



Smelter and Refiner List

This list contains smelters and refiners identified in Apple's supply chain as of December 31, 2020.

Apple is committed to setting the highest standards for responsible sourcing of the materials used in our products. We work to protect the planet and safeguard the human rights of people throughout our supply chain. Our Responsible Materials Sourcing program establishes supplier standards for the sourcing of the many materials in Apple products, from advanced bio-materials to minerals sourced from the earth and recycled content.

Our goal is to one day end our reliance on mining, using only recycled and renewable materials in our products and packaging. While we work toward this goal, we continue to responsibly source minerals by conducting environmental and human rights due diligence in our supply chain; considering human rights impact on surrounding communities; and fostering the same opportunities as we do in other parts of Apple’s supply chain. In pursuit of these goals, we utilize a comprehensive set of tools to drive progress throughout Apple’s supply chain.

Responsible Sourcing Toolbox steps



Innovate sourcing of primary materials



Map the supply chain and establish strict requirements



Understand risks by using supply chain tools like the Risk Readiness Assessment



Conduct third-party audits



Address risks that are found



Publish smelter and refiner list annually



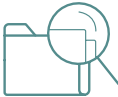
Increase recycled content



Support local communities



Engage with civil society and support local human rights and environmental defenders



Strengthen industry traceability systems to increase transparency



Develop and drive common industry standards



Provide training to supply chain actors to strengthen due diligence

More information on our Responsible Minerals Sourcing program is available in the annual Apple Supplier Responsibility Progress Report and Conflict Minerals Report, both of which are available at apple.com/supplier-responsibility.

This list below includes smelters and refiners identified in Apple's supply chain as of 31 December, 2020

100% of Identified Tin, Tantalum, Tungsten, Gold, Cobalt and Lithium smelters and refiners have completed a Third Party Audit.

For more details, as well as the most current status of each Tin, Tungsten, Tantalum, Gold and Cobalt smelter or refiner, visit the Responsible Minerals Assurance Process (RMAP) website (<http://www.responsiblemineralsinitiative.org>) and LBMA's Good Delivery List (www.lbma.org.uk/the-good-delivery-list), or at each company's website.

Additional details can be found on:

[Apple Supplier Responsibility Progress Report](#)

[Apple Conflict Minerals Report](#)

Metal	Smelter Name	Country
Cobalt	Ganzhou Highpower Technology Co., Ltd.	China
Cobalt	Ganzhou Tengyuan Cobalt New Material Co., Ltd.	China
Cobalt	GEM (JIANGSU) Cobalt Industry Co.,Ltd.	China
Cobalt	Guangdong Jiana Energy Technology Co.,Ltd	China
Cobalt	Gangzhou Yi Hao Umicore Industry Co. (Umicore)	China
Cobalt	Hunan Brunp Recycling Technology Co., Ltd.	China
Cobalt	Hunan Shiji Yintian New Material Co., Ltd	China
Cobalt	Hunan Yacheng New Materials Co.,Ltd.	China
Cobalt	Hunan Zoomwe New Energy Science & Technology Co., Ltd.	China
Cobalt	Hunan Jinxin New Material Holding Co., Ltd.	China
Cobalt	Jiangsu Xiongfeng Science & Technology Co., LTD	China
Cobalt	Jiangxi Jiangwu Cobalt Industry Co., Ltd.	China
Cobalt	Jingmen GEM Co., Ltd.	China
Cobalt	Lanzhou Jinchuan Advanced Materials Technology Co., Ltd.	China
Cobalt	Nantong Xinwei Nickel & Cobalt Hightech Development Co., Ltd	China
Cobalt	Ningbo Hubang New Material Co., Ltd.	China
Cobalt	New Era Group Zhenjiang Zhongneng Cycle Technology Co., Ltd	China
Cobalt	NORILSK NICKEL HARJAVALTA OY	Finland

