



REPUBLIC OF TURKEY
MINISTRY OF ECONOMY



INDUSTRY



MINING



TURKEY
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MINING INDUSTRY IN TURKEY

PRODUCTION

The minerals sector is one of the leading sectors supplying raw materials to domestic industry. Turkey possesses the largest resources of most minerals in the world and is one of the world's richest countries in terms of minerals. Excluding petroleum and coal, there are 53 exploitable minerals and metals and 4,500 mineral deposits in Turkey.

Turkey's geology is extremely complex and this complexity is reflected in the diversity of its mineral deposits. Best known for its industrial minerals, Turkey is a major producer of boron minerals, feldspar, marble, baryte, celestite (strontium), emery, limestone, magnesite, perlite and pumice.

A wide variety of primary metallic minerals are produced as well. Copper and chromite are the most significant minerals in the metals sector. Turkey is a major producer of processed mineral commodities, including refined borates and related chemicals, cement, ceramics and glass. In addition, Turkey is a significant producer of ferrochromium and steel.

In recent years, mining activities and the search and production of mainly silver, gold, manganese, copper and chrome ore have increased considerably in Turkey as in the rest of the world.

Today, 53 different minerals are produced in the Turkish mining sector. Most of the production is carried out by the private sector. The main producers are Eti Mine Works General Management, Turkish Hard Coal Corporation (TKİ), Turkish Hard Coal Institute (TTK) and private sector companies. The public sector is dominant in fuel minerals and metallic ore production, while the private sector is concentrated in industrial mineral production.

Chromite

Turkey has a 6% share in world chromite mining and possesses 25 million tons of reserves. Ferrochromium is the most important product in production and exports. The majority of Turkey's chromite production has been utilized by the ferrochromium industry. In 2015, Turkey ranked 2nd in chromite exports in the world with a share of 12.4%. The most important chromite reserves are located in the Guleman district of Elazığ, the Kopdag district of Erzincan, the Fethiye district of Koycegiz, Muğla, Eskisehir, and the Pozanti district of Adana, Harmancik, the Orhaneli district of Bursa and the Pınarbaşı district of Kayseri.

Turkey's total export of chromite was USD 244,8 million in 2016, with a 2% decrease compared to the previous year. Major markets were China, Sweden, Belgium and Ukraine.

Copper

The recognized copper reserves of Turkey are about 3.7 million tons of metal copper; nevertheless, total reserves amount to 15.8 million tons. Turkey has three important copper reserves: the East Black Sea, Southeast Anatolia and Thrace. Rods, profiles and cables are the most important export products in the sector. Turkey's copper ore exports were USD 177,9 million in 2016. The main buyers were China, Sweden, Bulgaria and Spain.

Zinc

Turkey's zinc reserves are about 2.7 million tons. Although Turkey has 2.07 % of world zinc reserves, ore production accounts for only 0.28% of world production. Zinc oxide ore reserves are located in the Zamanti (Kayseri/Nigde/Adana) district of Middle Taurus. In addition, some small reserves are found in Konya, Malatya, Bingol and Bitlis.

Turkey annually produces about 40 thousand tons of zinc metal. Half of the production is consumed in the domestic market and the rest is exported. In 2016, approximately US\$ 188,6 million worth of zinc ore and concentrate was exported mainly to Belgium, Spain, Iran and Australia.

Feldspar

Turkey possesses 10% of total world feldspar reserves. Turkey's feldspar reserves are estimated to be 239 million tons (visible+potential). Important feldspar reserves are located in Manisa/Demirci, Kutahya/Simav, Aydın/Cine and Mugla/Milas. The rise in world production of white body tile and granite tile has increased the demand for feldspar.

Turkish producers are now competing in the domestic and international markets to supply this material. Most of the feldspar is produced by the private sector and 90% of the production is exported. Feldspar exports started in 1990 and it reached US\$ 155,6 million in 2016. Russia, Poland, Egypt and Israel were the most important markets for Turkish feldspar. In 2015, Turkey ranked first in feldspar exports in the world with a share of 42,3%.

Magnesite

Turkey's magnesite reserves are about 168.4 million tons. Most of these reserves are concentrated in the Konya-Kutahya-Eskisehir triangle. In addition, some reserves are located in Erzincan and Canakkale. Raw magnesite, dead burned and caustic calcined magnesite are produced in Turkey. Several small companies also produce raw magnesite. Some of them provide raw magnesite to the large domestic dead burned magnesite producers or to the ceramic industry, while others export their products.

Magnesite is exported as raw magnesite, calcined, sintered and burned. Magnesite is also exported as bricks which are used in the iron and steel industry. In 2016, magnesite exports were about US\$ 91,9 million, and Austria, Germany, Ukraine and Ireland were the major markets for Turkish magnesite. In 2015, Turkey ranked fourth in magnesite exports in the world with a share of 5,3%.

