

API Guide

API implementation recommendations and example use cases to help you get started with the Dutify APIs.

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Overview

Dutify provides a number of APIs and services to help with the classification of products and calculation of landed cost on cross-border shipments. Accurate landed cost requires

Getting Started

API Documentation

The Dutify API documentation can be found [here](#). Our API docs page is built using Swagger, allowing you to make real-time API requests on page using the “Try it out” functionality. To get started, simply click “Authorize” on the right-hand side of the page and enter your API key.

API Keys

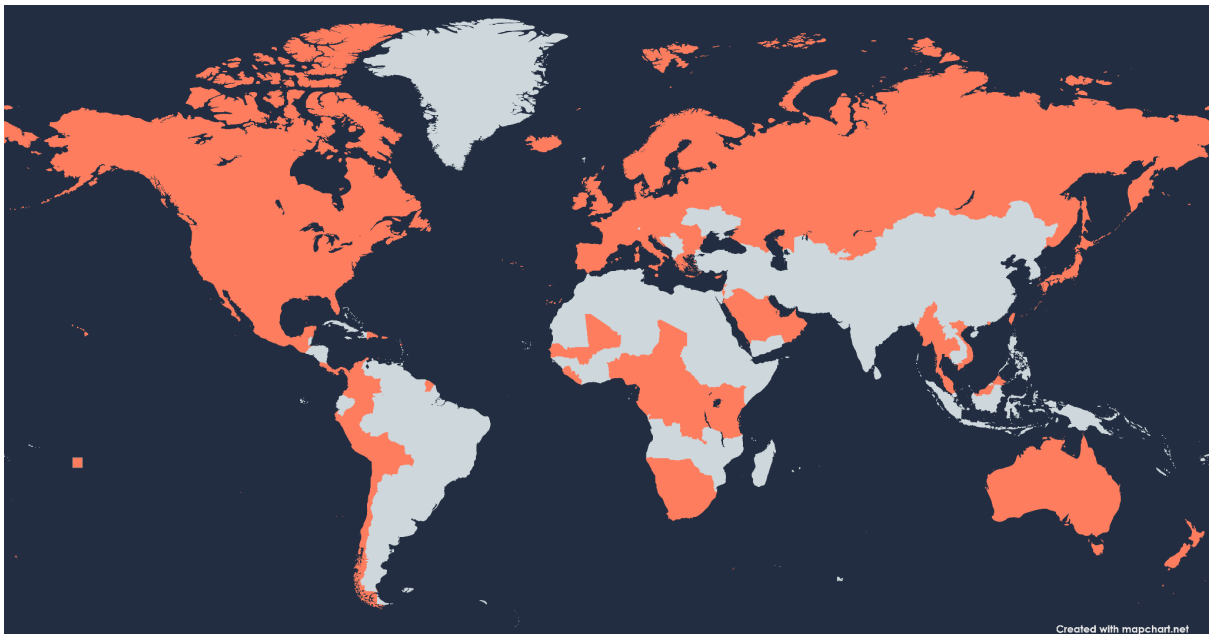
Once you have signed up for an [account plan](#) that has API access, your API key can be retrieved from your Dutify account:

1. Navigate to <https://dutify.com/> and click ‘**Account**’;
2. Next, click ‘**API Access**’ on the left-hand menu;
3. Here you will see your API key listed at the top of the page, copy this key to your clipboard’.

Please note that you can reset your API key at any time from this page.