Cobalt	Quzhou Huayou Cobalt New Material Co., Ltd	China
Cobalt	Tianjin Maolian Science & Technology Co., Ltd	China
Cobalt	Umicore Finland Oy	Finland
Cobalt	Umicore Olen (Umicore)	Belgium
Cobalt	XTC New Energy Materials (Xiamen) Ltd.	China
Cobalt	Zhejiang Huayou Cobalt Co., Ltd.	China
Lithium	Abazhou Gaoyuan Lithium Battery Material Co., Ltd.	China
Lithium	General Lithium Corporation	China
Lithium	Guizhou Redstar Development Dalong Manganese Industry Co., Ltd	China
Lithium	Guizhou Red Star Electronic Material Co., Ltd.	China
Lithium	Hunan Wuchuang Recycling Technology Co., Ltd.	China
Lithium	Jiangxi Ganfeng Lithium Co., Ltd.	China
Lithium	Ningdu Ganfeng Lithium Co., Ltd.	China
Lithium	Qinghai Dongtai Jinear Lithium Resources Co., Ltd.	China
Lithium	Sichuan Zhiyuan Lithium Industries Co., Ltd	China
Lithium	Sichuan Guangxing Lithium Battery Technology Co., Ltd.	China
Lithium	Sichuan Energy Investment Dingsheng Lithium Technology Co., Ltd.	China
Lithium	Tianqi Lithium (Shehong) Co., Ltd.	China
Tin	Alpha*	United States Of America
Tin	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.*	China
Tin	Chifeng Dajingzi Tin Industry Co., Ltd.*	China
Tin	China Tin Group Co., Ltd.	China
Tin	Dowa*	Japan
Tin	EM Vinto	Bolivia (Plurinational State Of)
Tin	Fenix Metals	Poland
Tin	Gejiu Fengming Metallurgy Chemical Plant	China
Tin	Gejiu Kai Meng Industry and Trade, LLC	China
Tin	Gejiu Non-Ferrous Metal Processing Co., Ltd.	China

Tin	Gejiu Yunxin Nonferrous Electrolysis Co., Ltd.*	China
Tin	Gejiu Zili Mining And Metallurgy Co., Ltd.	China
Tin	Guangdong Hanhe Non-Ferrous Metal Co., Ltd.*	China
Tin	HuiChang Hill Tin Industry Co., Ltd.	China
Tin	Huichang Jinshunda Tin Co., Ltd.	China
Tin	Jiangxi New Nanshan Technology Ltd.*	China
Tin	Luna Smelter, Ltd.	Rwanda
Tin	Ma'anshan Weitai Tin Co., Ltd.*	China
Tin	Magnu's Minerais Metais e Ligas Ltda.*	Brazil
Tin	Malaysia Smelting Corp. (MSC)*	Malaysia
Tin	Melt Metais e Ligas S.A.	Brazil
Tin	Metallic Resources, Inc.*	United States Of America
Tin	Metallo Belgium N.V.*	Belgium
Tin	Metallo Spain S.L.U.*	Spain
Tin	Mineração Taboca S.A.	Brazil
Tin	Minsur	Peru
Tin	Mitsubishi Materials Corp.*	Japan
Tin	O.M. Manufacturing (Thailand) Co., Ltd.*	Thailand
Tin	O.M. Manufacturing Philippines, Inc.*	Philippines
Tin	Operaciones Metalurgicas S.A.	Bolivia (Plurinational State Of)
Tin	PT Artha Cipta Langgeng	Indonesia
Tin	PT ATD Makmur Mandiri Jaya	Indonesia
Tin	PT Babel Surya Alam Lestari	Indonesia
Tin	PT Bangka Serumpun	Indonesia
Tin	PT Menara Cipta Mulia	Indonesia
Tin	PT Mitra Stania Prima	Indonesia
Tin	PT Prima Timah Utama	Indonesia
Tin	PT Rajawali Rimba Perkasa	Indonesia

Tin	PT Rajehan Ariq	Indonesia
Tin	PT Refined Bangka Tin	Indonesia
Tin	PT Timah Tbk Kunder	Indonesia
Tin	PT Timah Tbk Mentok	Indonesia
Tin	Resind Indústria e Comércio Ltda.	Brazil
Tin	Rui Da Hung*	Taiwan, Province Of China
Tin	Soft Metais Ltda.*	Brazil
Tin	Thai Nguyen Mining and Metallurgy Co., Ltd.	Viet Nam
Tin	Thaisarco*	Thailand
Tin	Tin Technology & Refining*	United States Of America
Tin	White Solder Metalurgia e Mineração Ltda.	Brazil
Tin	Yunnan Chengfeng Non-ferrous Metals Co., Ltd.	China
Tin	Yunnan Tin Co., Ltd.*	China
Tin	Yunnan Yunfan Non-ferrous Metals Co., Ltd.*	China
Tantalum	Asaka Riken Co., Ltd.*	Japan
Tantalum	Changsha South Tantalum Niobium Co., Ltd.*	China
Tantalum	D Block Metals, LLC*	United States Of America
Tantalum	Exotech Inc.*	United States Of America
Tantalum	F&X Electro-Materials Ltd.	China
Tantalum	FIR Metals & Resource Ltd.*	China
Tantalum	Global Advanced Metals Aizu	Japan
Tantalum	Global Advanced Metals Boyertown*	United States Of America
Tantalum	Guangdong Rising Rare Metals-EO Materials Ltd.	China
Tantalum	H.C. Starck Hermsdorf GmbH*	Germany
Tantalum	H.C. Starck Inc.*	United States Of America
Tantalum	Hengyang King Xing Lifeng New Materials Co., Ltd.	China
Tantalum	Jiangxi Dinghai Tantalum & Niobium Co., Ltd.	China
Tantalum	Jiangxi Tuohong New Raw Material	China

