Activated Carbon Consortium

Activated Carbon - Low Density Skeleton

Substance description: A porous, amorphous, high surface area adsorbent material composed of largely elemental carbon, with a low skeletal density.

(Activated carbon with a low density skeleton is produced by activation with chemical activation agents such as phosphoric acid, of various raw materials such as wood and synthetic sources.)

Analytical identity:

Parameter	Value	Method
Carbon content	80 mass% min.	Standard elemental analysis
Surface area or Iodine number	400 m2/g min. or 400 mg/g min.	Surface area BET or iodine number
Pore volume	0.2 ml/g min.	Mercury porosimetry And / or Gas adsorption
Morphology	Amorphous – no visible crystallinity down to 1 μm	XRD Analysis
Crystalline Silica content	rCS 1% w/w max. SiO2 < 2% w/w max.	
Particles < 0.1 μm	10 w/w% max	Laser diffraction PSD
Skeletal density (true density, absolute density)	1.8 g/ml max.	Helium pycknometry
Dustiness	Respirable dust fraction 17% max. inhalante dust fraction	EN 15051, method B « continuous drop »
Trace metals	ICP/OeS	Concentration not leading to classification

Impurity profile:

Impurity	Range	EC number
SiO2	0 - 2 mass%	234-368-0
НЗРО4	0 - 9 mass%	231-633-2
NaH2PO4	0 - 15 mass%	231-449-2
Na2HPO4	0 - 15 mass%	231-448-7

Classification: Either one of the following classifications may apply:

- not classified

- classified as Self-heating (corresponding to transport class 4.2)

The producer/importer shall determine for his products which of these two possibilities apply, by testing the material and considering the packaging size.

If your substance is to be classified as self-heating category 2 needs to be determined based on test results of your particular substances as placed on the market. Figure 2.11.1 of the ECHA guidance on the application of the CLP criteria gives a flow scheme to determine if the substance needs to be classified as Self Heating, category 2 (<u>http://echa.europa.eu/documents/10162/13562/clp_en.pdf</u>).

Packaging group needs to be determined based on the test results for your substance. Figure 33.3.1.3.3.1 of UNECE document on the transport of dangerous goods, part III Classification procedures, test methods and criteria relating to class2, class 3, class 4, division 5.1, class 8 and class 9 provides a flow scheme to determine the packaging group for self-heating substances

(http://www.unece.org/fileadmin/DAM/trans/danger/publi/manual/Rev5/English/03en_part3.pdf).

ACC - low density skeleton

CLP Hazard elements for the label (comments in italic):

Selfheating, Category 2

Hazard pictogram:



Warning

Hazard statement:

H252: Self heating in large quantities, may catch fire.

Precautionary statements:

P413: Store bulk masses greater than @@@ kg / @@@ lbs at temperatures not exceeding @@@ °C. (The maximum amounts in kilograms and pounds and the maximum temperature shall be determined based on the tests results of the actual substance.)

P235+ 410: Keep cool. Protect from sunlight. (Optional for industrial/professiona users if P413 has been applied.) **P280: Wear protective gloves/protective clothing/ eye protection/ face protection.**

Note: type of protective equipment to be listed in section 8 of the SDS.

The legal provisions related to the labels of hazardous substances are provided in Title III chapter 1 of the CLP Regulation.

TRANSPORT

Class 4.2 UN number: 1362 Packaging group: III Forwarding name: UN 1362 Carbon, activated, 4.2, III (E) Limited quantity: LQ0 Transport category: 4



Depending on the product, the classification and labeling may vary. Testing should confirm the correct packaging group.

Statement regarding criteria for nanomaterials

ACPA determined that Activated Carbons do not fullfill the criteria of nanomaterial under the following

• European Commission Recommendation for the definition of Nanomaterials, 2011/696/EU. It was intended to be applied as an overarching framework with regard to other EU regulations

- IISO Technical Committee (TC) 229 "Nanotechnologies"
- French decree, 2012-232 and articles from Code de l'Environnement L523-1 to L523-5 http://acpa.cefic.org/index.php/legislation/nano