

## **TC NES SUBGROUP ON IDENTIFICATION OF PBT AND VPVB SUBSTANCES**

### **RESULTS OF THE EVALUATION OF THE PBT/VPVB PROPERTIES OF:**

**Substance name: Anthracene oil, anthracene paste**

**EC number: 292-603-2**

**CAS number: 90640-81-6**

**Molecular formula: Not applicable**

**Structural formula: Not applicable**

#### **Summary of the evaluation:**

Anthracene oil, anthracene paste is considered to be a UVCB substance with PBT/vPvB constituents. The constituent anthracene (CAS 120-12-7; see PBT summary No. 32) is a PBT and vPvB substance.

## JUSTIFICATION

### 1 IDENTIFICATION OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES

Name: Anthracene oil, anthracene paste  
 EC Number: 292-603-2  
 CAS Number: 90640-81-6  
 IUPAC Name:  
 Molecular Formula: Not applicable  
 Structural Formula: Not applicable  
 Molecular Weight: Not applicable  
 Synonyms: Crude anthracene, raw anthracene, anthracene 30%, anthracene 40%

#### 1.1 PURITY/IMPURITIES/ADDITIVES

Anthracene oil, anthracene paste is a UVCB substance. Based on its production process and that the producers have provided data on properties of its constituents, it can be concluded to contain at least anthracene (CAS 120-12-7), phenanthrene (CAS 85-01-8) and carbazole (CAS 86-74-8).

#### 1.2 PHYSICO-CHEMICAL PROPERTIES

Table 1 Summary of physico-chemical properties. For details and references, see European Commission (2000)

REACH ref Annex, §	Property	Value	Comments
VII, 7.1	Physical state at 20°C and 101.3 Kpa	Solid	European Commission (2000)
VII, 7.2	Melting/freezing point	150-200°C	VfT AG (1994)
VII, 7.3	Boiling point	300-350°C (at 1013.25 Pa)	VfT AG (1994)
VII, 7.5	Vapour pressure		
VII, 7.7	Water solubility		
VII, 7.8	Partition coefficient n-octanol/water (log value)		
	Dissociation constant	-	

In addition, physical-chemical properties of constituents have been reported by the notifiers.

## **2 MANUFACTURE AND USES**

Anthracene oil, anthracene paste is produced via distillation of coal tar, high temperature (65996-89-6) followed by subsequent crystallisation of anthracene fraction. Five companies have provided information on the substance under Regulation 93/793/EEC with a production volume of 100,000–500,000 tonnes according to the IUCLID (European Commission, 2000).

Anthracene oil, anthracene paste is used as intermediate and as basic chemical (European Commission, 2000).

## **3 CLASSIFICATION AND LABELLING**

Anthracene oil is classified as carcinogenic (Cat 2), R45 in the Directive 67/548/EEC (with nota H).

## **4 ENVIRONMENTAL FATE PROPERTIES**

Environmental fate of anthracene oil, anthracene paste can be roughly estimated based on the properties of its constituents. For fate properties of anthracene and phenantrene, see the PBT summary fact sheets of anthracene (CAS 120-12-7) and coal tar pitch, high temperature (CAS 65996-93-2).

### **4.1 DEGRADATION (P)**

#### **4.1.1 Abiotic degradation**

#### **4.1.2 Biotic degradation**

#### **4.1.3 Other information <sup>1</sup>**

#### **4.1.4 Summary and discussion of persistence**

### **4.2 ENVIRONMENTAL DISTRIBUTION**

#### **4.2.1 Adsorption**

#### **4.2.2 Volatilisation**

#### **4.2.3 Long-range environmental transport**

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<sup>1</sup> For example, half life from field studies or monitoring data

### **4.3 BIOACCUMULATION (B)**

#### **4.3.1 Screening data<sup>2</sup>**

#### **4.3.2 Measured bioaccumulation data<sup>3</sup>**

#### **4.3.3 Other supporting information<sup>4</sup>**

#### **4.3.4 Summary and discussion of bioaccumulation**

## **5 HUMAN HEALTH HAZARD ASSESSMENT**

Data not reviewed for this report.

## **6 ENVIRONMENTAL HAZARD ASSESSMENT**

There are no data available on the ecotoxicity of anthracene oil, anthracene paste. For ecotoxicity of its constituents, see the PBT summary fact sheets of anthracene (CAS 120-12-7) and coal tar pitch, high temperature (CAS 65996-93-2).

### **6.1 AQUATIC COMPARTMENT (INCLUDING SEDIMENT)**

#### **6.1.1 Toxicity test results**

##### **6.1.1.1 Fish**

Acute toxicity

Long-term toxicity

##### **6.1.1.2 Aquatic invertebrates**

Acute toxicity

Long-term toxicity

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<sup>2</sup> For example, log  $K_{ow}$  values, predicted BCFs

<sup>3</sup> For example, fish bioconcentration factor

<sup>4</sup> For example, measured concentrations in biota

**6.1.1.3 Algae and aquatic plants****6.1.2 Sediment organisms****6.1.3 Other aquatic organisms****6.2 TERRESTRIAL COMPARTMENT****6.3 ATMOSPHERIC COMPARTMENT****7 PBT AND VPVB****7.1 PBT, VPVB ASSESSMENT**

Summary: anthracene oil, anthracene paste is considered to be a UVCB substance with PBT/vPvB constituents. The constituent anthracene (CAS 120-12-7; see PBT summary No. 32) is considered to be a PBT and vPvB substance.

## **INFORMATION ON USE AND EXPOSURE**

Data not reviewed for this report.

## **OTHER INFORMATION**

The information used in this report was taken from the following source:

European Commission (2000) IUCLID Dataset, anthracene oil, anthracene paste, CAS 90640-81-6, 19.2.2000.