



Registration form for third country producers

Case No: AD0086:

Anti-dumping investigation into rutile titanium dioxide exported
from the People's Republic of China

Completed on behalf of (provide the name of your business or organisation):	<i>Tronox Pigmentos do Brasil SA ("Tronox Brazil")</i>
Location(s) of production facility/facilities (country):	<i>Camaçari, Bahia, Brazil</i>

Note:

Please provide **two copies of your response to this form**: a **confidential** and a **non-confidential** version. Both copies must be returned to the TRA using the Trade Remedies Service (www.trade-remedies.service.gov.uk).

When you have completed each form, indicate the **confidentiality** status of the document by placing an in the relevant box below and in the header of the form. We strongly recommend this questionnaire be completed on a computer, so this step is easy to complete.

- Confidential
- Non-confidential (will be made available on the public file: <https://www.trade-remedies.service.gov.uk/public/cases/>)

Deadline for response:	23:59 UK time on 16 April 2026
Case team contact:	AD0086@traderemedies.gov.uk



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The scope of this investigation

Like goods

This investigation covers **rutile titanium dioxide** exported from **the People's Republic of China (PRC)**, described as:

Rutile titanium oxides in pigments and preparations based on rutile titanium dioxide, containing a minimum of 80% by weight of titanium dioxide calculated on the dry matter and having all types of particle sizes, classified under Chemical Abstracts Service Registry Numbers 12065-65-5 and 13463-67-7.

These **goods** are currently classifiable within the following commodity codes

- 2823 0000 10
- 2823 0000 30
- 2823 0000 80
- 2823 0000 83
- 3206 1100 10
- 3206 1100 30
- 3206 1100 80
- 3206 1100 85

These codes are given for information only.

This registration form will ask about your production and sales of like goods. Any reference to '**like goods**' in this questionnaire refers to goods which are like the goods concerned in all respects, or with characteristics closely resembling them.

Where this questionnaire refers to 'all goods', this means all goods that are produced by you.



Who should complete this form

Following registration, a number of countries have been recommended to us to use as an appropriate representative third country:

- Brazil
- India
- Malaysia
- Mexico
- Morocco
- South Korea

You should complete this form if you are a producer of the like goods in any of the above countries and you are able and willing to provide information to this investigation.

Why you are being asked to complete this registration form

The TRA has received an allegation that a Particular Market Situation (PMS) may exist in the rutile titanium dioxide industry in the PRC.

The TRA has yet to make a determination in relation to this allegation. However where it is determined that a PMS exists and the effect of the PMS is that sales in the domestic market of the exporting country or territory do not permit a proper comparison between the like goods destined for consumption in the exporting country or territory and the goods concerned in our investigation, we would not consider the comparable price (the price of the goods, in the ordinary course of trade, destined for consumption in the exporting country or territory) appropriate to use for the purpose of determining their normal value.

In such circumstances, the TRA may determine the normal value by determining the costs of production plus a reasonable amount for administrative, selling, and general costs and for profits. Adjustments may then be made to these figures using data from an appropriate representative third country

We are considering the above listed countries as potentially appropriate representative third country in this investigation, should it be required.

We are therefore inviting producers in these countries (Brazil, India, Malaysia, Mexico, Morocco and South Korea) to participate in the investigation and to provide certain sales and cost data which will help us:

- Understand costs, manufacturing and sales for the like goods; and,
- Compare the data against figures from the PRC.



If a large number of producers of the like goods complete registration, we will use the information each one provides to help us decide which companies we want to sample for further involvement. If you are sampled, we will send you a more detailed questionnaire to complete.

Deadline for response

A completed registration form must be submitted to the TRA by no later than 23:59 UK time on 16 April 2026. If you are unable to provide a completed submission by the given deadline and you wish to request an extension, please contact AD0086@traderemedies.gov.uk and see the TRA's guidance on extension requests for further information.

Note about confidentiality

You will need to submit one confidential version and one non-confidential version of your registration form by the deadline. Please ensure that each page of information you provide is clearly marked either "Confidential" or "Non-confidential" in the header.

It is your responsibility to ensure that the non-confidential version does not contain any confidential information, which includes personal contact information, names and signatures. Please see the TRA's [public guidance](#) for further information on what can be considered confidential and how to prepare a non-confidential version of this questionnaire.