Country Coverage

Dutify supports 189 origin countries and 103 destination countries. Here’s a map showing our supported destination countries in orange:



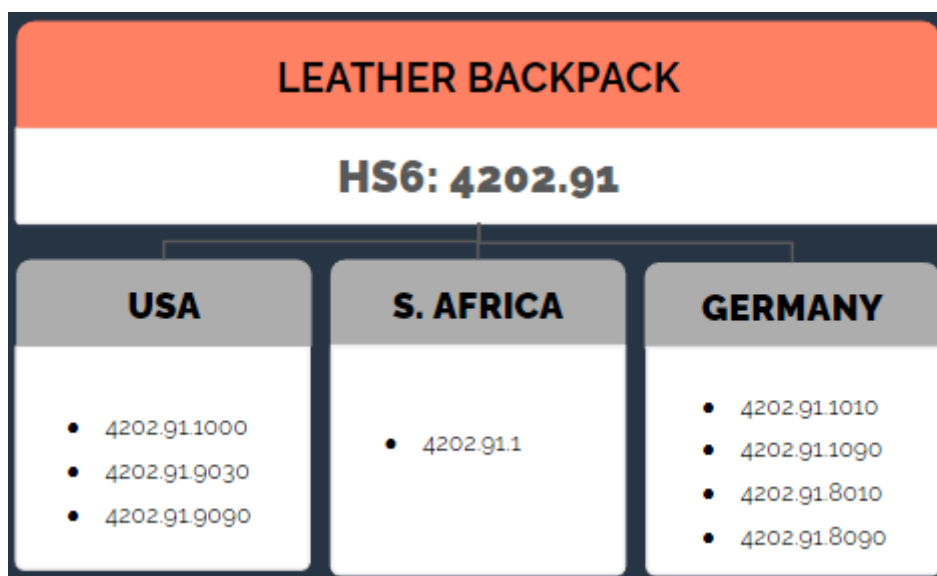
A full list of supported destination countries can be found in your account’s ‘**API Access**’ page. You can also retrieve a full list of supported countries via our API by querying the

`api/v1/countries` endpoint. When querying this endpoint, the attribute `import_supported` denotes support as an origin country and `export_supported` denotes support as a destination country.

Please note that you can also enable or disable the available destination countries at an account level, which is useful when using a Dutify pre-built ecommerce integration to restrict DDP shipping to specific countries.

Product Coverage

While product manufacturers may supply the HS code for a product's origin country, the same product will have a different HS code depending on the destination country - only the first six digits are harmonized. In the below example, we can see that a leather backpack only has one possible HS code in South Africa, however there are three different codes in the United States and four in the European Union - with each code potentially having a different rate.



To accurately calculate duty and tax you would need to know the HS code for your specific product for every country that you ship to.

We solve this problem with the Dutify product taxonomy, a four-level category structure that represents real world products, which we have mapped to the full length HS code and rates. Using this system you can retrieve a "Classification ID" for each of your products to power accurate landed cost to any supported country.



A full list of our supported categories is available [here](#).

Our Landed Cost API also supports auto-classification using product titles & partial HS codes, so you will always be able to calculate landed cost even without having pre-classified your catalog.

Use Cases

Dutify offers a number of APIs and services to help both ecommerce and logistics businesses. Here are some examples of how our services can be leveraged to help your business:

Ecommerce

Let's consider an ecommerce platform that sells products to customers worldwide. When a customer places an order, the platform needs to calculate the total cost of the product, including not only the item price but also all additional expenses, duties and taxes levied at import. Here's how the Dutify Landed Cost API can be utilized in this scenario:

1. Optional: pre-classify your product catalog to Dutify's product taxonomy by using [api/v1/product_classifications](#) to retrieve and store a "product_classification_id" for each product as a product attribute in the ecommerce platform to use as the classification parameter when making calculation requests.

2. By using `api/v1/landed_cost_calculator`, the ecommerce platform sends the necessary information such as the product's value, measurements, origin country, and destination country to the Dutify Landed Cost API.
3. The ecommerce platform receives the calculated landed cost from the API and displays it to the customer during the checkout process. The ecommerce merchant can display the duty and tax and offer DAP shipping options or collect the duty and tax and offer DDP shipping options.
4. The ecommerce platform saves the destination country HS code and shipping restrictions to each line item on the order.

Logistics

Let's consider a shipping platform that allows customers to choose from multiple shipping services to send their goods cross-border. In this scenario, the shipping platform needs to be able to display shipping restrictions, a full breakdown of the cost for each service, along with the additional expenses, duties and taxes that are charged at import.

