

Plastic Waste Generated Calculation Tool Manual

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Abbreviations

CPC	Central Product Classification
WG	Waste Generated
HS Codes	Harmonized System Codes
POM	Put on Market
PEM	Plastic Embedded
PE	Polyethylene
PET	Polyethylene terephthalate
PP	Polypropylene
PS	Polystyrene
PVC	Polyvinyl chloride
PUR	Polyurethane

1. Introduction

The "Plastic Waste Generation calculation tool" is an integral part of the methodologies for the calculation of the weight of plastic embedded (PEM) POM and the calculation of the plastic waste generated by weight in each country. Moreover, it provides an estimation for the countries of the plastic POM and waste generated per market sector and per type of plastic (i.e. PE, PP, PS, PVC, PET, PUR).

The goal of this manual is to help users to handle, calculate and adapt the data in the Tool and to address possible questions on how the Tool works. Chapter 2, presents an overview of the Plastic Waste Generation calculation tool with a description of its different sheets. In Chapter 3, the manual provides a guideline to the user on how to operate the Tool to perform different tasks.

The calculation routines have been developed by United Nations Institute for Training and Research (UNITAR). The methodology to calculate the total quantity of Plastic Waste Generation calculation tool in a given year in the territory of a country is based on:

- the amount of plastic embedded placed on the market (POM) in the preceding years,
- the corresponding product lifetimes.

The Tool uses PEM POM data and product lifetimes based on the instructions which are provided to calculate the quantity of plastic waste generated in any year as described in Chapters 3.4 and 3.5. The calculation uses a disposal rate with the Gauss distribution and the product lifetime which can be presented in the tool as illustrated in Annex 4.

2. Overview of the Plastic Waste Generated Calculation Tool

The Plastic Waste Generated Calculation Tool contains 18 different sheets. All of them are essential for the proper functioning of the tool. Most sheets are hidden by default to prevent accidental changes which would cause wrong calculations. The table below presents the different sheets of the Plastic Waste Generated Calculation Tool and explains their purpose:

Table 1 Overview of the sheets of the Plastic POM calculation tool

Name of the sheet	Description
FrontPage	User interface
Indicators	A table displaying a summary of the quantities for each indicator (POM and Plastic waste generated).
POM	A table is used to insert a country's plastic POM, copied from "POM_to_Tool" from Plastic Embedded POM Calculation Tool
POM_Plastic_Sector	Plastic Embedded POM by polymer type
WG_Plastic_Sector	Plastic waste generated by polymer type
GraphPOM_Plastic_Sector	A graph illustrating plastic POM for a specific country per market sector
GraphPOM_type_of_plastic	A graph illustrating the POM for a specific country by polymer type
Graph_WG_Plastic_Sector	A graph illustrating plastic waste generation for a specific country per market sector
Graph_WG_type_of_plastic	A graph illustrating the plastic waste generated for a specific country by polymer type
<i>The following sheets are hidden, it can be made visible by clicking on the "show sheets" button.</i>	
Plastic Waste Generated	Calculation results of plastic waste generated per PlasticKEY
GraphLifespan	Graph illustrating the lifetime of the PlasticKEY groups
mean	Mean parameter used in the Gauss distribution for the calculation of a country plastic waste generated (per plastic key) (Do not modify)
std dev	Standard deviation parameters are used in the Gauss distribution for the calculation of a country plastic waste generated (per plastic key) (Do not modify)
Gauss	Gauss distribution for the calculation (Do not modify)
POM_copy	Copy of the original POM data in the POM sheet (Do not modify)
Mean_copy	Copy of the original Mean parameters included in the Mean sheet (Do not modify)
std dev_copy	Copy of the original Standard deviation parameters included in the Std_dev sheet (Do not modify)

conversion	Polymer composition of PlasticKEY groups (Do not modify)
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Do not **relocate**, **insert**, or **change** the individual order of the sheets in the Plastic Waste Generated Calculation Tool. This will result in the malfunction of the **Show Sheets** action button on the “FrontPage”. All other sheets are used for data storage, calculations and intermediate results and must not be modified by the user.

The Plastic Waste Generated Calculation Tool is developed in Excel 2013 as a “.xlsm” spreadsheet. It is designed as basic as possible to operate across different platforms and is downward compatible with all versions of Excel.

3. Using the Plastic Waste Generated Calculation Tool

The "FrontPage" sheets (the first sheet of the Plastic Waste Generated Calculation Tool and user interphase) contains four buttons that will allow the user to perform all necessary actions.

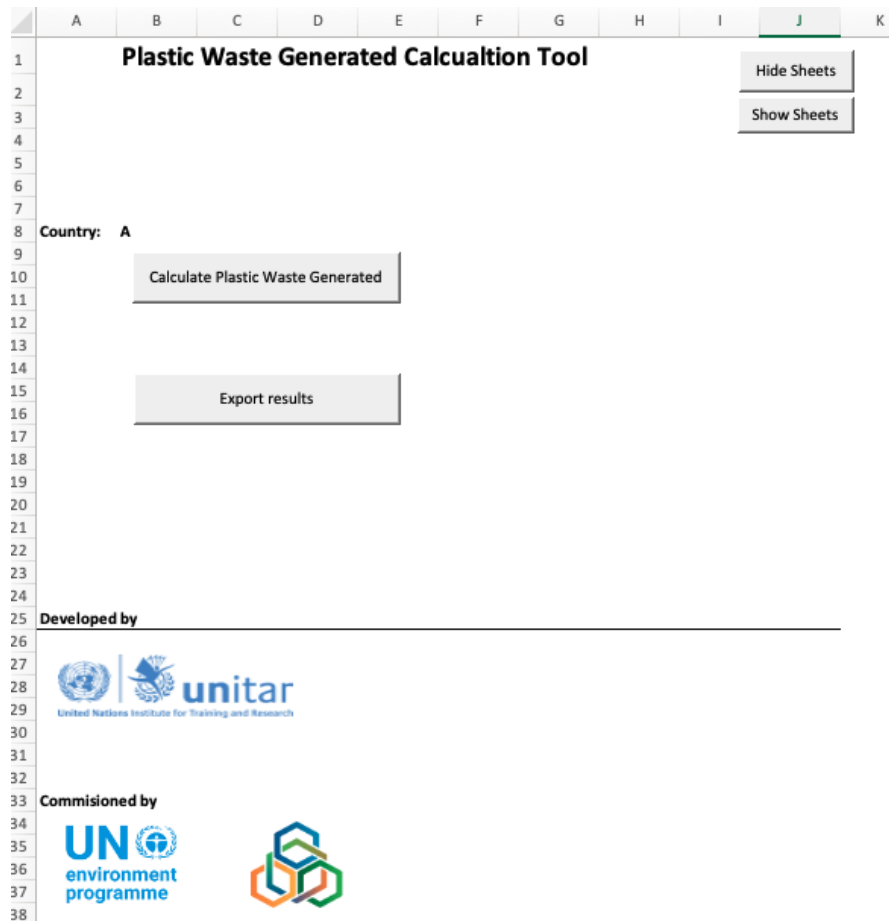


Figure 1 The "FrontPage" sheets of the Plastic Waste Generate Calculation Tool

3.1. Hide/Show sheets

In order to prevent accidental changes to certain sheets, the tool has hidden sheets by default. However, it is possible to make these sheets visible by clicking on the **Show Sheets** button.