Tantalum	JiuJiang JinXin Nonferrous Metals Co., Ltd.	China
Tantalum	Jiujiang Tanbre Co., Ltd.*	China
Tantalum	Jiujiang Zhongao Tantalum & Niobium Co., Ltd.	China
Tantalum	Kemet Blue Metals*	Mexico
Tantalum	LSM Brasil S.A.	Brazil
Tantalum	Meta Materials	North Macedonia, Republic Of
Tantalum	Metallurgical Products India Pvt., Ltd.*	India
Tantalum	Mineração Taboca S.A.	Brazil
Tantalum	Mitsui Mining and Smelting Co., Ltd.*	Japan
Tantalum	Ningxia Orient Tantalum Industry Co., Ltd.*	China
Tantalum	NPM Silmet A.S.	Estonia
Tantalum	QuantumClean*	United States Of America
Tantalum	Resind Indústria e Comércio Ltda.	Brazil
Tantalum	Solikamsk Magnesium Works OAO	Russian Federation
Tantalum	Taki Chemical Co., Ltd.*	Japan
Tantalum	TANIOBIS Co., Ltd.	Thailand
Tantalum	TANIOBIS GmbH*	Germany
Tantalum	TANIOBIS Japan Co., Ltd.*	Japan
Tantalum	TANIOBIS Smelting GmbH & Co. KG*	Germany
Tantalum	Telex Metals*	United States Of America
Tantalum	Ulba Metallurgical Plant JSC*	Kazakhstan
Tantalum	XIMEI RESOURCES (GUANGDONG) LIMITED*	China
Tantalum	XinXing Haorong Electronic Material Co., Ltd.*	China
Tantalum	Yanling Jincheng Tantalum & Niobium Co., Ltd.*	China
Tungsten	A.L.M.T. Corp.*	Japan
Tungsten	ACL Metais Eireli	Brazil
Tungsten	Asia Tungsten Products Vietnam Ltd.	Viet Nam
Tungsten	Chenzhou Diamond Tungsten Products Co., Ltd.	China

Tungsten	Chongyi Zhangyuan Tungsten Co., Ltd.	China
Tungsten	Fujian Ganmin RareMetal Co., Ltd.	China
Tungsten	FuJian JinXin Tungsten Co., Ltd.**	China
Tungsten	Ganzhou Haichuang Tungsten Co., Ltd.	China
Tungsten	Ganzhou Huaxing Tungsten Products Co., Ltd.	China
Tungsten	Ganzhou Jiangwu Ferrotungsten Co., Ltd.*	China
Tungsten	Ganzhou Seadragon W & Mo Co., Ltd.	China
Tungsten	GEM Co., Ltd.*	China
Tungsten	Global Tungsten & Powders Corp.*	United States Of America
Tungsten	Guangdong Xianglu Tungsten Co., Ltd.	China
Tungsten	H.C. Starck Tungsten GmbH*	Germany
Tungsten	Hunan Chenzhou Mining Co., Ltd.	China
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji**	China
Tungsten	Hunan Chunchang Nonferrous Metals Co., Ltd.	China
Tungsten	Hunan Litian Tungsten Industry Co., Ltd.*	China
Tungsten	Hydrometallurg, JSC*	Russian Federation
Tungsten	Japan New Metals Co., Ltd.*	Japan
Tungsten	Jiangwu H.C. Starck Tungsten Products Co., Ltd.	China
Tungsten	Jiangxi Gan Bei Tungsten Co., Ltd.	China
Tungsten	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.	China
Tungsten	Jiangxi Xinsheng Tungsten Industry Co., Ltd.	China
Tungsten	Jiangxi Yaosheng Tungsten Co., Ltd.	China
Tungsten	Kennametal Fallon*	United States Of America
Tungsten	Kennametal Huntsville*	United States Of America
Tungsten	KGETS Co., Ltd.*	Korea, Republic Of
Tungsten	Lianyou Metals Co., Ltd.*	Taiwan, Province Of China
Tungsten	Malipo Haiyu Tungsten Co., Ltd.	China
Tungsten	Masan High-Tech Materials*	Viet Nam

