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THE SUB COMMITTEE ON CARRIAGE OF
CARGOES AND CONTAINERS
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Agenda item 3.2

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PREPARATION OF DRAFT AMENDMENT 04-17 TO THE IMSBC CODE

**New proposals of amendments to the Code, new individual schedules
or amendments to existing ones**

**New entry for oily vegetable materials and their processing by-products as an MHB
to substitute existing entries for schedules of SEED CAKE**

Submitted by Germany and Italy

SUMMARY

<i>Executive summary:</i>	This document contains a proposal to include a new entry for oily vegetable materials and their processing by-products as an MHB in order to complement the proposal for a new entry of non-hazardous cargoes under the same Bulk Cargo Shipping Name
<i>Strategic direction:</i>	5.2
<i>High-level action:</i>	5.2.3
<i>Output:</i>	5.2.3.3
<i>Action to be taken:</i>	Paragraph 13
<i>Related documents:</i>	DSC 18/6/23; CCC 1/5/5 and CCC 2/5/6

Introduction

- 1 The existing entries for SEED CAKE comprise:
 - .1 SEED CAKE, containing vegetable oil UN 1386
(a) mechanically expelled seeds, containing more than 10% of oil or more than 20% of oil and moisture combined;
 - .2 SEED CAKE, containing vegetable oil UN 1386
(b) solvent extractions and expelled seeds, containing not more than 10% of oil and when the amount of moisture is higher than 10%, not more than 20% of oil and moisture combined; and
 - .3 SEED CAKE UN 2217
with not more than 1.5% oil and not more than 11% moisture.

Discussion

2 The existing entries of seed cake under SEED CAKE, UN 1386 and SEED CAKE, UN 2217 do not correctly include whole seeds (soya beans, sunflower beans, etc.), materials not related to seeds (citrus pulp) or extracted seeds that have not been shaped into "cakes" (bakery materials, meal, oily, etc.). The existing Bulk Cargo Shipping Name does not describe all types of oily vegetable materials and relevant derivatives that are being offered for shipment or will be offered in future.

3 Under the existing provisions, solvent extracted seeds shall only be accepted for loading when the cargo is substantially free from flammable solvent.

4 The requirements for safe transport are not currently verified by tests on class 4.2 criteria. The existing entries are classified on description of the properties, in particular, on the basis of content of oil or moisture.

5 If no test has been carried out it has to be supposed that the cargo meets the criteria of class 4.2. In this case, the strictest requirements have to be applied and the cargo has to be carried as a dangerous good.

6 SEED CAKE or OILY VEGETABLE MATERIALS AND THEIR PROCESSING BY-PRODUCTS which have been tested according to N.4 of the UN Manual of Tests and Criteria that do not meet the criteria for Class 4.2, but do meet the criteria in 9.2.3.3 of the Code are not considered in the Code. Even if the Criteria for MHB is fulfilled there is no entry for such cargo.

7 Actually, this proposal was part of a broader proposal aiming to reform the entries for packaged and bulk transport of oily vegetable materials and their processing by-products. In particular, bulk sea cargoes should be allowed to be transported as Group B cargoes. This approach, however, had no success since the UN Committee of Experts on The Transport of Dangerous Goods (UN TDG) refused to amend the existing entries for seed cake so that the proper shipping name covers further organic materials with self-heating properties. One reason for this is the fact that n.o.s. entries apply to the transport of packaged organic material of Class 4.2 which is not seed cake (for details see documents ST/SG/AC.10/C.3/2015/7 and paragraphs 30 and 31 of ST/SG/AC.10/C.3/94).

8 Presently, it is not possible to estimate the time frame for a solution by UN TDG. Even if a new proposal were to be submitted to and accepted by UN TDG in 2016, it would be incorporated only in amendment 39-18 to the IMDG-Code (enter into force on 1 January 2020, applicable as of 1st January 2019). Consequently, the consideration on the basis of harmonization could start after 2018, and, after reaching a decision, the implementation of the IMSBC Code could start after 2020 at the earliest date. However, this scenario is very ambitious; and as the legal situation is different for packaged dangerous goods, more time is needed for a new discussion at UN level.

9 Considering the procedure described in paragraph 8, and taking into account that the highest amount of seed cake is carried at sea as bulk cargo, an alternative procedure for bulk cargoes seems to be appropriate. For these transports, a realistic classification of the goods and, consequently, realistic transport regulations are urgently needed. The classification of seed cake which is only hazardous when transported in bulk does not fall in the competence of the UN Committee of Experts on The Transport of Dangerous Goods (paragraph 1, Recommendation on the Transport of Dangerous Goods). Therefore, the regulation for the carriage of Seed Cake (MHB) as bulk cargo can be solved separately.

Proposal

10 OILY VEGETABLE MATERIALS AND THEIR PROCESSING BY-PRODUCTS which have been tested according to N.4 of the UN Manual of Tests and Criteria and do not meet the criteria for Class 4.2 (proved by the certificate of a person recognized by the competent authority of the country of shipment) but do meet the criteria in 9.2.3.3 of this Code should be carried under restricted provisions if the cargo does not fulfill the criteria as non-hazardous cargoes.