Clicking on the **Hide Sheets** button will hide the sheets again and only 9 out of 18 will be unhidden.

3.2. Inserting plastic embedded POM data

As part of the integral part of the methodologies for the calculation of plastic POM and waste generated data in countries, UNITAR developed the Plastic POM Calculation Tool (including Plastic Products POM Calculation Tool and Plastic Embedded POM Calculation Tool) and Plastic Waste Generated Calculation Tool. Once the user has estimated the plastic embedded POM using the Plastic embedded POM calculation Tool, they can copy and paste the sheet "POM_to_Tool" sheet (from the

Plastic Embedded POM Calculation Tool) into the “POM” sheet of the Plastic Waste Generated Calculation Tool.

Please note that when pasting the sheet “POM_to_Tool” to Plastic Waste Generated Tool, please select “Paste Special” and then “Values”.

3.3. Calculating Plastic Waste Generated

Once the user has entered the POM data resulting from the Plastic Embedded POM Calculation Tool, the Plastic Waste Generated Calculation Tool can calculate the quantity of plastic waste generated. The calculation of plastic waste generated will start by clicking on the button **Calculate Plastic Generated** on the “FrontPage” sheet. We recommend not to use or open any other program once the **Calculate Plastic Waste Generated** button has been pressed as it can affect the performance of the tool and its calculation. This process will take approximately 2 minutes.

Once the plastic waste generated is calculated the user will get a notification that the calculations are completed. The results will then be available in the tables and graphs in different sheets as described in sections 2 and 3.5.

3.4. Viewing the results

The Plastic Waste Generated Calculation Tool shows the results of the POM input and calculation of the plastic waste generated both as tables (sheets " POM_Plastic_Sector " and " WG_Plastic_Sector" and as graphs (sheets "GraphPOM_Plastic_Sector", "GraphPOM_type_of_plastic", "Graph_WG_Plastic_Sector" and "Graph_WG_type_of_plastic") as seen in Figure 2. The results are presented by market sector and by polymer type.

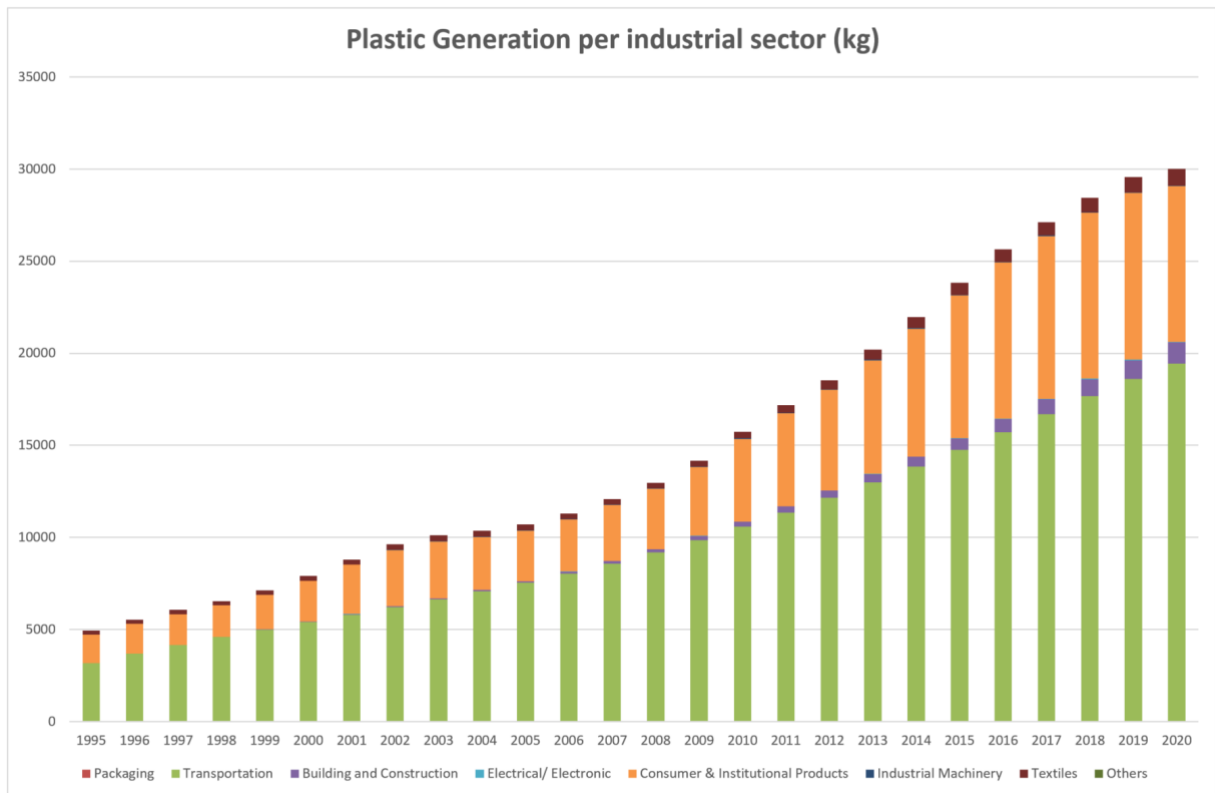


Figure 2 Example of a graph representing plastic generation per market sector for a sample country

3.5. Exporting the results

To export the results, the users need to fill in the country name in cell B9 at the “Frontpage” and click on the **Export results** button. A new spreadsheet will be created and named “Result_[country name].xlsx”. This filename is fixed and cannot be changed. The spreadsheet will be saved in the same directory where the Plastic Waste Generated Calculation Tool is stored.

The following sheets will be exported:

1. WG_Plastic_Sector
2. POM_Plastic_Sector
3. Graph_WG_type_of_plastic
4. Graph_WG_Plastic_Sector
5. GraphPOM_type_of_plastic
6. GraphPOM_Plastic_Sector

If an Export file already exists, the user will get an error message and be asked to rename it. Otherwise, the Export procedure will be aborted.

If the user would like to keep an earlier version of the Exported file, then this should be renamed before running the Export functionality again.