Tungsten	Moliren Ltd.	Russian Federation
Tungsten	Niagara Refining, LLC*	United States Of America
Tungsten	Philippine Chuangxin Industrial Co., Inc.*	Philippines
Tungsten	TANIOBIS Smelting GmbH & Co. KG*	Germany
Tungsten	Tejing (Vietnam) Tungsten Co., Ltd.**	Viet Nam
Tungsten	Unecha Refractory Metals Plant*	Russian Federation
Tungsten	Wolfram Bergbau und Hütten AG*	Austria
Tungsten	Woltech Korea Co., Ltd.	Korea, Republic Of
Tungsten	Xiamen Tungsten (H.C.) Co., Ltd.*	China
Tungsten	Xiamen Tungsten Co., Ltd.*	China
Tungsten	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.	China
Gold	8853 S.p.A.***	Italy
Gold	Advanced Chemical Co.*	United States Of America
Gold	Aida Chemical Industries Co., Ltd.*	Japan
Gold	Al Etihad Gold Refinery DMCC*	United Arab Emirates
Gold	Allgemeine Gold-und Silberscheideanstalt A.G.	Germany
Gold	Almalyk Mining and Metallurgical Complex (AMMC)	Uzbekistan
Gold	AngloGold Ashanti Córrego do Sítio Mineração	Brazil
Gold	Argor-Heraeus S.A.	Switzerland
Gold	Asahi Pretec Corp.	Japan
Gold	Asahi Refining Canada Ltd.	Canada
Gold	Asahi Refining USA Inc.	United States Of America
Gold	Asaka Riken Co., Ltd.*	Japan
Gold	AU Traders and Refiners***	South Africa
Gold	Aurubis AG	Germany
Gold	Bangalore Refinery*	India
Gold	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)***	Philippines
Gold	Boliden AB	Sweden

Gold	C. Hafner GmbH + Co. KG	Germany
Gold	CCR Refinery - Glencore Canada Corp.	Canada
Gold	Cendres + Métaux S.A.***	Switzerland
Gold	Chimet S.p.A.	Italy
Gold	Chugai Mining*	Japan
Gold	Daye Non-Ferrous Metals Mining Ltd.	China
Gold	DODUCO Contacts and Refining GmbH*	Germany
Gold	Dowa*	Japan
Gold	DSC (Do Sung Corp.)*	Korea, Republic Of
Gold	Eco-System Recycling Co., Ltd. East Plant*	Japan
Gold	Eco-System Recycling Co., Ltd. North Plant*	Japan
Gold	Eco-System Recycling Co., Ltd. West Plant*	Japan
Gold	Emirates Gold DMCC*	United Arab Emirates
Gold	Geib Refining Corp.*	United States Of America
Gold	Gold Refinery of Zijin Mining Group Co., Ltd.	China
Gold	Great Wall Precious Metals Co., Ltd. of CBPM	China
Gold	Heimerle + Meule GmbH	Germany
Gold	Heraeus Germany GmbH Co. KG	Germany
Gold	Heraeus Metals Hong Kong Ltd.	China
Gold	Inner Mongolia Qiankun Gold and Silver Refinery Share Co., Ltd.	China
Gold	Ishifuku Metal Industry Co., Ltd.	Japan
Gold	Istanbul Gold Refinery	Turkey
Gold	Italpreziosi	Italy
Gold	Japan Mint	Japan
Gold	Jiangxi Copper Co., Ltd.	China
Gold	JSC Novosibirsk Refinery	Russian Federation
Gold	JSC UralElectromed	Russian Federation
Gold	JX Nippon Mining & Metals Co., Ltd.	Japan

