

39.11

39.11 - Petroleum resins, coumarone-indene resins, polyterpenes, polysulphides, polysulphones and other products specified in Note 3 to this Chapter, not elsewhere specified or included, in primary forms.

3911.10 - Petroleum resins, coumarone, indene or coumarone-indene resins and polyterpenes

3911.90 - Other

This heading covers the following products :

- (1) **Petroleum resins, coumarone, indene or coumarone-indene resins and polyterpenes** constitute a group of resins, not highly polymerised, made by polymerising more or less impure fractions obtained, respectively, from deeply cracked petroleum distillates, from coal tar or from turpentine or other sources of terpenes. They are used in adhesives and coatings and are often incorporated as softeners in rubber or plastics, for example, for use in floor tiles.
- (2) **Polysulphides** are polymers characterised by the presence of monosulphide linkages in the polymer chain, for example, poly(phenylene sulphide). In polysulphides each sulphur atom is bound on both sides by carbon atoms, as opposed to the thioplasts of Chapter 40, which contain sulphur-sulphur linkages. Polysulphides are used in coatings and in moulded articles, for example, aircraft and automobile parts, pump impellers.
- (3) **Polysulphones** are polymers characterised by the presence of sulphone linkages in the polymer chain, for example, the product obtained by reacting the sodium salt of bisphenol A (4,4'-isopropylidene-diphenol) with bis (4-chlorophenyl) sulphone. They are used in electrical parts, domestic appliances, etc.
- (4) **Polymers with isocyanate groups**, not elsewhere specified or included, such as :
 - (a) **Polyureas based on hexamethylene diisocyanate (HDI)**, synthesised by the reaction of HDI with water to produce prepolymers with an average number of monomer units of between 3 and 4. The products are used in the manufacture of paints and varnishes.
 - (b) **Polyisocyanurates based on hexamethylene diisocyanate (HDI)**, synthesised by the reaction of HDI to produce prepolymers with isocyanurate links between monomer units. The prepolymers have an average number of monomer units of between 3 and 5. The products are used in the manufacture of paints and varnishes.
- (5) **Other products specified in Note 3 to the Chapter** include polyxylene resins, poly (1,4-diisopropylbenzene), polyvinyl ketones, polyethyleneimines and polyimides.

For the classification of polymers (including copolymers), chemically modified polymers and polymer blends, see the General Explanatory Note to this Chapter.