Annex 1: Correspondence table between the Plastic-Keys and HS code

Plastic-Key	Plastic-Key Description	HS Code	HS Description
P101	Boxes, cases, crates and similar packing articles, of plastics	3923.10	Boxes, cases, crates and similar articles for the conveyance or packaging of goods, of plastics
P101	Boxes, cases, crates and similar packing articles, of plastics	3923.30	Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods, of plastics
P102	Sacks and bags, of plastics	3923.21	Sacks and bags, incl. cones, of polymers of ethylene
P102	Sacks and bags, of plastics	3923.29	Sacks and bags, incl. cones, of plastics (excl. those of polymers of ethylene)
P103	Juices	2009.11	Frozen orange juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.12	Orange juice, unfermented, Brix value \leq 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit and frozen)
P103	Juices	2009.19	Orange juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit, frozen, and of a Brix value \leq 20 at 20 $^{\circ}$ C)
P103	Juices	2009.21	Grapefruit juice, unfermented, Brix value \leq 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.29	Grapefruit juice, unfermented, Brix value $>$ 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.31	Single citrus fruit juice, unfermented, Brix value \leq 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, orange juice and grapefruit juice)
P103	Juices	2009.39	Single citrus fruit juice, unfermented, Brix value $>$ 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, orange juice and grapefruit juice)
P103	Juices	2009.41	Pineapple juice, unfermented, Brix value \leq 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.49	Pineapple juice, unfermented, Brix value $>$ 20 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.50	Tomato juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.61	Grape juice, incl. grape must, unfermented, Brix value \leq 30 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.69	Grape juice, incl. grape must, unfermented, Brix value $>$ 30 at 20 $^{\circ}$ C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)

P103	Juices	2009.71	Apple juice, unfermented, Brix value ≤ 20 at 20–∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.79	Apple juice, unfermented, Brix value > 20 at 20–∞C, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.81	Cranberry "Vaccinium macrocarpon, Vaccinium oxycoccos, Vaccinium vitis-idaea" juice, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P103	Juices	2009.89	Juice of fruit or vegetables, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit, mixtures, and juice of citrus fruit, pineapples, tomatoes, grapes, incl. grape must, apples and cranberries)
P103	Juices	2009.90	Mixtures of fruit juices, incl. grape must, and vegetable juices, unfermented, whether or not containing added sugar or other sweetening matter (excl. containing spirit)
P104	Mineral waters and aerated waters	2201.10	Mineral waters and aerated waters, not containing added sugar, other sweetening matter or flavoured
P104	Mineral waters and aerated waters	2201.90	Ordinary natural water, not containing added sugar, other sweetening matter or flavoured; ice and snow (excl. mineral waters and aerated waters, sea water, distilled water, conductivity water or water of similar purity)
P105	Soft drinks, excluding water and fruit juices	2202.10	Waters, incl. mineral and aerated, with added sugar, sweetener or flavour, for direct consumption as a beverage
P201	Locomotives	8601.10	Rail locomotives powered from an external source of electricity
P201	Locomotives	8601.20	Rail locomotives powered by electric accumulators
P201	Locomotives	8602.10	Diesel-electric locomotives
P201	Locomotives	8602.90	Rail locomotives (excl. those powered from an external source of electricity or by accumulators and diesel-electric locomotives)
P202	Railway or tramway coaches, self-propelled	8603.10	Self-propelled railway or tramway coaches, vans and trucks, powered from an external source of electricity (excl. those of heading 8604)
P202	Railway or tramway coaches, self-propelled	8603.90	Self-propelled railway or tramway coaches, vans and trucks (excl. those powered from an external source of electricity and those of heading 8604)
P202	Railway or tramway coaches, self-propelled	8604.00	Railway or tramway maintenance or service vehicles, whether or not self-propelled, e.g., workshops, cranes, ballast tampers, trackliners, testing coaches and track inspection vehicles
P202	Railway or tramway coaches, self-propelled	8605.00	Railway or tramway passenger coaches, luggage vans, post office coaches and other special purpose railway or tramway coaches (excl. self-propelled railway or tramway coaches, vans and trucks, railway or tramway maintenance or service vehicles and goods vans and wagons)
P203	Railway or tramway goods vans and wagons, not self-propelled	8606.10	Railway or tramway tank wagons and the like (excl. self-propelled)

P203	Railway or tramway goods vans and wagons, not self-propelled	8606.30	Railway or tramway self-discharging goods vans and wagons (excl. tank wagons and the like and insulated or refrigerated goods vans and wagons)
P203	Railway or tramway goods vans and wagons, not self-propelled	8606.91	Railway or tramway goods vans and wagons, covered and closed (excl. self-discharging goods vans and wagons and tank wagons and the like)
P203	Railway or tramway goods vans and wagons, not self-propelled	8606.92	Railway or tramway goods vans and wagons, open, with non-removable sides of a height > 60 cm (excl. self-discharging wagons)
P203	Railway or tramway goods vans and wagons, not self-propelled	8606.99	Railway or tramway goods vans and wagons (excl. those specially designed for the transport of highly radioactive materials, tank wagons and the like, insulated, refrigerated or self-discharging goods vans and wagons and open goods vans and wagons with non-removable sides of a height > 60 cm)
P204	Tractors	8701.10	Pedestrian-controlled agricultural tractors and similar tractors for industry (excl. tractor units for articulated lorries)
P204	Tractors	8701.20	Road tractors for semi-trailers
P204	Tractors	8701.30	Track-laying tractors (excl. pedestrian-controlled)
P204	Tractors	8701.91	Tractors, of an engine power ≤ 18 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
P204	Tractors	8701.92	Tractors, of an engine power > 18 kW but ≤ 37 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
P204	Tractors	8701.93	Tractors, of an engine power > 37 kW but ≤ 75 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
P204	Tractors	8701.94	Tractors, of an engine power > 75 kW but ≤ 130 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
P204	Tractors	8701.95	Tractors, of an engine power > 130 kW (excl. those of heading 8709, pedestrian-controlled tractors, road tractors for semi-trailers and track-laying tractors)
P205	Public-transport type passenger motor vehicles	8702.10	Motor vehicles for the transport of ≥ 10 persons, incl. driver, with only diesel engine
P205	Public-transport type passenger motor vehicles	8702.20	Motor vehicles for the transport of ≥ 10 persons, incl. driver, with both diesel engine and electric motor as motors for propulsion
P205	Public-transport type passenger motor vehicles	8702.30	Motor vehicles for the transport of ≥ 10 persons, incl. driver, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion
P205	Public-transport type passenger motor vehicles	8702.40	Motor vehicles for the transport of ≥ 10 persons, incl. driver, with only electric motor for propulsion
P205	Public-transport type passenger motor vehicles	8702.90	Motor vehicles for the transport of ≥ 10 persons, incl. driver (excl. with diesel engine or electric motor for propulsion)

