

ACPA/Cefic Guidance Note

Amendment 42-24 to the International Maritime Dangerous Goods code New provisions for UN1362 CARBON, activated

Introduction

The Activated Carbon Producers Association (ACPA), a sector group of Cefic (The European Chemical Industry Council) represents companies with European entities that are involved in the manufacture and supply of the porous adsorbent activated carbon.

Through Cefic, ACPA participates at various levels including the International Maritime Organization (IMO) and International Standards Organisation (ISO) for the regulation that affect activated carbon, and also associated materials such as charcoal.

This document is intended to provide information relating to the recent amendment of the International Maritime Dangerous Goods (IMDG) Code.

This guidance note covers:

- Amendment 42-24 of the IMDG Code, which has made significant changes to the Special Provisions (SP) relating to both these materials, to give shippers and carriers more clarity in relation to the requirements of the code.
- Amendment 42-24, which applies on a voluntary basis from 1st January 2025, and on a mandatory basis from 1st January 2026.

Product classification

Charcoal, officially classified as **UN 1361 CARBON, animal or vegetable origin** under the UN Transport of Dangerous Goods regulations, is commonly used as a raw material in the production of activated carbon. It can also be formed as an intermediate product during the manufacturing process of activated carbon.

Activated carbon, officially classified as **UN1362 CARBON, activated**, is also known as **activated charcoal**, which often causes confusion. However, the IMDG Code clearly defines "Activated Charcoal" as another term for Activated Carbon, ensuring proper distinction between the two substances assigned to UN1361 and UN1362 classifications.

Activated carbon is a highly porous adsorbent with minimal volatile matter content, and a high ignition temperature. It is used for critical applications such as the purification of water, gases and air, as well as other industrial purposes (e.g. catalyst carrier).

Activated carbon status in maritime transportation regulations

Both charcoal and activated carbon are assigned specific UN numbers, meaning they must be evaluated according to the relevant transport regulations and any applicable special provisions. Based on classification rules, both substances fall under **Class 4.2: Self-Heating Substances**, as this is the only appropriate category for their classification.

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Under class 4.2, prior to amendment 42-24, **SP223** (Special Provision, IMDG Code 3.3) exists, which permits exemption of the product based on testing. This SP in turn refers to SP925, which provides the testing criteria to be applied. Again, this common **Special Provision** has caused confusion as it applies to both UN1361 and UN1362. The amendment 42-24 of the IMDG Code seeks to correct this and is discussed later in this advisory note.

SP925 has a mandatory exemption for UN1362 CARBON, *activated* manufactured by steam activation and a declaration by the shipper of this substance will permit exemption from the requirements of the IMDG Code, and denotes the material **to be not classified as dangerous goods**.

SP925 requires specific self-heating testing for chemically activated carbon and charcoal in accordance with the UN N.4 test, the method for which is set out in the UN Manual of Tests and Criteria in section 33.4.6. If the material has a negative test (i.e. does not exhibit self-heating according to the criteria of the test), it is considered to be exempt from the requirements of the IMDG Code, and denotes the material **to be not classified as Dangerous Goods**.

The shared application of this special provision has led to confusion, which amendment 42-24 of the IMDG Code aims to clarify.

Changes made in amendment 42-24 of the IMDG Code

1. Charcoal (UN1361) –Shipping name *CARBON, animal or vegetable*

The changes in amendment 42-24 remove the entries SP223 and SP925 from the entry for UN1361, which means that testing can no longer be used to exempt the substance from classification as Dangerous Goods. Moreover, a new specific special provision, SP978 is referenced. This provision outlines this, as well as other specific conditions that the shipper must present to the carrier for shipping this substance. These conditions are provided in Annex I of this advisory note.

2. Activated carbon (UN1362) – Proper shipping name *CARBON, activated*

The changes in amendment 42-24 remove the entries SP223 and SP925 from the entry for UN1362 and replace it with SP979. This SP:

a. Provides a universal exemption for activated carbon **manufactured by steam activation** processes;

b. Advises that the use of the UN N.4 test should only be performed to assess activated carbon **manufactured by chemical activation** processes, allowing it to be exempted from the requirements of the IMDG Code should a negative result (i.e. does not exhibit self-heating according to the criteria of the test);

c. Revises the test requirements for the shipper in relation to chemically activated carbon and the application of the UN N.4 test.

