15.16 - Animal or vegetable fats and oils and their fractions, partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, whether or not refined, but not further prepared.

1516.10 - Animal fats and oils and their fractions

1516.20 - Vegetable fats and oils and their fractions

This heading covers animal or vegetable fats and oils, which have undergone a specific chemical transformation of a kind mentioned below, but have not been further prepared.

The heading also covers similarly treated fractions of animal or vegetable fats and oils.

(A) **Hydrogenated fats and oils.**

Hydrogenation, which is effected by bringing the products into contact with pure hydrogen at a suitable temperature and pressure in the presence of a catalyst (usually finely divided nickel), raises the melting points of fats and increases the consistency of oils by transforming unsaturated glycerides (e.g., of oleic, linoleic, etc., acids) into saturated glycerides of higher melting points (e.g., of palmitic, stearic, etc., acids). The degree of hydrogenation and the final consistency of the products depend on the conditions employed in the process and the length of treatment. The heading covers such products whether they have been :

(1) Partly hydrogenated (even if these products tend to separate into pasty and liquid layers). This also has the effect of converting the *cis*-form of the unsaturated fatty acids into the *trans*-form in order to raise the melting point.

(2) Wholly hydrogenated (e.g., oils converted into pasty or solid fats).

The products most commonly hydrogenated are oils of fish or marine mammals and certain vegetable oils (cotton-seed oil, sesame oil, ground-nut oil, colza oil, soya-bean oil, maize (corn) oil, etc.). Wholly or partly hydrogenated oils of this type are frequently used as constituents in the preparation of edible fats of heading 15.17, since the hydrogenation not only increases their consistency but also makes them less liable to deterioration by atmospheric oxidation, and improves their taste and odour, and, by bleaching them, gives them a better appearance.

This part also covers hydrogenated castor oil, so called " opal wax ".

(B) **Inter-esterified, re-esterified or elaidinised fats and oils.**

(1) **Inter-esterified (or trans-esterified) fats and oils**. The consistency of an oil or fat can be increased by suitable rearrangement of the fatty acid radicals in the triglycerides contained in the product. The necessary interaction and rearrangements of the esters is stimulated by the use of catalysts.

(2) **Re-esterified fats and oils** (also called esterified fats and oils) are triglycerides obtained by direct synthesis from glycerol with mixtures of free fatty acids or acid oils from refining. The arrangement of the fatty acid radicals in the triglycerides is different from that normally found in natural oils.

Oils obtained from olives, containing re-esterified oils, fall in this heading.

(3) **Elaidinised fats and oils** are fats and oils processed in such a way that the unsaturated fatty acid radicals are substantially converted from the *cis*-form to the corresponding *trans*-form.

The heading includes the products as described above, even if they have a waxy character and even if they have been subsequently deodorised or subjected to similar refining processes, and whether or not they can be used directly as food. But it **excludes** hydrogenated, etc., fats and oils and their fractions which have undergone such further preparation for food purposes as texturation (modification of the texture or crystalline structure) (**heading 15.17**). The heading further **excludes** hydrogenated, inter-esterified, re-esterified or elaidinised fats and oils or their fractions, where modification involves more than one fat or oil (**heading 15.17** or **15.18**).