P205	Public-transport type passenger motor vehicles	8703.10	Vehicles for the transport of <10 persons on snow; golf cars and similar vehicles
P206	Passenger cars	8703.21	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity ≤ 1.000 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.22	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 1.000 cm ³ but ≤ 1.500 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.23	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 1.500 cm ³ but ≤ 3.000 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.24	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 3.000 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.31	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only diesel engine of a cylinder capacity ≤ 1.500 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.32	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only diesel engine of a cylinder capacity > 1.500 cm ³ but ≤ 2.500 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.33	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only diesel engine of a cylinder capacity > 2.500 cm ³ (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.40	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion (excl. vehicles for travelling on snow, other specially designed vehicles of subheading 8703.10 and plug-in hybrids)
P206	Passenger cars	8703.50	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both diesel engine and electric motor as motors for propulsion (excl. vehicles for travelling on snow, other specially designed vehicles of subheading 8703.10 and plug-in hybrids)
P206	Passenger cars	8703.60	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing

			cars, with both spark-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion, capable of being charged by plugging to external source of electric power (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.70	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with both diesel engine and electric motor as motors for propulsion, capable of being charged by plugging to external source of electric power (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.80	Motor cars and other motor vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with only electric motor for propulsion (excl. vehicles for travelling on snow and other specially designed vehicles of subheading 8703.10)
P206	Passenger cars	8703.90	Motor cars and other vehicles principally designed for the transport of <10 persons, incl. station wagons and racing cars, with engines other than internal combustion piston engine or electric motor (excl. vehicles for the transport of persons on snow and other specially designed vehicles of subheading 8703.10)
P207	Trucks	8704.10	Dumpers for off-highway use
P207	Trucks	8704.21	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight ≤ 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P207	Trucks	8704.22	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight > 5 t but ≤ 20 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P207	Trucks	8704.23	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a gross vehicle weight > 20 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P207	Trucks	8704.31	Motor vehicles for the transport of goods, with spark-ignition internal combustion piston engine, of a gross vehicle weight ≤ 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P207	Trucks	8704.32	Motor vehicles for the transport of goods, with spark-ignition internal combustion piston engine, of a gross vehicle weight > 5 t (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P207	Trucks	8704.90	Motor vehicles for the transport of goods, with engines other than internal combustion piston engine (excl. dumpers for off-highway use of subheading 8704.10 and special purpose motor vehicles of heading 8705)
P208	Special-purpose motor vehicles n.e.c.	8705.10	Crane lorries (excl. breakdown lorries)
P208	Special-purpose motor vehicles n.e.c.	8705.20	Mobile drilling derricks

P208	Special-purpose motor vehicles n.e.c.	8705.30	Fire fighting vehicles (excl. vehicles for transporting persons)
P208	Special-purpose motor vehicles n.e.c.	8705.40	Concrete-mixer lorries
P209	Fork-lift trucks and other works trucks; tractors of the type used on railway station platforms	8709.11	Electrical vehicles not fitted with lifting or handling equipment, of the type used in factories, warehouses, dock areas or airports for short distance transport of goods; tractors of the type used on railway station platforms
P209	Fork-lift trucks and other works trucks; tractors of the type used on railway station platforms	8709.19	Works trucks, self-propelled, not fitted with lifting or handling equipment, of the type used in factories, warehouses, dock areas or airports for short distance transport of goods; tractors of the type used on railway station platforms (excl. electrical trucks)
P210	Tanks and other armoured fighting vehicles, motorized, and parts thereof	8710.00	Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles, n.e.s.
P211	Motorcycles	8711.10	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity $\leq 50 \text{ cm}^3$
P211	Motorcycles	8711.20	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity $> 50 \text{ cm}^3$ but $\leq 250 \text{ cm}^3$
P211	Motorcycles	8711.30	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity $> 250 \text{ cm}^3$ but $\leq 500 \text{ cm}^3$
P211	Motorcycles	8711.40	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity $> 500 \text{ cm}^3$ but $\leq 800 \text{ cm}^3$
P211	Motorcycles	8711.50	Motorcycles, incl. mopeds, with reciprocating internal combustion piston engine of a cylinder capacity $> 800 \text{ cm}^3$
P211	Motorcycles	8711.60	Motorcycles, incl. mopeds, and cycles fitted with an auxiliary motor, with electric motor for propulsion
P212	Bicycles	8712.00	Bicycles and other cycles, incl. delivery tricycles, not motorised
P213	Wheelchairs	8713.10	Carriages for disabled persons, not mechanically propelled
P213	Wheelchairs	8713.90	Carriages for disabled persons, motorised or otherwise mechanically propelled (excl. specially designed motor vehicles and bicycles)
P214	Trailers and semi-trailers of the caravan type, for housing or camping	8716.10	Trailers and semi-trailers of the caravan type, for housing or camping
P214	Trailers and semi-trailers of the caravan type, for housing or camping	8716.31	Tanker trailers and tanker semi-trailers, not designed for running on rails
P214	Trailers and semi-trailers of the caravan type, for housing or camping	8716.39	Trailers and semi-trailers for the transport of goods, not designed for running on rails (excl. self-loading or self-unloading trailers and semi-trailers for agricultural purposes and tanker trailers and tanker semi-trailers)

P215	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft	8801.00	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft
P216	Helicopters of an unladen weight not exceeding 2,000 kg	8802.11	Helicopters of an unladen weight <= 2.000 kg
P216	Helicopters of an unladen weight not exceeding 2,000 kg	8802.12	Helicopters of an unladen weight > 2.000 kg
P216	Helicopters of an unladen weight not exceeding 2,000 kg	8802.20	Aeroplanes and other powered aircraft of an unladen weight <= 2.000 kg (excl. helicopters and dirigibles)
P216	Helicopters of an unladen weight not exceeding 2,000 kg	8802.30	Aeroplanes and other powered aircraft of an unladen weight > 2.000 kg but <= 15.000 kg (excl. helicopters and dirigibles)
P216	Helicopters of an unladen weight not exceeding 2,000 kg	8802.40	Aeroplanes and other powered aircraft of an of an unladen weight > 15.000 kg (excl. helicopters and dirigibles)
P217	Spacecraft and spacecraft launch vehicles	8802.60	Spacecraft, incl. satellites, and suborbital and spacecraft launch vehicles
P218	Large ships and vessels	8901.10	Cruise ships, excursion boats and similar vessels principally designed for the transport of persons; ferry-boats of all kinds
P218	Large ships and vessels	8901.20	Tankers
P218	Large ships and vessels	8901.30	Refrigerated vessels (excl. tankers)
P218	Large ships and vessels	8901.90	Vessels for the transport of goods and vessels for the transport of both persons and goods (excl. refrigerated vessels, tankers, ferry-boats and vessels principally designed for the transport of persons)
P218	Large ships and vessels	8902.00	Fishing vessels; factory ships and other vessels for processing or preserving fishery products (excl. fishing boats for sport)
P219	(Intentionally empty) (to be updated)		
P220	Vessels for pleasure and sports	8903.10	Inflatable vessels for pleasure or sports
P220	Vessels for pleasure and sports	8903.91	Sailboats and yachts, with or without auxiliary motor, for pleasure or sports
P220	Vessels for pleasure and sports	8903.92	Motor boats and motor yachts, for pleasure or sports (other than outboard motor boats)
P220	Vessels for pleasure and sports	8903.99	Vessels for pleasure or sports; rowing boats (excl. motor boats and motor yachts powered other than by outboard motors, sailboats and yachts with or without auxiliary motor and inflatable boats)
P220	Vessels for pleasure and sports	8904.00	Tugs and pusher craft
P221	Other vessels	8905.10	Dredgers
P221	Other vessels	8905.20	Floating or submersible drilling or production platforms
P221	Other vessels	8905.90	Light-vessels, fire-floats, floating cranes and other vessels, the navigability of which is subsidiary to their main function (excl.

