6 CALCULATION AND VALIDATION OF THE CHECK DIGITS

6.1 METHOD OF VALIDATING THE CHECK DIGITS

Preliminary step

If the IBAN is in paper format, convert to basic format by deleting all non-alphanumeric characters.

BE62 5100 0754 7061 becomes BE62510007547061

Step 1

Move the first four characters of the IBAN to the right of the number.

Result = 510007547061BE62

Step 2

Convert the letters into numerics in accordance with the conversion table under 6.3.

Result = 510007547061111462

Step 3

Apply MOD 97-10 (see ISO 7064). For the check digits to be correct, the remainder after calculating the modulus 97 must be 1.

The remainder of the division of 510007547061111462 by 97 = 1

6.2 METHOD OF CALCULATING THE CHECK DIGITS

Preliminary step

Create an artificial IBAN composed of the country code (ISO 3166) followed by "00" and the BBAN (without non-alphanumeric characters).

A Belgian BBAN 510-0075470-61 becomes BE00510007547061

Step 1

Move the first four characters of the IBAN to the right of the number.

Result = 510007547061BE00

Step 2

Convert the letters into numerics in accordance with the conversion table

under 6.3.

Result = 510007547061111400

Step 3

Apply MOD 97-10 (see ISO 7064).

Calculate the modulo 97 and subtract the remainder from 98. If the result is one digit, then insert a leading zero.

98 - 36 = 62 so IBAN = BE62510007547061

6.3 ALPHA TO NUMERIC CONVERSION TABLE

A	= 10	G	= 16	M	= 22	S	= 28	Y	= 34
B	= 11	H	= 17	N	= 23	T	= 29	Z	= 35
C	= 12	I	= 18	O	= 24	U	= 30		
D	= 13	J	= 19	P	= 25	V	= 31		
E	= 14	K	= 20	Q	= 26	W	= 32		
F	= 15	L	= 21	R	= 27	X	= 33		

Note: Implementation note for modulo 97 calculations

For reasons of precision, the use of integers instead of floating point numbers is recommended. If the number is too long for the software implementation of integers (a (signed) integer of 32 bits or 64 bits represents a maximum of 9 or 18 digits), then the calculation can be split up into consecutive remainder calculations on integers with a maximum length of 9 or 18 digits.

The remainder of the division of 510007547061111462 by 97 = 1

- Calculate the modulo 97 of the first 9 (or 18) digits of the number.
- modulo 97 of 510007547 = 74
- Construct the next integer of 9 (or 18) digits from the remainder, followed by the next 7/8 (or 16/17) digits of the number. Calculate the modulo 97.
- modulo 97 of 740611114 = 12
- Repeat step 2 until all the digits of the number have been processed.

- modulo 97 of 1262 = 1