11 A new schedule for oily vegetable materials and their processing by-products as an MHB Cargo is proposed as set out in the annex.

12 This proposal is part of a broader proposal aiming to reform all the entries for packaged and bulk transport of oily vegetable materials and their processing by-products. In particular, the bulk sea cargoes should be allowed to be transported as Group B, MHB or group C cargoes according to their properties. The ascertainment of the properties and the subsequent classification of the cargoes should rely, as far as possible, on experimental data, according to the flow chart shown in annex 2.

Action requested of the group

13 The group is invited to consider the proposals in paragraphs 10, 11 and 12 and take action as appropriate.

ANNEX 1

OILY VEGETABLE MATERIALS AND THEIR PROCESSING BY-PRODUCTS

This schedule applies to OILY VEGETABLE MATERIALS AND THEIR PROCESSING BY-PRODUCTS which have been tested according to N.4 of the UN Manual of Tests and Criteria and proved by a certificate of a person recognized by the competent authority of the country of shipment, not to meet the criteria for Class 4.2, but which meet the criteria in 9.2.3.3 of this Code.

Description

Residues remaining after oil have been expelled mechanically from oil bearing seeds (oil seed expellers) or after it has been solvent extracted and other food industry residues made from cereals or vegetable pulp. The oil contained in the cargoes to which this entry is applicable may exist in the form of fat. Examples for oil seeds are:

Copra	Rape seed
Cottonseed	Sesame seed
Linseed	Safflower seed
Niger seed	Soya bean
Palm kernel	Sunflower seed.
Peanut	

Examples for other food industry residues are:

Barley malt	Citrus pulp
Beet pulp	Corn gluten
Bran	Hominy chop
Brewers grain	Maize pulp
Cereal pellets	Rice, broken or barn

Note: the above may be shipped in the form of expellers, pulp, meals, cake and pellets.

Characteristics

ANGLE OF REPOSE	BULK DENSITY (kg/m ³)	STOWAGE FACTOR (m ³ /t)
Not applicable	478 to 719	1.39 to 2.09
SIZE	CLASS	GROUP
Not applicable	MHB (CB SH,OH)	B

Hazard

May self-heat slowly and, if wet or containing an excessive proportion of unoxidized oil, ignite spontaneously. Liable to oxidize, causing subsequent reduction of oxygen in the cargo space. Carbon dioxide may be produced.

Stowage & segregation

No special requirements other than prescribed in section 9.3 of this Code.

Hold cleanliness

Clean and dry as relevant to the hazards of the cargo.

Weather precautions

This cargo shall be kept as dry as practicable. This cargo shall not be handled during precipitation. During handling of this cargo all non-working hatches of the cargo spaces into which this cargo is to be loaded shall be closed.

Loading

Solvent extracted cargo shall only be accepted for loading when it has been prepared or treated to ensure that **it has been prepared or treated to ensure that the cargo cannot give off dangerous gases or vapours** (no risk of explosion) during carriage, which has to be certified by the shipper or, preferably, by a person recognized by the competent authority of the country of shipment, issued on the basis of tests to be purposely developed. Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

Precautions

Before shipment, this cargo shall be properly aged; the duration of ageing required varies with the oil content. The temperature of this cargo shall be measured regularly at a number of depths in the cargo spaces and recorded during the voyage.

If the temperature of this cargo reaches 55°C and continues to increase, ventilation of the cargo shall be stopped.

If the self-heating continues, then carbon dioxide or inert gas shall be introduced to the cargo space.

Entry of personnel into cargo and adjacent confined spaces shall not be permitted until tests have been carried out and it has been established that the oxygen level is 21%. If this condition is not met, additional ventilation shall be applied to the cargo hold or adjacent confined spaces and re-measuring shall be conducted after a suitable interval. An oxygen meter shall be worn and activated by all crew when entering cargo and adjacent enclosed spaces. Smoking and the use of naked lights shall be prohibited in the vicinity of the cargo space during loading and unloading and on entry into the cargo spaces at any other time.

Ventilation

Surface ventilation, either natural or mechanical, should be conducted, as necessary, for removing any residual solvent vapour. To prevent self-heating of the cargo, caution is required when using mechanical ventilation.

Carriage

Hatches of the cargo spaces carrying this cargo shall be weather tight to prevent the ingress of water.

Discharge

No special requirements.

Clean up

No special requirements.

Emergency procedures

<p>SPECIAL EMERGENCY EQUIPMENT TO BE CARRIED Self-contained breathing apparatus</p>
<p>EMERGENCY PROCEDURES Wear self-contained breathing apparatus</p> <p>EMERGENCY ACTION IN THE EVENT OF FIRE Batten down; use ship's fixed fire-fighting installation, if fitted.</p> <p>MEDICAL FIRST AID Refer to the Medical First Guide (MFAG), as amended</p>

ANNEX 2
CLASSIFICATION FLOWCHART