			dredgers, floating or submersible drilling or production platforms; fishing vessels and warships)
P221	Other vessels	8906.10	Warships of all kinds
P221	Other vessels	8906.90	Vessels, incl. lifeboats (excl. warships, rowing boats and other vessels of heading 8901 to 8905 and vessels for breaking up)
P222	Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures	8907.10	Inflatable rafts
P222	Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures	8907.90	Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures (excl. inflatable rafts, vessels of heading 8901 to 8906 and floating structures for breaking up)
P301	Carpets and other textile floor coverings, woven, not tufted or flopped	5702.32	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flopped, of pile construction, not made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
P301	Carpets and other textile floor coverings, woven, not tufted or flopped	5702.42	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flopped, of pile construction, made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
P301	Carpets and other textile floor coverings, woven, not tufted or flopped	5702.92	Carpets and other floor coverings, of man-made textile materials, woven, not tufted or flopped, not of pile construction, made up (excl. Kelem, Schumacks, Karamanie and similar hand-woven rugs)
P302	Carpets and other textile floor coverings, tufted	5703.20	Carpets and other floor coverings, of nylon or other polyamides, tufted "needle punched", whether or not made up
P302	Carpets and other textile floor coverings, tufted	5703.30	Carpets and other floor coverings, of man-made textile materials, tufted "needle punched", whether or not made up (excl. those of nylon or other polyamides)
P303	Other carpets	5705.00	Carpets and other textile floor coverings, whether or not made up (excl. knotted, woven or tufted "needle punched", and of felt)
P304	Embroidery and Lace	5804.21	Mechanically made lace of man-made fibres in the piece, in strips or in motifs (excl. fabrics of headings 6002 to 6006)
P304	Embroidery and Lace	5810.92	Embroidery of man-made fibres on a textile fabric base, in the piece, in strips or in motifs (excl. embroidery without visible ground)
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.21	Rigid tubes, pipes and hoses, of polymers of ethylene
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.22	Rigid tubes, pipes and hoses of polymers of propylene
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.23	Rigid tubes, pipes and hoses, of polymers of vinyl chloride
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.29	Rigid tubes, pipes and hoses, of plastics (excl. those of polymers of ethylene, propylene and vinyl chloride)

P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.31	Flexible tubes, pipes and hoses, of plastics, burst pressure \geq 27,6 MPa
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.32	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, without fittings
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.33	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, with fittings, seals or connectors
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.39	Flexible tubes, pipes and hoses, of plastics, reinforced or otherwise combined with other materials (excl. those with a burst pressure of \geq 27,6 MPa)
P305	Tubes, pipes and hoses, and fittings therefor, of plastics	3917.40	Fittings, e.g. joints, elbows, flanges, of plastics, for tubes, pipes and hoses
P306	Floor coverings of plastics, wall or ceiling coverings of plastics	3918.10	Floor coverings, whether or not self-adhesive, in rolls or in the form of tiles, and wall or ceiling coverings "in rolls with a width of \geq 45 cm, consisting of a layer of plastics fixed permanently on a backing of any material other than paper, the face side of which is grained, embossed, coloured, design-printed or otherwise decorated", of polymers of vinyl chloride
P306	Floor coverings of plastics, wall or ceiling coverings of plastics	3918.90	Floor coverings of plastics, whether or not self-adhesive, in rolls or in the form of tiles, and wall or ceiling coverings in rolls with a width of \geq 45 cm, consisting of a layer of plastics fixed permanently on a backing of any material other than paper, the face side of which is grained, embossed, coloured, design-printed or otherwise decorated (excl. coverings of polymers of vinyl chloride)
P307	Self-adhesive plates, sheets and other flat shapes, of plastics	3919.10	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, in rolls \leq 20 cm wide
P307	Self-adhesive plates, sheets and other flat shapes, of plastics	3919.90	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, whether or not in rolls $>$ 20 cm wide (excl. floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.10	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.20	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly	3920.30	Plates, sheets, foil, film and strip, of non-cellular polymers of styrene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)

	combined with other materials		
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.43	Plates, sheets, film, foil and strip, of non-cellular polymers of vinyl chloride, containing by weight \geq 6% of plasticisers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.49	Plates, sheets, film, foil and strip, of non-cellular polymers of vinyl chloride, containing by weight $<$ 6% of plasticisers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.51	Plates, sheets, film, foil and strip, of non-cellular poly"methyl methacrylate", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.59	Plates, sheets, film, foil and strip, of non-cellular acrylic polymers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.61	Plates, sheets, film, foil and strip, of non-cellular polycarbonates, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.62	Plates, sheets, film, foil and strip, of non-cellular poly"ethylene terephthalate", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.63	Plates, sheets, film, foil and strip, of non-cellular unsaturated polyesters, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of poly"methyl methacrylate", self-adhesive products, and floor, wall and ceiling coverings of heading 3918)

