38.10 - Pickling preparations for metal surfaces; fluxes and other auxiliary preparations for soldering, brazing or welding; soldering, brazing or welding powders and pastes consisting of metal and other materials; preparations of a kind used as cores or coatings for welding electrodes or rods.

3810.10 - Pickling preparations for metal surfaces; soldering, brazing or welding powders and pastes consisting of metal and other materials

3810.90 - Other

(1) **Pickling preparations for metal surfaces**. These are preparations used to remove oxides, scale, rust or tarnish from the surface of metals, or for roughening these surfaces to facilitate certain operations. The pickling process may be a finishing operation, or may be effected at an earlier stage (to prepare the metal for drawing or extruding operations, for example), or prior to coating the metal, e.g., by galvanising, metallising, tinning, cladding, electroplating, painting, etc.

Pickling preparations are usually based on dilute acids (hydrochloric, sulphuric, hydrofluoric, nitric, phosphoric, etc.), and sometimes contain inhibitors which restrict the corrosion of the metal. Some, however, have a basis of alkalis (e.g., sodium hydroxide).

The heading **does not include** cleaning preparations for metals (**heading 34.02**).

(2) **Fluxes and other auxiliary preparations for soldering, brazing or welding**. Fluxes are used to facilitate the joining of the metals in the process of soldering, brazing or welding, by protecting the metal surfaces to be joined and the solder itself from oxidation. They have the property of dissolving the oxide which forms during the operation. Zinc chloride, ammonium chloride, sodium tetraborate, rosin and lanolin are the products most commonly used in these preparations.

This group also includes mixtures of aluminium granules or powder with various metallic oxides (e.g., iron oxide) used as intense heat-generators (alumino-thermic process) in welding operations, etc.

(3) **Soldering, brazing or welding powders and pastes consisting of metal and other materials**. These preparations are used to make the metal surfaces to be joined adhere to each other. Their essential constituent is metal (usually alloys containing tin, lead, copper, etc.). These preparations are classified in the heading **only when** :

(a) They contain other constituents as well as metals. These constituents are the auxiliary preparations described in (2) above; and

(b) They are put up in the form of powders or pastes.

Soldering, brazing or welding preparations consisting solely of metallic powders, whether or not mixed together, are **excluded (Chapter 71** or **Section XV** according to their constituents).

(4) **Preparations of a kind used as cores or coatings for welding electrodes or rods**. These are mainly intended to eliminate, in the form of fusible slag, the oxides which form during welding operations. They usually consist of a refractory mixture containing, for example, lime and kaolin.

Electrodes, of base metal or of metal carbides, coated or cored with a flux, are excluded (**heading 83.11**).