All information provided to the TRA in confidence will be treated accordingly and only used for this investigation (except in limited circumstance as permitted by regulation 46 of the Trade Remedies (Dumping and Subsidisation) (EU Exit) Regulations 2019) and will be stored in protected systems.

The non-confidential version of your submission will be placed on the public file, which is available on [www.trade-remedies.service.gov.uk/public/cases/AD0058/.](http://www.trade-remedies.service.gov.uk/public/cases/AD0058/)



Section A – Activities of your company and any associated parties

A1 – Your company’s activities

To determine your company’s role for the purpose of this investigation, please select the activity/activities of your company below. For a definition of like goods please refer to above section ‘the scope of this investigation’.

- overseas producer of the like goods
- other (please give details below)

If you have selected ‘other’, please describe the role of your company with regards to the like goods:

N/A

A2 – Associated parties and operational links

Please give details of all associated parties involved with the company in the production and sales (export and/or domestic) of the like goods during the POI. Both natural persons (individuals) and legal persons (e.g. companies) are considered to be associated where they meet the definition of ‘Related Persons’ in regulation 128 of the *Customs (Import Duty) (EU Exit) Regulations 2018*.

Examples of activities could include manufacturing, exporting, purchasing, warehousing, sales (domestic), sales (export), further processing of the like goods.

	Company name	Company location (city, country)	Activities	Relationship
Associated party 1	N/A			

+ Add additional rows as required



Section B – Production and sales volumes

B1 – Production

Please fill in your company’s total production volume and capacity for the like goods in the table below.

POI: 01-01-2025 to 31-12-2025	Volume (MT)
Total production of the like goods during the POI	[40-50,000]
Total production capacity of the like goods during the POI	60,000

B2 – Sales volume and value

Please provide the total sales volumes and sales price values in the table below.

POI: 01-01-2025 to 31-12-2025	Volume (MT)	Value in invoice currency (BRL)	Value in GBP (£)	FX rate
Total export sales of the like goods to all countries during the POI manufactured by your company	[0-500]	[1-10,000,000]	[100,000-1,000,000]	7.30
Total export sales of the like goods to all countries during the POI not manufactured by your company	[0-500]	[1-10,000,000]	[100,000-1,000,000]	7.30
Total export sales, <u>to the PRC</u> of the like goods during the POI manufactured by your company	N/A			
Total export sales, <u>to the PRC</u> of the like goods during the POI not manufactured by your company				
Total export sales, <u>to the UK</u> of the like goods during the POI manufactured by your company				
Total export sales, <u>to the UK</u> of the like goods during the POI not manufactured by your company				
Total <u>domestic sales</u> of the like goods during the POI manufactured by your company	[40-50,000]	[700-900,000,000]	[100-150,000,000]	7.30
Total <u>domestic sales</u> of the like goods during the POI not manufactured by your company	[5-10,000]	[100-200,000,000]	[10-20,000,000]	7.30



B3 – Commodity codes

Please provide details of the commodity code(s) under which you export the like goods in the box below:

The goods are classified under Brazilian NCM 3206.11.10 – Rutile-type titanium dioxide pigments, containing 80% or more by weight of TiO₂.

Section C – Raw materials

C1- Raw materials used in production

Please describe your production process(es) for rutile titanium dioxide and provide details of the raw materials used to produce your like goods in the box below. For example, titanium feedstock, chloride, sulphate, caustic soda.

Tronox Brazil uses the sulphate process for producing Rutile TiO₂.

Rutile TiO₂ is produced through a sulphate-based process that begins with the drying and grinding of a mixture of ilmenite and titanium slag to remove moisture, reduce particle size, and increase the reactive surface area. The dried and ground mineral blend is then mixed in controlled proportions with concentrated sulphuric acid to form a suspension, which is maintained under controlled temperature to prevent premature reactions. This suspension is continuously fed into sulphation reactors, where the mineral oxides are chemically attacked by sulphuric acid, converting them into soluble metal sulphates. The heat required for the reaction is generated by acid dilution, and the resulting sulphated mass is discharged and subsequently dissolved in water to form a titanium-rich solution with controlled density.

To enable the efficient removal of iron, ferric iron present in the solution is chemically reduced to the ferrous state through the addition of metallic iron, with the reduction efficiency monitored by the formation of trivalent titanium ions. The reduced solution then undergoes clarification, where unreacted mineral particles and solid impurities are removed by gravity settling with the aid of flocculants, producing a clarified liquor and a solid residue. Titanium-bearing solution entrapped in the solid residue is recovered by vacuum filtration and returned to the process, while remaining solids are neutralized and discarded. The clarified liquor is further filtered to remove residual fine solids before proceeding to nucleation control.