P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.69	Plates, sheets, film, foil and strip, of non-cellular polyesters, not reinforced, laminated, supported or similarly combined with other materials, not worked or only surface-worked, or only cut to rectangular, incl. square, shapes (excl. polycarbonates, polyethylene terephthalate and other unsaturated polyesters, self-adhesive products, and floor, wall and ceiling coverings in heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.71	Plates, sheets, film, foil and strip, of non-cellular regenerated cellulose, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.73	Plates, sheets, film, foil and strip, of non-cellular cellulose acetates, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, and floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.79	Plates, sheets, film, foil and strip, of non-cellular cellulose derivatives, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. products of cellulose acetates, self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.91	Plates, sheets, film, foil and strip, of non-cellular poly"vinyl butyral", not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.92	Plates, sheets, film, foil and strip, of non-cellular polyamides, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.93	Plates, sheets, film, foil and strip, of non-cellular amino-resins, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-	3920.94	Plates, sheets, film, foil and strip, of non-cellular phenolic resins, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked

	cellular and not reinforced, laminated, supported or similarly combined with other materials		or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P308	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	3920.99	Plates, sheets, film, foil and strip, of non-cellular plastics, n.e.s., not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.11	Plates, sheets, film, foil and strip, of cellular polymers of styrene, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.12	Plates, sheets, film, foil and strip, of cellular polymers of vinyl chloride, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.13	Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.14	Plates, sheets, film, foil and strip, of regenerated cellular cellulose, unworked or merely surface-worked or merely cut into squares or rectangles (excl. self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.19	Plates, sheets, film, foil and strip, of cellular plastic, unworked or merely surface-worked or merely cut into squares or rectangles (excl. those of polymers of styrene, vinyl chloride, polyurethanes and regenerated cellulose, self-adhesive products, floor, wall and ceiling coverings of heading 3918 and sterile surgical or dental adhesion barriers of subheading 3006.10.30)
P309	Other plates, sheets, film, foil and strip, of plastics	3921.90	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated, supported or similarly combined with other materials, unworked or merely surface-worked or merely cut into squares or rectangles (excl. of cellular plastic; self-adhesive products, floor, wall and ceiling coverings of heading 3918)
P310	Plastic sanitary ware (baths, wash-basins etc.)	3922.10	Baths, shower-baths, sinks and washbasins, of plastics
P310	Plastic sanitary ware (baths, wash-basins etc.)	3922.20	Lavatory seats and covers, of plastics
P310	Plastic sanitary ware (baths, wash-basins etc.)	3922.90	Bidets, lavatory pans, flushing cisterns and similar sanitary ware, of plastics (excl. baths, shower-baths, sinks, washbasins, lavatory seats and covers)

P311	Other Builders' ware of plastics n.e.c.	3925.10	Reservoirs, tanks, vats and similar containers, of plastics, with a capacity of > 300 l
P311	Other Builders' ware of plastics n.e.c.	3925.20	Doors, windows and their frames and thresholds for doors, of plastics
P311	Other Builders' ware of plastics n.e.c.	3925.30	Shutters, blinds, incl. Venetian blinds, and similar articles and parts thereof, of plastics (excl. fittings and similar articles)
P311	Other Builders' ware of plastics n.e.c.	3925.90	Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs, etc., of plastics; gutters and accessories of plastics; railings, fences and similar barriers, of plastics; large shelves, for assembly and permanent installation in shops, workshops, etc., of plastics; architectural ornaments, e.g. friezes, of plastics; fittings and similar products for permanent mounting on buildings, of plastics
P4*	Electronic and electrical equipment (Forti et al., 2018)		
P501	Boxes, cases, crates and similar packing articles, of plastics	3923.40	Spools, cops, bobbins and similar supports, of plastics
P501	Boxes, cases, crates and similar packing articles, of plastics	3923.50	Stoppers, lids, caps and other closures, of plastics
P501	Boxes, cases, crates and similar packing articles, of plastics	3923.90	Articles for the conveyance or packaging of goods, of plastics (excl. boxes, cases, crates and similar articles; sacks and bags, incl. cones; carboys, bottles, flasks and similar articles; spools, spindles, bobbins and similar supports; stoppers, lids, caps and other closures)
P502	Household articles and toilet articles, of plastics	3924.10	Tableware and kitchenware, of plastics
P502	Household articles and toilet articles, of plastics	3924.90	Household articles and toilet articles, of plastics (excl. tableware, kitchenware, baths, shower-baths, washbasins, bidets, lavatory pans, seats and covers, flushing cisterns and similar sanitary ware)
P503	Office or school supplies of plastics	3926.10	Office or school supplies, of plastics, n.e.s.
P503	Office or school supplies of plastics	3926.30	Fittings for furniture, coachwork and the like, of plastics (excl. building components for permanent mounting on parts of buildings)
P503	Office or school supplies of plastics	3926.40	Statuettes and other ornamental articles, of plastics
P503	Office or school supplies of plastics	3926.90	Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s (excl. goods of 9619)
P504	Hand tools	8202.10	Handsaws, with working parts of base metal (excl. power-operated saws)
P504	Hand tools	8205.40	Hand-operated screwdrivers
P504	Hand tools	8205.51	Household hand tools, non-mechanical, with working parts of base metal, n.e.s.
P506	Consumer Seats	9401.30	Swivel seats with variable height adjustments (excl. medical, surgical, dental or veterinary, and barbers' chairs)
P506	Consumer Seats	9401.40	Seats, convertible into beds (excl. garden seats and camping equipment, and medical, dental or surgical furniture)

P507	Electric table, desk, bedside or floor standing lamp	9405.50	Non-electrical lamps and lighting fittings, n.e.s.
P508	Luggage, handbags, travel sets and similar articles	9605	Travel sets for personal toilet, sewing or shoe or clothes cleaning (excl. manicure sets)
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.10	Ball-point pens
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.20	Felt-tipped and other porous-tipped pens and markers
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.30	Fountain pens, stylograph pens and other pens
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.40	Propelling or sliding pencils
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.60	Refills for ball-point pens, comprising the ball-point and ink-reservoir
P509	Pens, stylos, pen-holders, pencil-holders and similar holders	9608.91	Pen nibs and nib points
P510	Lighters	9613.10	Pocket lighters, gas fuelled, non-refillable
P510	Lighters	9613.20	Pocket lighters, gas fuelled, refillable
P510	Lighters	9613.80	Lighters (excl. gas fuelled pocket lighters, and fuses and primers for propellant powders and explosives)
P511	Other, including Brooms and brushes	9615.11	Combs, hair-slides and the like of hard rubber or plastics
P511	Other, including Brooms and brushes	9603.21	Tooth brushes, incl. dental-plate brushes
P511	Other, including Brooms and brushes	9603.90	Mops and leather dusters; prepared knots and tufts for broom or brush making; squeegees of rubber or other flexible materials; brooms and brushes, n.e.s.
P511	Other, including Brooms and brushes	9604.00	Hand sieves and hand riddles (excl. colanders)
P511	Other, including Brooms and brushes	9618.00	Tailors' dummies and other lay figures, automata and other animated displays used for shop window dressing (excl. the articles actually on display, educational models and toy dolls)
P6*	Further detailing has to be developed		to be further developed
P701	Tyre cord fabric of high tenacity yarn	5902.10	Tyre cord fabric of high-tenacity yarn of nylon or other polyamides, whether or not dipped or impregnated with rubber or plastic