Bentonite and Kaolin

Turkey's bentonite reserves are 370 million tons. The production of ground bentonite has been rising steadily during the last 20 years. At present, Turkey is a net exporter of bentonite. Known bentonite deposits are found in Edirne-Enez, Çankırı, Tokat-Resadiye, AnkaraKalecik and Giresun-Tirebolu. Bentonite production and exports have increased in the 1990's and reached US\$ 59 million in 2016. Bentonite exports were mainly directed to the Netherlands, Italy, Germany and India.

Known kaolin reserves are found in some villages of Balıkesir, Nevsehir, Nigde, Bolu, Canakkale, and in the East Black Sea region. Turkey's probable kaolin reserves are about 100 million tons. In 2016, the total export value of kaolin was US\$ 2,2 million. Italy, Lebanon, Tunisia, Russia ranked as top markets for Turkish exports in 2016.

Baryte

Turkey possesses 26 million tons of baryte which is about 2.1 % of the total world reserves. These reserves are composed of good quality baryte for all types including ground, crude or micronized.

The largest share of Turkish baryte production is sold to oil drillers. Important baryte deposits are located in Konya, Maras, Muş, Antalya and Kutahya. Being located near the most important consumers of barytes, Turkey has advantage in exporting baryte products. The total export value of baryte was US\$31,5 million in 2015 and the major markets for Turkish barytes were Egypt, Romania, Saudi Arabia.

Other Important Minerals and Their Exports

Turkey has a wealth of industrial minerals. The other important commercially produced minerals are plaster, sepiolite, diatomite, zeolite, sulphur, lead, silver, antimony, alumina ore, gypsum, phosphate, salt, sodium, sulphate, quartz, industrial sand, dolomite, talc, wollastonite, kyanite, calcite, emery rock and calcium fluorite .

Turkish mining exports sum up to around US\$2 billion in 2016 (US\$ 3,9 billion including Natural Stones) Turkey's mineral exports have a share of 2,7 % in Turkey's total exports in 2016. Chrome, copper , natural borates and zinc are the major metallic minerals which are exported. Natural stones, borates, feldspar, magnesite, pumice stone, baryte, kaolin, clays and calcite are the most important industrial minerals. In 2016 China, EU and the USA were the main markets in Turkey's mineral exports.

Turkish Mining Exports (Quantity: Million Tons; Value: Million US\$)

HS	Products	2014		2015		2016		Major Markets in 2016
		Quantity	Value	Quantity	Value	Quantity	Value	
2610	Chromite ores	1.504	342,8	1.325	249,9	1.254	244,8	CHINA, SWEDEN, BELGIUM
2603	Copper ores	343	369,5	294	250,4	245	177,9	CHINA, BULGARIA, SWEDEN, THAILAND
2528	Natural borates	846	266,1	713	231,8	713	224,4	CHINA, USA, TAIWAN, INDIA, AUSTRIA
2608	Zinc ores	423	237,8	367	168,3	424	188,6	BELGIUM, IRAN, SPAIN, AUSTRALIA

7202	Ferro alloys	110	162,7	80	121,6	138	197,4	USA, CHINA, NETHERLANDS, BELGIUM, ITALY, GERMANY, INDIA
252910	Feldspar	4.096	142,1	4.559	155,6	5.521	155,6	RUSSIA, POLAND, EGYPT, ISRAEL
2519	Magnesite	303	100,9	284	81,7	318	91,9	AUSTRIA, GERMANY, UKRAINE, IRELAND, INDIA, MEXICO, USA
2607	Lead ores	106	142,8	129	157,2	107	117,9	CHINA, S.KOREA, AUSTRALIA, BELGIUM, ITALY
2520	Gypsum, anhydrite, plasters	814	77,7	646	51,5	687	55,1	NIJERIA, RUSSIA, GEORGIA, BULGARIA
2530	Mineral substance	634	39,2	648	35,7	661	35,5	S. KOREA, INDIA, RUSSIA, UK, SPAIN, CHINA
2508	Clays	388	50,3	503	50,2	711	62,2	NETHERLANDS, ITALY, GERMANY, UK, INDIA
2506	Quartz	442	62,4	465	68,2	458	68,2	ISRAEL, SPAIN, USA, POTUGAL, ICELAND
2619	Slag, droos other than granulated slag	484	21	116	4,3	378	7,7	JAPAN, ISRAEL, S. KOREA

2501	Salt	159	18,3	380	26,8	264	21,4	IRAQ, USA, ROMANIA, UK, UAE, SYRIA
2601	Iron ores	1.073	82,5	338	15,5	399	17,6	CHINA, BAHREIN
	Total	11.725	2.116	10.738	1.669	11.567	1.666	

USEFUL LINKS

- Istanbul Minerals and Metals Exporters' Associations (IMMIB) www.immib.org.tr/en
- Turkish Jewellery Association www.jtr.org.tr/en



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