

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 low

EC number: 292-604-8

CAS number: 90640-82-7

Molecular formula: Not applicable

Structural formula: Not applicable

Summary of the evaluation:

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

JUSTIFICATION

1 IDENTIFICATION OF THE SUBSTANCE AND PHYSICAL AND CHEMICAL PROPERTIES

Name: Anthracene oil, anthracene low
EC Number: 292-604-8
CAS Number: 90640-82-7
IUPAC Name:
Molecular Formula: Not applicable
Structural Formula: Not applicable
Molecular Weight: Not applicable
Synonyms: Filtered anthracene oil

1.1 Purity/Impurities/Additives

Anthracene oil, anthracene low is a UVCB substance. Based on its production process and that the producers have provided data on properties of its constituents, it can be expected to contain at least acenaphthene (CAS 83-32-9), anthracene (CAS 120-12-7) and phenanthrene (CAS 85-01-8).

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, liquid	
VII, 7.2	Melting / freezing point	20-70 °C	VFT AG, unpublished data
VII, 7.3	Boiling point	230-400 °C	VFT AG (1994)
VII, 7.5	Vapour pressure	≤ 2 hPa	VFT AG (1994)
VII, 7.7	Water solubility	slightly soluble	VFT AG (1994)
VII, 7.8	Partition coefficient n-octanol/water (log value)		
	Dissociation constant	-	

In addition, physical-chemical properties of the constituents anthracene, acenaphthene and phenantrene have been provided by the notifiers in the IUCLID.

2 MANUFACTURE AND USES

Anthracene oil, anthracene low is one of the downstream products of distillation of coal tar, high temperature (65996-89-6). Four companies are producing the substance according to the IUCLID (European Commission, 2000). The substance is produced by distillation and subsequent chrySTALLISATION of anthracene oil.

Use as solvent and basic chemical have been notified (European Commission, 2000).

3 CLASSIFICATION AND LABELLING

The substance 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 low can be roughly estimated based on the properties of its constituents. For fate properties of anthracene, acenaphthene and phenantrene, see the PBT summary fact sheets of anthracene (CAS 120-12-7, PBT summary no. 32) and coal tar pitch, high temperature (CAS 65996-93-2, PBT summary no. 54).

4.1 Degradation (P)

4.1.1 Abiotic degradation

4.1.2 Biotic degradation**4.1.3 Other information ¹****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****4.3 Bioaccumulation (B)****4.3.1 Screening data²****4.3.2 Measured bioaccumulation data³****4.3.3 Other supporting information⁴****4.3.4 Summary and discussion of bioaccumulation****5 HUMAN HEALTH HAZARD ASSESSMENT**

Data not reviewed for this report.

¹ For example, half life from field studies or monitoring data

² For example, log K_{ow} values, predicted BCFs

³ For example, fish bioconcentration factor

⁴For example, measured concentrations in biota

6 ENVIRONMENTAL HAZARD ASSESSMENT

There are no data available on the ecotoxicity of anthracene oil, anthracene low. 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

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 low is considered to be a UVCB substance with PBT/vPvB constituents. The constituent anthracene (CAS 120-12-7) 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 low, CAS 90640-82-7, 19.2.2000.