use based on comment received during the public consultation on the 6th draft Recommendation (ComRef, 2015)

<table>
<thead>
<tr>
<th>Uses</th>
<th>Volume (t/y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate uses</td>
<td></td>
</tr>
<tr>
<td>Manufacture of ‘pitch coke’, correctly named ‘Coke (coal tar), high temp.pitch (CAS 140203-12-9)” in the following sectors/for the following processes</td>
<td>510,000</td>
</tr>
<tr>
<td>- In the aluminium industry: in the production of binder for prebake anodes, for cathodes / cathodes ramming paste, for Södeberg electrodes; in the production of collar paste for prebake anodes</td>
<td></td>
</tr>
<tr>
<td>- In the steel industry: in the production of binder for graphite electrodes</td>
<td></td>
</tr>
<tr>
<td>- In the metallurgical processes, CaC₂: in the production of binder for prebake electrodes, for Södeberg electrodes, for shaped refractories, for furnace lining paste, for top hole paste and runner mix</td>
<td></td>
</tr>
<tr>
<td>- In the carbon and graphite industry: in the production of carbon/graphite specialities</td>
<td></td>
</tr>
<tr>
<td>- in the active carbon supply chain: in the production of binder for activated carbon</td>
<td></td>
</tr>
<tr>
<td>- In the refractory supply chain: in the production of binder for carbonised refractory products</td>
<td></td>
</tr>
<tr>
<td>- In the production of impregnating agent for graphite electrodes, graphite electrodes connectors (nipples) and for refractories</td>
<td></td>
</tr>
<tr>
<td>Manufacture of carbon black (CAS 1333-86-4)</td>
<td>40,000</td>
</tr>
<tr>
<td>Manufacture of other substances</td>
<td>40,000</td>
</tr>
<tr>
<td>Other use exempted from authorisation</td>
<td></td>
</tr>
<tr>
<td>Use as fuel</td>
<td>1,000</td>
</tr>
<tr>
<td>Non intermediate uses</td>
<td></td>
</tr>
<tr>
<td>Binder for clay targets</td>
<td>15,000</td>
</tr>
<tr>
<td>Binder for airport driveway repair work</td>
<td>Ca. 2,000</td>
</tr>
<tr>
<td>Heavy-duty corrosion protection</td>
<td></td>
</tr>
</tbody>
</table>

Aluminium industry is reported as by far consuming the largest CTPHT volume (60-70%) (ComRef, 2015).

---

4 Claimed as being exempt from REACH registration and authorisation requirements under Annex V.
As far as the complexity of supply chains is concerned, it appears that, depending on the specific uses of CTPHT, they can be rather simple (i.e. with rather limited number of levels, of parallel supply strands and/or number of actors) to rather complex, mainly when involving either different industry sectors or a high number of actors (Annex XV report, 2009; ComRef, 2015).

4. **Background information for the proposed Annex XIV entry**


The section below provides background for allocation of the substance to the Latest Application Dates slots.

The LAD slots are set in 3 months intervals (normally 18, 21 and 24 months after inclusion in Annex XIV but more slots can be considered on a case-by-case basis).

Anthracene oil and pitch, coal tar, high temp. have been considered to be placed in the same slot as they may fulfil the definition of a group according to section 1.5 of Annex XI of REACH (provision allowing submitting common applications for authorisation).

Allocation of (group of) substances to LAD slots aims at an even workload for all parties during the opinion forming and decision making on the authorisation applications. All substances can therefore not be set at the same LAD. ECHA proposes to allocate those substances to the “later” LAD slots (21 months or more) for which the available information indicates a relatively high number of uses. Substances with no registration requirement are also allocated to the later slots.

Based on rough indicators (such as the number of registered uses within the scope of authorisation, number of registrants, and number and type of SVHC endpoints), processing of applications is anticipated to be of higher workload in particular for two groups of substances among the substances included in the final 6th recommendation. Those groups, comprising the two above coal-stream-substances and borates, are therefore proposed to be allocated at separate LAD slots.

For anthracene oil and pitch, coal tar, high temp., although the supply chain is not simple, preparation of an application may still require shorter time in comparison with the boron substances which have probably higher number of uses and higher (overall) supply chain complexity. Therefore anthracene oil and pitch, coal tar, high temp. are assigned in the 2nd LAD slot (i.e. 21 months after the inclusion in Annex XIV).

---

5. References

