benzo[def]chrysene@ Benzo(a)pyrene

Name (English): benzo[def]chrysene@ Benzo(a)pyrene

IDENTIFICATION NUMBERS

- **CAS:** 50-32-8
- **EC/EINECS:** 200-028-5
- **International Chemical Safety Card (ICSC):** 0104

MORE INFORMATION

- **Molecular Formula:** C20H12
- **Synonyms:** Benzo(a)pireno

USES

molding sand

⚠ **Black list — Substances particularly hazardous to the environment or health**

CLASSIFICATION AND LABELLING (Regulation 1272/2008)

Symbols



GHS07

Acute toxicity (oral, dermal, inhalation



GHS08

Respiratory sensitisation



GHS09

Hazardous to the aquatic environment

Signal word: **Danger**

H Phrases

H350 : May cause cancer

Carc. (Cat. 1B) : Carcinogenicity

H340 : May cause genetic defects

Muta. (Cat. 1B) : Germ cell mutagenicity

H360FD : May damage fertility. Suspected of damaging the unborn child.

Repr. (Cat. 1B) : Reproductive toxicity

H317 : May cause an allergic skin reaction

Skin Sens. (Cat. 1) : Respiratory/skin sensitization

H400 : Very toxic to aquatic life

Aquatic Acute (Cat. 1) : Hazardous to the aquatic environment

H410 : Very toxic to aquatic life with long lasting effects

Aquatic Chronic (Cat. 1) : Hazardous to the aquatic environment

Labelling

Concentration	Labelling
C >= 0,01 %	Carc. Cat. 2; R45
C >= 0,01 %	Carc., 1B; H350

Specific health risks

Breast cancer

Substances classified with H362 phrase (may cause harm to breast-fed children). Toxic for reproduction due to effects on lactation or due to transmissibility through breast milk.

SOURCE

http://sciencereview.silentspring.org/mamm_detail.cfm?cid=50-32-8

Carcinogens (other sources)

Substances classified as carcinogens or mutagens Category 3 under the Dangerous Preparations Directive criteria (pre-CLP). Substances with limited evidence or indications of carcinogenicity or mutagenicity.

CATEGORY

G-A2, N-2, CP

SOURCE

ACGIH, NTP, CP65

Endocrine disruptors

Substances with endocrine disrupting activity

DISRUPTOR LEVEL

NS, UE2, OSF

Neurotoxic substances

Substances with neurotoxic effects

LEVEL

2

According to IARC

Substances classified as carcinogens or mutagens Category 2 under the CLP Regulation (GHS), bearing H351 and/or H341 phrases. These are substances suspected of causing cancer or heritable genetic mutations in humans.

IARC GROUP

Grupo 1

IARC VOLUME

(VOL. 92, 100F; 2012)

IARC NOTES

NB: Overall evaluation upgraded to Group 1 based on mechanistic and other relevant data)

Prohibited for breastfeeding workers

Chemical agents whose exposure is prohibited for breastfeeding workers under Royal Decree 298/2009 and Directive 92/85/EEC. Includes substances that may be transmitted through breast milk or that negatively affect milk production.

Prohibited for pregnant workers

Chemical agents whose exposure is prohibited for pregnant workers under Royal Decree 298/2009 (amendment of RD 39/1997) and

Directive 92/85/EEC. Includes substances with proven risk of foetal harm, miscarriage or pregnancy complications.

Prohibited for pregnant workers

Substances prohibited for pregnant workers

Carcinogens and mutagens (Regulation 1272/2008)

Substances classified as carcinogenic or mutagenic under Regulation 1272/2008

Reproductive toxicants

Substances classified as toxic for reproduction under Regulation 1272/2008

Sensitisers

Substances with skin or respiratory sensitisation potential

Specific environmental risks

Persistent bioaccumulative and toxic

Substances identified as Persistent, Bioaccumulative and Toxic (PBT) according to the criteria of Annex XIII of the REACH Regulation. They pose a special risk of accumulation in the environment and in the food chain.