P701	Tyre cord fabric of high tenacity yarn	5902.20	Tyre cord fabric of high-tenacity polyester yarn, whether or not dipped or impregnated with rubber or plastic
P701	Tyre cord fabric of high tenacity yarn	5902.90	Tyre cord fabric of high-tenacity viscose rayon yarn, whether or not dipped in rubber or plastic
P702	Textile fabrics, impregnated, coated or covered n.e.c.	5903.10	Textile fabrics impregnated, coated, covered or laminated with poly"vinyl chloride" (excl. wallcoverings of textile materials impregnated or covered with poly"vinyl chloride"; floor coverings consisting of a textile backing and a top layer or covering of poly"vinyl chloride")
P702	Textile fabrics, impregnated, coated or covered n.e.c.	5903.20	Textile fabrics impregnated, coated, covered or laminated with polyurethane (excl. wallcoverings of textile materials impregnated or covered with polyurethane; floor coverings consisting of a textile backing and a top layer or covering of polyurethane)
P702	Textile fabrics, impregnated, coated or covered n.e.c.	5903.90	Textile fabrics impregnated, coated, covered or laminated with plastics other than poly"vinyl chloride" or polyurethane (excl. tyre cord fabric of high-tenacity yarn of nylon or other polyamides, polyesters or viscose rayon; wallcoverings of textile materials impregnated or covered with plastic; floor coverings consisting of a textile backing and a top layer or covering of plastics)
P703	Apparel and clothing accessories of plastics (incl. gloves)	3926.20	Articles of apparel and clothing accessories produced by the stitching or sticking together of plastic sheeting, incl. gloves, mittens and mitts (excl. goods of 9619)
P801	Umbrellas, sun-umbrellas, walking-sticks, seat-sticks and the like	6601.10	Garden or similar umbrellas (excl. beach tents)
P801	Umbrellas, sun-umbrellas, walking-sticks, seat-sticks and the like	6601.91	Umbrellas having a telescopic shaft (excl. toy umbrellas)
P801	Umbrellas, sun-umbrellas, walking-sticks, seat-sticks and the like	6601.99	Umbrellas and sun umbrellas, incl. walking-stick umbrellas (excl. umbrellas having a telescopic shaft, garden umbrellas and the like, and toy umbrellas)
P802	glasses	9003.11	Frames and mountings for spectacles, goggles or the like, of plastics
P802	glasses	9004.10	Sunglasses
P802	glasses	9005.10	Binoculars
P803	Syringes, with or without needles	9018.31	Syringes, with or without needles, used in medical, surgical, dental or veterinary sciences
P804	Furniture	9401.80	Seats, n.e.s.
P804	Furniture	9403.70	Furniture of plastics (excl. medical, dental, surgical or veterinary, and seats)
P805	Sporting balls and other sport equipment	9506.32	Golf balls
P805	Sporting balls and other sport equipment	9506.69	Balls (excl. inflatable, tennis balls, golf balls, and table-tennis balls)
P805	Sporting balls and other sport equipment	9506.91	Articles and equipment for general physical exercise, gymnastics or athletics

P806	Others, wigs, artificial flowers, etc	6701.00	Skins and other parts of birds with their feathers or down, feathers, parts of feathers, down and articles thereof (excl. goods of heading 0505, worked quills and scapes, footwear and headgear, articles of bedding and similar furnishing of heading 9404, toys, games and sports requisites, and collectors' pieces)
P805	Sporting balls and other sport equipment	6702.10	Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods, of plastics
P805	Sporting balls and other sport equipment	6702.90	Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods (excl. of plastics)
P805	Sporting balls and other sport equipment	6704.11	Complete wigs of synthetic textile materials
P805	Sporting balls and other sport equipment	6704.19	False beards, eyebrows and eyelashes, switches and the like, of synthetic textile materials (excl. complete wigs)
P805	Sporting balls and other sport equipment	6704.20	Wigs, false beards, eyebrows and eyelashes, switches and the like, of human hair, and articles of human hair, n.e.s.
P805	Sporting balls and other sport equipment	6704.90	Wigs, false beards, eyebrows and eyelashes, switches and the like, of animal hair or textile materials (excl. synthetic textile materials)
P805	Sporting balls and other sport equipment	9505.10	Christmas articles (excl. candles and electric lighting sets, natural Christmas trees and Christmas tree stands)
P805	Sporting balls and other sport equipment	9505.90	Festival, carnival or other entertainment articles, incl. conjuring tricks and novelty jokes, n.e.s.

Annex 2: Correspondence table between the Plastic-Keys and CPC code

CPC Code	CPC Description	Plastic Key
36490	Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics	P101
36410	Sacks and bags, of plastics	P102
21321	Tomato juice	P103
21329	Other vegetable juices	P103
21431	Orange juice	P103
21432	Grapefruit juice	P103
21433	Pineapple juice	P103
21434	Grape juice	P103
21435	Apple juice	P103
21439	Other fruit juices, n.e.c.	P103
17300	Steam and hot water	P104
24410	Bottled waters, not sweetened or flavoured	P104
24490	Other non-alcoholic caloric beverages	P105
49511	Rail locomotives powered from an external source of electricity	P201
49512	Diesel-electric locomotives	P201
49519	Other rail locomotives; locomotive tenders	P201
49520	Self-propelled railway or tramway coaches, vans and trucks (except maintenance or service vehicles)	P202
49531	Railway or tramway maintenance or service vehicles, whether or not self-propelled	P202
49532	Railway or tramway passenger coaches, not self-propelled; luggage vans, post office coaches and other special-purpose railway or tramway coaches, not self-propelled (except maintenance or service vehicles)	P202
49533	Railway or tramway goods vans and wagons, not self-propelled	P203
44141	Pedestrian controlled tractors	P204
44142	Track-laying tractors	P204
44149	Other agricultural tractors	P204
49111	Road tractors for semi-trailers	P204
49112	Public-transport type passenger motor vehicles	P205
49116	Motor vehicles, for the transport of persons, specially designed for travelling on snow; golf cars and similar vehicles	P205
49113	Motor cars and other motor vehicles principally designed for the transport of persons (except public-transport type vehicles, vehicles	P206

	pecially designed for travelling on snow, and golf cars and similar vehicles)	
44428	Dumpers designed for off-highway use	P207
49114	Motor vehicles n.e.c. for the transport of goods	P207
49115	Crane lorries	P208
49119	Special-purpose motor vehicles n.e.c.	P208
43530	Fork-lift trucks; other works trucks whether or not fitted with lifting or handling equipment; tractors of the type used on railway station platforms	P209
43530	Fork-lift trucks; other works trucks whether or not fitted with lifting or handling equipment; tractors of the type used on railway station platforms	P209
44710	Tanks and other armoured fighting vehicles, motorized, and parts thereof	P210
49911	Motorcycles and cycles fitted with an auxiliary motor, with reciprocating internal combustion piston engine of a cylinder capacity not exceeding 50 cc	P211
49912	Motorcycles and cycles fitted with an auxiliary motor, with reciprocating internal combustion piston engine of a cylinder capacity exceeding 50 cc	P211
49913	Motorcycles and cycles fitted with an auxiliary motor, other than those with reciprocating internal combustion piston engines; side-cars	P211
49921	Bicycles and other cycles, not motorized	P212
49922	Invalid carriages	P213
49222	Trailers and semi-trailers of the caravan type, for housing or camping	P214
49229	Other trailers and semi-trailers (including trailers and semi-trailers for the transport of goods), except self-loading or self-unloading trailers or semi-trailers for agricultural purposes	P214
49610	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft	P215
49621	Helicopters	P216
49622	Aeroplanes and other powered aircraft of an unladen weight not exceeding 2000 kg	P216
49623	Aeroplanes and other powered aircraft of an unladen weight exceeding 2000 kg	P216
49630	Spacecraft and spacecraft launch vehicles	P217
49311	Cruise ships, excursion boats and similar vessels, principally designed for the transport of persons; ferry boats of all kinds	P218
49312	Tankers (ships)	P218