1. Optional: Use `api/v1/product_classifications` endpoint to retrieve the Dutify product taxonomy, which can be rendered on the shipping platform to help customers classify the products they're shipping.
2. By using `api/v1/landed_cost_calculator`, the shipping platform sends the necessary information such as the product's value, measurements, origin country, and destination country to the Dutify Landed Cost API.
3. The shipping platform receives the calculated landed cost from the API and displays it as a total, or broken down by individual charges and taxes.
4. The shipping platform can display compliance messaging and shipping restrictions to the customer, and the full destination HS code can be added to the shipment once confirmed.

Available Endpoints

Countries

- GET `/api/v1/countries` - is used to retrieve a list of Dutify supported countries.
- GET `/api/v1/countries/{country_code}` - is used to query a country by ISO 3166 code, typically to check whether export is supported.

Currency

- GET `/api/v1/currencies` - retrieves a list of supported currencies in ISO 4217 format. Note that a country's currency is also returned when using the country endpoints.

HS code lookup and duty rates

- POST `/api/v1/hs_lookups` - is used to retrieve the full HS code, duty rates, sales tax rates and additional taxes for a given country. Note: "product_classification_id" is required for this endpoint, which can be retrieved using the product classification endpoint.
- GET `/api/v1/hs_lookups/{lookup_id}` - is used to retrieve a previous lookup result.

Landed cost calculation

- POST `/api/v1/landed_cost_calculator` - used to calculate the total landed cost for a shipment.
- GET `/api/v1/landed_cost_calculator/{landed_cost_result_id}` - used to retrieve an existing landed cost calculation.

Product classification

- GET `/api/v1/product_classifications` - is used to retrieve the root Dutify product taxonomy tree. The payload contains parents and their immediate children.
- GET `/api/v1/product_classifications/{product_classification_id}` - is used to retrieve the Dutify product taxonomy subtree that is identified by the "product_classification_id" parameter. The payload contains the requested node, its immediate children (if available) and its parent (if available).

The Dutify product taxonomy has four levels of depth, only the classification ID of a leaf product (one without children) can be used as the classification input for landed cost or HS & rate lookup.

In the below example, only id 1882 could be used as the classification input for landed cost or HS & rate lookup:

- Apparel & Accessories (id: 1820)
 - Bags (id: 1821)
 - Backpacks (id: 1881)
 - Backpacks - leather: other (id: **1882**)

Examples

Below is an example request of a smartphone shipment going from the United States to the United Kingdom.

Landed Cost Request

```
{
```

```
"data": {
  "export_country_code": "US",
  "import_country_code": "GB",
  "input_currency_code": "GBP",
  "description": "Smartphone shipment",
  "shipping_cost": 10.99,
  "insurance_cost": 0,
  "mode_of_transport": "postal",
  "import_type": "private",
  "line_items": [
    {
      "origin_country_code": "CN",
      "certificate_of_origin": false,
      "unit_price": 500,
      "quantity": 1,
      "product_title": "Smartphone",
      "product_classification_id": 3636,
      "product_classification_hs": "8517.13",
      "product_classification_hs_country_code": "US",
      "measurements": [
        {
          "unit_name": "g",
          "value": 900
        }
      ]
    }
  ]
}
```