Primary seeding is carried out by reacting the filtered liquor with a dilute caustic soda solution, generating fine nuclei that control the kinetics, particle size, and size distribution during the hydrolysis stage. During hydrolysis, soluble titanium, present mainly as titanyl sulphate, is precipitated as hydrated titanium dioxide through heating and controlled dilution with water. This step is critical, as it defines the initial characteristics of the pigment particles. The resulting suspension is filtered and washed under vacuum to remove soluble impurities such as iron, chromium, and



vanadium, which could negatively affect pigment colour. Additional clarification and recycling steps ensure maximum titanium recovery.

Residual metals adsorbed on the titanium hydroxide particles are removed by an acid treatment conducted under reducing conditions using sulfuric acid and metallic aluminium. To obtain rutile-grade pigment, secondary seeding is applied to direct the crystal phase transformation. The initially formed anatase-based slurry is subjected to alkaline washing to remove sulphate ions, followed by reacidification with hydrochloric acid, which promotes rutile crystal orientation. The treated slurry is peptized and added in controlled amounts to the main titanium hydroxide suspension. A second vacuum filtration and washing stage further reduces metallic impurities to levels suitable for high-quality pigment production.

The purified titanium hydroxide slurry is then conditioned with additives such as caustic soda and aluminium sulphate to control crystal growth, prevent sintering, improve particle uniformity, and enhance long-term pigment stability. The slurry is mechanically dewatered to form a filter cake with high solids content and fed into calciners, where it is converted into crystalline titanium dioxide under carefully controlled temperature profiles. Calcination, lasting several hours, determines the final pigment properties, including brightness, tinting strength, and hiding power, which are continuously monitored, including by X-ray diffraction to verify the anatase or rutile phase content.

Acidic gases generated during calcination are treated through a multistage gas cleaning system involving wet scrubbers, electrostatic precipitators, and wet oxidation units with activated carbon, allowing sulphur oxides to be converted into recyclable sulfuric acid while ensuring atmospheric emissions remain within regulatory limits. The calcined product, although crystalline, is highly agglomerated and is therefore ground in pendulum mills to achieve the required particle size. At this stage, untreated pigments may be packaged, while pigments requiring enhanced performance characteristics undergo further processing (i.e., finishing).

Surface treatment is performed by resuspending the milled Rutile TiO₂ in water with dispersing agents, followed by the controlled deposition of inorganic layers such as silica, aluminium, and phosphorous oxides onto the pigment surface through pH adjustments. This treatment improves optical efficiency, durability, and resistance to weathering. The treated slurry is subsequently filtered, extensively washed to remove soluble salts, and dewatered. Final drying is accomplished in spray dryers, where the material is atomized and dried by hot combustion gases. The dried pigment is then micronized using high-energy jet mills, ensuring a narrow particle size distribution and optimal pigment performance, after which the finished titanium dioxide is packaged, palletized, and prepared for distribution.

This production process is very similar to the process used by Chinese Rutile TiO₂ producers that use the sulphate process.

C2 – Sources of titanium feedstock / chloride / sulphate

Please provide details of the suppliers and/or sources of the main raw materials that you use.



Organisation name	Website
<u>Ilmenite and titanium slag</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Sulphuric acid</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Caustic soda</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Iron scrap</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Trimethylolpropane – TMP</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Natural gas</u> [CONFIDENTIAL]	[CONFIDENTIAL]
<u>Electricity</u> [CONFIDENTIAL]	[CONFIDENTIAL]

Section D – Additional information

D1 – Other interested parties

If you believe there are other interested parties that should receive a registration form, please provide their organisation name and website details below.

Organisation name	Website
N/A	

D2 – Anything else

Please use the box below to provide information about anything else you consider relevant to this investigation.

See Tronox Pigment UK Ltd.'s comments on the choice of representative country for the purpose of this investigation.

Now you have reached the end of this registration form please ensure that you have prepared a confidential and non-confidential version and indicated the status of each within the header. The non-confidential version must not include personal contact information, names, signatures, and exact sales quotes. Redacted figures should be replaced with a range where possible. Please return both versions to the TRA using the Trade Remedies Service (trade-remedies.service.gov.uk).