The details of SP979 are provided in Annex II of this advisory note.

SP925 is also to be deleted from the IMDG Code.

Summary

It is clear that the separation of special provisions relating to these two very different substances will provide an improved means for assessment by carriers of the product being offered for shipment. ACPA members have worked closely with representatives of the shipping lines (such as World Shipping Council and BIMCO) in the drafting of the amendment and the transitional phase of its implementation. There is a single objective to improve the safety of shipping of these substances, and to simplify the assessment of activated carbons in relation to the IMDG Code.

For further information on ACPA and the activities of Cefic in regard to these substances, please contact us.

For more information, please contact:

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About Cefic

Cefic, the European Chemical Industry Council, is the forum of large, medium and small chemical companies across Europe, accounting for 1.2 million jobs and 13% of world chemicals production. On behalf of its members, Cefic's experts share industry insights and trends, and offer views and input to the EU agenda. Cefic also provides members with services, like guidance and trainings on regulatory and technical matters, while also contributing to the advancement of scientific knowledge.

Annex I

IMDG Code relating to UN1361 CARBON, animal or vegetable

Considered class 4.2 Self-heating substances

Text of Special Provision SP978

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- .1 For the purpose of this Code, *carbon of animal or vegetable* origin means carbon, generated in a production or manufacturing process, not formed in a geological process and not obtained from mining. Carbon covered by this entry is produced by pyrolysis of an organic material such as bone, bamboo, coconut shell, jute or wood.
 - .2 The UN N.4 test according to section 33.4.6 of the UN *Manual of Tests and Criteria* shall not be used to exempt *carbon of animal or vegetable origin* (UN 1361) from the provisions of this Code.
 - .3 Without testing, the material shall be assigned to at least packing group III.
 - .4 Unless otherwise approved by the competent authority, the following provisions apply:
 - .1 after production, the unpacked material shall be subject to weathering (stored under cover, but in the open air) for a minimum period of 14 days before being packaged for transport; or
 - .2 after pyrolysis, steam and cooling shall be applied to the unpacked material and the material shall be packed under an inert gas atmosphere (e.g. nitrogen); packages shall then be stored under loose cover or in the open air for a minimum of 24 hours before transport.
 - .5 The material shall be packed into packagings only when the temperature of the material does not exceed 40°C on the day of packing.
 - .6 When stowed in a cargo transport unit, minimum headspace in the CTU of 30 cm shall be maintained, and:
 - .1 the stowage height of the package(s) in the unit should not exceed 1.5 m; or
 - .2 the maximum block size of the packages should be 16 m³ and a minimum of 15 cm of dunnage between blocks should be used."

UN1361 CARBON, animal or vegetable retains a PGIII packing classification, but as mandatory Dangerous Goods without exemption, the use of UN type tested packaging will apply.

Annex II

IMDG Code relating to UN1362 CARBON, activated

Considered class 4.2 Self-heating substances

Text of Special Provision SP979

"979 With the exception of the documentation requirements in 5.4.4.2, the provisions of this Code do not apply to this substance when:

.1 it is accompanied by a certificate from the shipper stating that the substance is steam activated carbon; or

.2 it is chemically activated carbon, which is accompanied by a certificate issued by a laboratory recognised by the competent authority, stating that the substance does not meet the criteria for class 4.2 based on a negative test result for self-heating substances when tested in accordance with the UN *Manual of Tests and Criteria* (see 33.4.6)."

UN1362 CARBON, activated retains a PGIII packing classification. As exemption from the IMDG Code applies mandatorily to product manufactured by steam activation, UN type tested packaging materials are not required.

The same rule applies to UN1362 CARBON, activated if it is exempted by testing as indicated in SP979 clause .2. Where this exemption is not obtained by testing, then class PGIII is applied, but the packages used should be UN type tested and approved, or in line with the outcome of the test protocol in UN Manual of Tests and Criteria (See 33.4.6).