SOURCES	LINK
OSPAR, REACH	http://www.ospar.org/v_substances/get_page.asp?v1=50328.xls

Aquatic toxicity (Water Framework Directive)

Substances classified with acute aquatic toxicity under the CLP Regulation (H400 phrase, Aquatic Acute 1). They present an immediate hazard to aquatic organisms, and their use or discharge can cause rapid damage to aquatic ecosystems.

Hazardous water substances (Germany)

Substances classified with chronic aquatic toxicity under the CLP Regulation (H410–H413 phrases, Aquatic Chronic categories 1 to 4). They pose a long-term hazard to aquatic organisms, even at low concentrations and through prolonged exposure.

MMA CLASSIFICATION
3

Air quality

Atmospheric pollutants that negatively affect air quality. Includes compounds contributing to tropospheric ozone formation, suspended particulate matter (PM), acid rain or other ambient air pollution phenomena.

Soil contaminants

Substances identified as soil contaminants under Spanish and European environmental regulations. Includes substances capable of persisting in soil, bioaccumulating in the terrestrial food chain, and affecting soil ecosystems and groundwater.

Atmospheric emissions

Substances subject to atmospheric emission limitations under the Industrial Emissions Directive (2010/75/EU) and its Spanish transposition. Includes pollutants regulated in industrial installation emission permits and best available technique reference documents (BAT/BREF).

Environmental regulations

LPCIC (EPER)

Priority substances and specific pollutants within the EU water policy framework, established by the Water Framework Directive (2000/60/EC) and the Priority Substances Directive (2008/105/EC and amendments). Substances posing significant risk to European surface waters and subject to Environmental Quality Standards (EQS).

EPER WATER	EPER AIR
1	1

EPER SOIL
1

MPMB

Substances classified as very Persistent and very Bioaccumulative (vPvB) according to Annex XIII of the REACH Regulation. Although not necessarily toxic in themselves, their extreme persistence and bioaccumulation in living organisms represent a long-term environmental risk.

EPER Water

Substances from List 1 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Atmospheric pollutants —including SO_2, NOx, heavy metals and organic compounds— that must be taken into account when setting emission limit values for IPPC installations.

EPER Air

Substances from List 2 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Pollutants that may affect surface and groundwater bodies and must be considered in the integrated environmental authorisation of industrial installations.

EPER Soil

Substances from List 3 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Substances present in waste generated by IPPC installations that must be controlled and minimised within the framework of best available techniques.

Restriction/prohibition regulations

Restricted substances under REACH

Substances listed in Annex XVII of the REACH Regulation (EC) No 1907/2006, subject to restrictions on their manufacture, placing on the market or use. Restrictions may be total or partial, limiting specific applications, maximum concentrations or user groups.

NOTES

Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: —carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation —reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation —skin sensitiser category 1, 1A or 1B —skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 —serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the EuropeanParliament and of the Council1 (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry. Conditions of restriction 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances: (a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight; (b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight; (c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight; (d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the

REACH Candidates

Substances of Very High Concern (SVHC) identified by ECHA and included on the REACH Candidate List. These are substances with CMR, PBT, vPvB or endocrine disrupting properties liable to be included in Annex XIV (authorisation). Their inclusion generates notification obligations for articles containing them.

Major accident hazards (Seveso)

Hazardous substances listed in Annex I of the Seveso III Directive (Directive 2012/18/EU), transposed in Spain by Royal Decree 840/2015. Their presence in industrial establishments in quantities equal to or above established thresholds triggers obligations to implement major accident risk control measures.

Substances under PACT evaluation

Substances under active regulatory monitoring through ECHA's PACT (Public Activities Coordination Tool). Allows tracking which regulatory authorities are examining a substance and what potential regulatory actions are being considered (restriction, SVHC identification, harmonised classification, etc.).