Product Code Builder API Usage Documentation

Welcome to the Product Code Builder (PCB) API Usage Documentation page. The documentation provides information regarding how the API retrieves the FDA product code information based upon the code portions selected for each of the five components (Industry, Class, Subclass, PIC, and Group) using the various REST Endpoints. REST endpoints provide a 'RESTful' web service that generates an action to retrieve or act upon a specific piece of information that resides in a database.

To use the API REST Endpoints, enter the Authorization-User and Authorization-Key by clicking the **Authorize** button at the top. Please submit authorization key requests using the online ORA Unified Logon application.

Each REST Endpoint is documented below and allows users that have entered the Authorization-User and Authorization-Key on this page to see how the request URL is constructed for each REST Endpoint and what each returns. When developing a method to utilize this API not using this page, below are some points that may help explain why results are not being returned as expected:

- The API cannot be used with a typical web browser (e.g. cutting and pasting the request URL into the URL bar of the browser). This is because the API request requires the use of the Authorization-User and Authorization-Key headers to be transmitted with the request.

- API calls are cached, so when constructing the string for an API call unique signatures should be used (as shown in the request URL examples below using "signature="). For example, if you send a request which results in a 401 message (i.e. you put the wrong Authorization-User and Authorization-Key in) and you try that same request with the same signature it will still return a 401 message even with the right Authorization-User and Authorization-Key information entered. It is recommended that signatures should use a date and time numeric component to make the request unique.

- The API server has a specified Access-Control-Allow-Origin and so API calls using some methods may not work. For example, regular JavaScript/JQuery may not work due to web browser security designed to not allow cross-domain calls. This is not an issue when calling the API using server-side code such as Java or PHP or ColdFusion that make server-level HTTP requests.

- It is recommended that API calls use TLS 1.2 to avoid any connection related errors.

- For POST endpoints the header Content-Type should have the value application/x-www-form-urlencoded.

- The following are code examples for using the POST operation in various languages:
  - Python
  - PHP
  - Java
  - C#

For requests for assistance regarding the PCB API, please e-mail ORAAPIRequests@fda.hhs.gov.

Following is an example of the PCB API REST Endpoint. In the below list of REST Endpoints, you will need to click on the REST Endpoint title to expand the window.

GET `/subclass/{subclassid}`

Upon clicking, the REST Endpoints display the six sections including Implementation Notes, Response Class, Parameters, Response Messages, Request URL, and Response Body. Please note that the **GET/industry** endpoint does not display the **Parameters** section.

Implementation Notes - Gives a brief description of what data is accessed and displayed

Response Class - Indicates the response class description of the API.

Parameters - Allows entering query parameters for the endpoint in the text box.

Response Messages - Is a legend that shows the API return codes and their meaning.

Request URL - Shows the URL of the requested API path.

Response Body - Shows the response of the API request.

Finally, notice the **Try it out!** button. Once you enter a specific value for the selected REST Endpoint in the Parameters field, click the **Try it out!** button. The results are displayed in the Response Body window.

REST Endpoints

GET   /industry

Implementation Notes

Gets the list of all available industries including industry id and industry description within the PCB application in JSON format.

Response Class

Model │ Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ▾

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this

API Return Code	Reason
	request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /industry/{industryid}

Implementation Notes

Gets the details of an industry including industry description based on the specific industry id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type [application/json ▼]

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	[(required)]	**ID of industry**	path	double

[Try it out!]

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric

API Return Code	Reason
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   **/subclass**

Implementation Notes

Gets the list of all available subclasses including subclass id, subclass code, and subclass description within the PCB application in JSON format.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   **/subclass/{subclassid}**

Implementation Notes

Gets the details of the subclass including subclass code and subclass description based on the specific subclass id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ∨

Parameters

Parameter	Value	Description	Parameter Type	Data Type
subclassid	(required)	**ID of subclass**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /industrysubclass/{industryid}

Implementation Notes

Gets the list of all available subclasses including subclass id, subclass code and subclass description for the specific industry id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	(required)	**ID of industry**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /class

Implementation Notes

Gets the list of all available classes including industry id, class id and class description within the PCB application in JSON format.

