Sähkönumerot.fi REST API: Overview of Product Data Transfer and Management

1 Using the API

The Sähkönumerot.fi API is available to all organisations operating in the industry. It provides access to product data for approximately 250,000 active electrical products.

The APIs are intended for machine-to-machine data processing. Their use requires valid access rights and API-specific authentication.

The API can be used to retrieve product data and to manage product data in accordance with the Product Information Standard. It also provides information on archived products. ETIM-standard data can also be maintained and retrieved through the API. All data is transmitted in JSON format.

The APIs can be tested in a separate test environment that is technically equivalent to the production environment. Use of the test environment is strongly recommended, particularly when product data is to be managed through the API. This makes it possible to review both the API workflow and the company's own processes before data maintenance begins in production.

1.1 Key terms

Terms used in this document:

API *(Application Programming Interface)*
A connection between software systems that allows them to retrieve, transfer or update data according to agreed rules.

REST *(Representational State Transfer)*
A way to implement web services and APIs. In REST APIs, data is usually retrieved and updated using the HTTP protocol.

JSON *(JavaScript Object Notation)*
A common data format used for data transfer and storage. In this API, data is transmitted in JSON format.

Authentication
Identification of a user or system before the API is used. Authentication ensures that the API is used by a party that has the right to use it.

JWT *(JSON Web Token)*
One way to implement authentication for an API.

OAuth 2.0
A common authentication and authorisation method.

Swagger
A tool used to describe, document and test REST APIs.

API specification
The API specification describes, for example, the URLs used, the request structure and the response codes.

POST request
A request sent to the API, usually to add or update data.

Response message
A message returned by the API indicating, for example, whether the request was successful or what errors, warnings or notes were detected during processing.

2 User account, authentication and API specification

Use of the APIs is always subject to an agreement with STK. Once the agreement is in place, the user is granted access rights in accordance with its terms.

The JWT-authenticated API can be used to maintain product data in accordance with the Product Information Standard, and to retrieve both Product Information Standard data and ETIM-standard data. The API specification is available at: https://www.sahkonumerot.fi/doc/.

The OAuth 2.0-authenticated API can be used to maintain ETIM-standard data. The API specification is available at: https://api.sahkonumerot.fi/.

3 Data retrieval (packages)

Product data is available through the following data packages:

- **full-data**
  - contains all data in accordance with the Product Information Standard
- **etim-data**
  - contains ETIM-standard data
- **archived-data**
  - returns a list of products archived after a given date, including identifiers: electrical number, supplier product code, GTIN code, supplier name and archiving date
- **active-data**
  - returns a list of products modified after a given date, including identifiers: electrical number, supplier name, supplier product code, GTIN code and modification date

Retrieving large data volumes from the API

Data retrieval can and should be limited to only the products whose data is needed at the time. The contents of a package can be filtered, for example, by supplier, brand, product series, modification date, creation date, archiving date, electrical number, GTIN code or supplier product code.

To ensure that data transfers through the API run smoothly without interruptions or performance issues, please follow these guidelines:

- **Schedule large data retrieval requests at night**
  Large data volumes should be retrieved during quieter hours, for example between 22:00 and 06:00. At that time, servers and network loads are typically lower, enabling faster and more efficient transfers.

- **Use filters to manage large retrievals**
  For large data volumes, we recommend retrieving data based on actual need instead of always retrieving all data "just in case". In most cases, the required data can be obtained by limiting the retrieval to products whose data has been changed after a given date.

4 Data retrieval (metadata)

Metadata means the background information needed when using the API. It helps retrieve and filter actual product data, for example by supplier, brand, product series or product group. Metadata related to package requests is available as follows:

- **/supplier**
  List of supplier identifiers: company ID, company name.
- **/brand**
  List of brand identifiers: brand ID, brand name, company ID, company name. The search can be filtered by supplier.
- **/product-serie**
  List of product series identifiers: product series ID, product series name, company ID, company name.
- **/product-group**
  List of product groups in use: product group number, product group name in Finnish, product group name in English.
- **/etim-version**
  Information on the default ETIM release.

5 Maintaining data

5.1 Maintaining data in accordance with the Product Information Standard

The API can be used to manage your company's own product data in accordance with the Product Information Standard. This includes creating a new electrical number, archiving an electrical number, and updating either selected product details or all product details.

Data updated through the API is checked using the same validation rules as in the browser-based self-service tool. The response message returned by the API includes the same product-specific warnings and notes as those shown to the user in the self-service tool. The index in the response message refers to the row number, not to the electrical number.

The data being managed must pass the validation checks. This means that the data must not contain errors. Warnings and notes do not prevent the data from being saved. If the data for a specific product contains errors, the data for that product will not be saved.

A single `POST` request may contain several products, although the number of products is limited. An incorrect value for one product does not prevent the other products in the same request from being processed. The data for the other products will be saved if it is correct.

Existing data in a field is cleared, meaning that it is removed from the product data if the field is included in the request but no value is provided for it. If the field is not included in the request, no changes are made to it and the existing data remains unchanged.

Please also note that when images and documents are imported through the API, they directly replace any images and documents that may already exist on the product card. This differs from manual data import using Excel.

5.2 Maintaining ETIM-standard data

The API can be used to manage a product's ETIM-standard data. This includes updating the product's ETIM class as well as its ETIM features and their values.

The ETIM class is updated by providing the product's electrical number and the corresponding ETIM class code in the request. If the ETIM class code is set to `null` or an empty string, the product's ETIM class is removed from the product data.

ETIM feature values are updated by providing the product's electrical number and the ETIM features and values to be updated in the request. If the value of an individual ETIM feature is set to `null` or an empty string, that feature value is removed from the product data.

If an ETIM feature is not included in the request, no changes are made to that feature. In that case, the product's existing ETIM data remains unchanged.

6 Testing the APIs

The APIs can be tested in a separate test environment that is technically equivalent to the production environment. Changes made on the test environment do not affect the data in the production environment. Separate, temporary credentials are provided for testing.