Landed Cost Response

```
{
  "data": {
    "id": "4opcd7bf-bafa-41c2-acef-86u8wa16cd7c",
    "type": "landed_cost_result",
    "attributes": {
      "created_at": "2022-09-02T01:05:13.037Z",
      "description": "Smartphone shipment",
      "export_country_name": "USA",
      "import_country_name": "United Kingdom",
      "import_state": null,
      "import_type": "private",
      "mode_of_transport": "postal",
      "currency_code": "GBP",
      "shipping_total": "10.99",
      "insurance_total": "0.0",
      "duty_total": "0.0",
      "excise_total": "0.0",
      "sales_tax_total": "102.2",
      "additional_tax_and_charges_total": "0.0",
      "combined_duties_total": "102.2",
      "landed_cost_total": "613.19"
    },
    "relationships": {
      "line_items": {
```

```
"data": [
  {
    "id": "92295",
    "type": "landed_cost_result_item"
  }
],
},
"notes": {
  "data": [
    {
      "id": "249822",
      "type": "calculation_note"
    },
    {
      "id": "249823",
      "type": "calculation_note"
    },
    {
      "id": "249824",
      "type": "calculation_note"
    },
    {
      "id": "249825",
      "type": "calculation_note"
    },
    {
      "id": "249826",
      "type": "calculation_note"
    }
  ]
}
},
"included": [
  {
    "id": "92295",
    "type": "landed_cost_result_item",
    "attributes": {
      "origin_country_name": "China",
      "certificate_of_origin": false,
      "product_title": "Smartphone",
      "product_classification_name": "Smartphones",
      "hs_code": "8517130000",
      "item_quantity": 1,
      "currency_code": "GBP",
      "item_value": "500.0",
      "total_value": "500.0"
    }
  },
  {
    "id": "249822",
    "type": "calculation_note",
    "attributes": {
      "note": "Duty is payable as this import exceeds the £135.00 minimum threshold.",
      "category": "general"
    }
  }
],
```



```
{
  "id": "249823",
  "type": "calculation_note",
  "attributes": {
    "note": "Item attracts a 0.0% rate of duty.",
    "category": "general"
  }
},
{
  "id": "249824",
  "type": "calculation_note",
  "attributes": {
    "note": "£102.20 VAT is charged on this import as it exceeds the minimum VAT threshold of £0.00.",
    "category": "general"
  }
},
{
  "id": "249825",
  "type": "calculation_note",
  "attributes": {
    "note": "Your shipping carrier may charge an additional handling or clearance fee. Contact your carrier for more information.",
    "category": "general"
  }
},
{
  "id": "249826",
  "type": "calculation_note",
  "attributes": {
    "note": "Shipping restrictions will apply. Couriers and postal companies will require correct labeling and packaging for shipments containing lithium batteries, whether or not they are installed or detached from the device.",
    "category": "compliance_and_restrictions"
  }
}
]
```

FAQs

We have a number of useful topics covered in our [Help Center](#), but here are some API specific FAQs.

What counts as an API call?

We count each **POST** to the `api/v1/landed_cost_calculator` endpoint. A request to that endpoint can contain multiple products as an array of `line_items`. All other requests are free of charge.

What data is included in a calculation response?

Calculation responses will include:

1. landed cost including import duty, sales tax (VAT/GST), excise and additional taxes;
2. calculation notes that detail rates and de minimis values;
3. full destination country HS code for each product included in the calculation;
4. import restrictions or compliance notices (if applicable to the products being shipped).

Do I need to classify my products?

No, you do not need to have classified your products in advance. Our Landed Cost API will use the `"product_title"` to auto-classify the products as part of the request.

However, if you already have full or partial HS codes, you can provide them along with the country of the provided HS code to help increase the accuracy of our auto-classification using the `"product_classification_hs"` and `"product_classification_hs_country_code"` attributes.

If accuracy is more important, you can use our `api/v1/product_classifications` endpoint to retrieve our full product taxonomy. You can then provide a `"product_classification_id"` on each landed cost request to guarantee the correct classification.

What rates are used?

We use most-favored nation (MFN) rates for import duty calculations. We also support free-trade agreements (FTAs), but only where rates are zeroed and not just reduced. To retrieve FTA rates, please set `"certificate_of_origin"` to **TRUE** and provide a `"origin_country_name"` for each line item.

Please note that if you retrieve FTA rates you must be able to provide your shipping provider with a Certificate of Origin (CO) to qualify for preferential treatment. Typically, ecommerce merchants do not provide a CO when shipping, so we recommend using MFN rates to reduce the risk of delays in customs clearance.