Response Class

Model | Example Value

```json
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ▾

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /class/{classid}

Implementation Notes

Gets the details of a class including industry id and class description based on the specific class id provided.

Response Class

Model | Example Value

```json
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
```

```
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Parameters

Parameter	Value	Description	Parameter Type	Data Type
classid	(required)	**ID of class**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /industryclass/{industryid}

Implementation Notes

Gets the list of all available classes including class id and class description based on the specific industry id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
```

```
        ]
      ]
    }
  }
```

Response Content Type `application/json` ✓

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	(required)	**ID of industry**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /pic

Implementation Notes

Gets the list of all available PIC (Process Indicator Code) including the PIC ID, PIC Code and PIC description within the PCB application in JSON format.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
```

      }
    }

Response Content Type [application/json ⌄]

[Try it out!]

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /pic/{picid}

Implementation Notes

Gets the details of the Process Indicator Code (PIC) including PIC code and PIC description based on the specific PIC id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type [application/json ⌄]

Parameters

Parameter	Value	Description	Parameter Type	Data Type
picid	(required)	**ID of pic**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /industrypic/{industryid}

Implementation Notes

Gets the list of all available Process Indicator Code (PICs) including PIC id, PIC code and PIC description based on the specific industry id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ∨

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	(required)	**ID of industry**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   **/product**

Implementation Notes

Gets the list of all available products including industry id, product id, product description, class code, and group code within the PCB application in JSON format.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request

API Return Code	Reason
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /product/{productid}

Implementation Notes

Gets the details of the product including industry id, product description, class code, and group code based on the specific product id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ∨

Parameters

Parameter	Value	Description	Parameter Type	Data Type
productid	(required)	**ID of product**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided

API Return Code	Reason
411	Invalid API user has been provided

GET	/product/name/{name}

Implementation Notes

Gets the list of all available products including the industry id, product id, product description, class code, and group code based on the product name provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Parameters

Parameter	Value	Description	Parameter Type	Data Type
name	(required)	**product name**	path	string

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
410	Invalid API key has been provided
411	Invalid API user has been provided

POST	/product/name

Implementation Notes

Gets the list of all the available products based on the product name provided when special characters (%, &, /) are included in the search string. For example: "Kayabu (Indonesian cassava cake made w/added coconut, sugar & cinnamon, wrapped in pandan leaves)", "Lamb (3% or less)".

The "payload" parameter is added in the request body and the value should be added as form data. An example of what a product code name payload would look like is payload=3% which allows the search of the product code names that include 3% which has the special character "%".

The following are code examples for using the POST operation in various languages:

- Python

- PHP

- Java

- C#

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ▾

Parameters

Parameter	Value	Description	Parameter Type	Data Type
payload	(required)	**payload input**	formData	string

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
407	Payload is missing
410	Invalid API key has been provided
411	Invalid API user has been provided

GET   /industryproduct/{industryid}

Implementation Notes

Gets the list of all available products including product id, product description, product class, and group code for the specific industry id provided.

Response Class

Model │ Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ▾

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	(required)	**ID of industry**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

GET	/productcode/{code}

Implementation Notes

Verifies whether the product code provided is valid or invalid.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "APIRETURNCODE": 0
}
```

Response Content Type [application/json ∨]

Parameters

Parameter	Value	Description	Parameter Type	Data Type
code	(required)	**code of the product**	path	string

[Try it out!]

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
402	Invalid length for product code
403	Valid product code
404	Invalid product code
410	Invalid API key has been provided
411	Invalid API user has been provided

GET	/productcodeindustry/{industryid}

Implementation Notes

Gets the list of all available product codes based on the industry id provided.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ▼

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industryid	(required)	**ID of industry**	path	double

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

GET	/partialcode

Implementation Notes

Gets the list of all available product codes based on any or all of the parameters (class, subclass, pic, and group) entered for a valid industry id.

Response Class

Model | Example Value

```
{
  "MESSAGE": "string",
  "RESULTCOUNT": 0,
  "APIRETURNCODE": 0,
  "RESULT": {
    "COLUMNS": [
      "string"
    ],
    "DATA": [
      [
        "string"
      ]
    ]
  }
}
```

Response Content Type application/json ⌄

Parameters

Parameter	Value	Description	Parameter Type	Data Type
industry	(required)	**industry**	query	double
class		class	query	string
subclass		subclass	query	string
pic		pic	query	string
group		group	query	string

Try it out!

Response Messages

API Return Code	Reason
400	Success
401	Authorization has been denied for this request
405	Industry is mandatory input parameter to

API Return Code	Reason
	perform partial search
406	Industryid provided should be numeric
410	Invalid API key has been provided
411	Invalid API user has been provided

[BASE URL: /rest/pcbapi/v1 , API VERSION: 1.0.0]

API Return Code	Reason