49313	Refrigerator vessels (ships), except tankers	P218
49314	Other vessels for the transport of goods and other vessels for the transport of both persons and goods	P218
49315	Fishing vessels; factory ships and other vessels for processing or preserving fishery products	P218
49316	Tugs and pusher craft	P220
49410	Sailboats (except inflatable), with or without auxiliary motor	P220
49490	Other vessels for pleasure or sports; rowing boats and canoes	P220
49319	Other vessels (including light-vessels, fire-floats, dredgers, floating cranes, floating docks, warships and lifeboats other than rowing boats), except floating or submersible drilling or production platforms	P221
49320	Floating or submersible drilling or production platforms	P221
49390	Other floating structures	P222
27220	Carpets and other textile floor coverings, woven, not tufted or flocked	P301
27230	Carpets and other textile floor coverings, tufted	P302
27290	Other carpets and textile floor coverings (including those of felt)	P303
27912	Tulles and other net fabrics, except woven, knitted or crocheted fabrics; lace in the piece, in strips or in motifs	P304
27913	Embroidery in the piece, in strips or in motifs	P304
36320	Tubes, pipes and hoses, and fittings therefor, of plastics	P305
36910	Floor coverings of plastics, in rolls or in the form of tiles; wall or ceiling coverings of plastics	P306
36920	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics	P307
36330	Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	P308
36390	Other plates, sheets, film, foil and strip, of plastics	P309
36930	Baths, wash-basins, lavatory pans and covers, flushing cisterns and similar sanitary ware, of plastics	P310
36950	Builders' ware of plastics n.e.c.	P311
36940	Tableware, kitchenware, other household articles and toilet articles, of plastics	P502
36990	Articles of plastics n.e.c.	P503
42921	Hand tools (including hand tools of a kind used in agriculture, horticulture or forestry, hand saws, files, pliers and metal cutting shears, hand-operated spanners, blow-lamps and clamps)	P504
38111	Seats, primarily with metal frames	P506
38112	Seats, primarily with wooden frames	P506

46531	Portable electric lamps designed to function by their own source of energy (except those for cycles or motor vehicles); electric ceiling or wall lighting fittings (except those for lighting public open spaces or thorough-fares); electric table, desk, bedside or floor-standing lamps; non-electrical lamps and lighting fittings; illuminated signs, illuminated name-plates and the like	P507
29220	Luggage, handbags and the like, of leather, composition leather, plastic sheeting, textile materials, vulcanized fibre or paperboard; travel sets for personal toilet, sewing or shoe or clothes cleaning	P508
38911	Pens, duplicating stylos, pencils, pen-holders, pencil-holders and similar holders, and parts thereof; crayons, pencil leads, pastels, drawing charcoals and chalks	P509
38994	Cigarette lighters and other lighters; smoking pipes and cigar or cigarette holders, and parts thereof; combs, hair-slides and the like; hairpins, curling pins, curling grips, hair-curlers and the like (except electro-thermic apparatus), and parts thereof; scent sprays and similar toilet sprays, and mounts and heads therefor; powder-puffs and pads for the application of cosmetics or toilet preparations	P510
38993	Brooms, brushes, hand-operated mechanical floor sweepers (not motorized), mops and feather dusters; prepared knots and tufts for broom or brush making; paint pads and rollers; squeegees (other than roller squeegees)	P511
38999	Articles n.e.c. (including candles, tapers, skins of birds with their feathers, artificial flowers, entertainment articles, hand sieves, hand riddles, vacuum flasks, tailors dummies, animated displays used for shop window dressing, and parts n.e.c.)	P511
27996	Tyre cord fabric of high tenacity yarn of nylon or other polyamides, polyesters or viscose rayon	P701
27997	Textile fabrics, impregnated, coated or covered n.e.c.	P702
28243	Apparel and clothing accessories of plastics (incl. gloves)	P703
38921	Umbrellas, sun-umbrellas, walking-sticks, seat-sticks, whips, riding-crops and the like	P801
48312	Spectacles, goggles and the like, corrective, protective or other	P802
48313	Frames and mountings for spectacles, goggles or the like	P802
48314	Binoculars, monoculars and other optical telescopes; other astronomical instruments, except instruments for radio-astronomy; compound optical microscopes	P802
48150	Other instruments and appliances used in medical, surgical or veterinary sciences (including syringes, needles, catheters, cannulae, ophthalmic instruments and appliances n.e.c. and electro-medical apparatus n.e.c.)	P803
38119	Other seats	P804

38140	Other furniture n.e.c.	P804
38430	Gymnasium or athletics articles and equipment	P805
38440	Other articles and equipment for sports or outdoor games	P805
38972	Human hair, dressed, thinned, bleached or otherwise worked; wool or other animal hair or other textile materials, prepared for use in making wigs or the like; wigs, false beards, eyebrows and eyelashes, switches and the like, of human or animal hair or of textile materials; articles of human hair n.e.c.	P806
38991	Festive, carnival or other entertainment articles, including conjuring tricks and novelty jokes	P806

Annex 3: Polymer composition of different sectors

No.	Market sector description	PE	PP	PS	PVC	PET	PUR
1	Packaging	51%	18%	5%	2%	23%	0%
2	Transportation	13%	38%	0%	4%	0%	24%
3	Building and Construction	51%	18%	5%	2%	23%	0%
4	Electrical/ Electronic	23%	6%	12%	43%	0%	13%
5	Consumer & Institutional Products	18%	23%	15%	10%	0%	10%
6	Industrial Machinery	38%	32%	15%	5%	0%	8%
8	Other	38%	25%	0%	0%	0%	38%

Annex 4: Lifetime assumption of PlasticKEY product groups

Market Sector	Mean (in years)	Standard deviation
Packaging	0.5	0.1
Transportation	13	3
Building and Construction	35	7
Electrical/ Electronic	8	2
Consumer & Institutional Products	3	1
Industrial Machinery	20	3
Other	5	1.5
Textiles	5	1.5