Gold	Kazzinc	Kazakhstan
Gold	Kennecott Utah Copper, LLC	United States Of America
Gold	KGHM Polska Miedz Spólka Akcyjna	Poland
Gold	Kojima Chemicals Co., Ltd.*	Japan
Gold	Korea Zinc Co., Ltd.	Korea, Republic Of
Gold	Kyrgyzaltyn JSC	Kyrgyzstan
Gold	L'Orfebre S.A.*	Andorra
Gold	LS-NIKKO Copper Inc.	Korea, Republic Of
Gold	LT Metal Ltd.*	Korea, Republic Of
Gold	Marsam Metals*	Brazil
Gold	Materion*	United States Of America
Gold	Matsuda Sangyo Co., Ltd.	Japan
Gold	Metalor Technologies (Hong Kong) Ltd.	China
Gold	Metalor Technologies (Singapore) Pte., Ltd.	Singapore
Gold	Metalor Technologies (Suzhou) Ltd.	China
Gold	Metalor Technologies S.A.	Switzerland
Gold	Metalor USA Refining Corp.	United States Of America
Gold	Metalúrgica Met-Mex Peñoles S.A. de C.V.	Mexico
Gold	Mitsubishi Materials Corp.	Japan
Gold	Mitsui Mining and Smelting Co., Ltd.	Japan
Gold	MMTC-PAMP India Pvt., Ltd.	India
Gold	Moscow Special Alloys Processing Plant	Russian Federation
Gold	Nadir Metal Rafineri San. Ve Tic. A.S.	Turkey
Gold	Navoi Mining and Metallurgical Combinat	Uzbekistan
Gold	Nihon Material Co., Ltd.	Japan
Gold	Ögussa Österreichische Gold- und Silber-Scheideanstalt GmbH***	Austria
Gold	Ohura Precious Metal Industry Co., Ltd.*	Japan
Gold	OJSC "The Gulidov Krasnoyarsk Non-Ferrous Metals Plant" (OJSC Krastsvetmet)	Russian Federation

Gold	PAMP S.A.	Switzerland
Gold	Planta Recuperadora de Metales SpA	Chile
Gold	Prioksky Plant of Non-Ferrous Metals	Russian Federation
Gold	PT Aneka Tambang (Persero) Tbk	Indonesia
Gold	PX Précinox S.A.	Switzerland
Gold	Rand Refinery (Pty) Ltd.	South Africa
Gold	Remondis PMR B.V.*	Netherlands
Gold	Royal Canadian Mint	Canada
Gold	SAAMP***	France
Gold	Safimet S.p.A***	Italy
Gold	SAFINA A.S.*	Czechia
Gold	Samduck Precious Metals*	Korea, Republic Of
Gold	SAXONIA Edelmetalle GmbH*	Germany
Gold	SEMPSA Joyería Platería S.A.	Spain
Gold	Shandong Gold Smelting Co., Ltd.	China
Gold	Shandong Zhaojin Gold & Silver Refinery Co., Ltd.	China
Gold	Sichuan Tianze Precious Metals Co., Ltd.	China
Gold	Singway Technology Co., Ltd.*	Taiwan, Province Of China
Gold	SOE Shyolkovsky Factory of Secondary Precious Metals	Russian Federation
Gold	Solar Applied Materials Technology Corp.	Taiwan, Province Of China
Gold	Sumitomo Metal Mining Co., Ltd.	Japan
Gold	SungEel HiMetal Co., Ltd.*	Korea, Republic Of
Gold	T.C.A. S.p.A.	Italy
Gold	Tanaka Kikinzoku Kogyo K.K.	Japan
Gold	Tokuriki Honten Co., Ltd.	Japan
Gold	TOO Tau-Ken-Altyn	Kazakhstan
Gold	Torecom*	Korea, Republic Of
Gold	TSK Pretech*	Korea, Republic Of

Gold	Umicore Precious Metals Thailand***	Thailand
Gold	Umicore S.A. Business Unit Precious Metals Refining	Belgium
Gold	United Precious Metal Refining, Inc.*	United States Of America
Gold	Valcambi S.A.	Switzerland
Gold	Western Australian Mint trading as The Perth Mint	Australia
Gold	Wieland Edelmetalle GmbH*	Germany
Gold	Yamakin Co., Ltd.*	Japan
Gold	Yokohama Metal Co., Ltd.*	Japan
Gold	Zhongyuan Gold Smelter of Zhongjin Gold Corp.	China

*The smelter/refiner is believed to process at least some 3TG from recycled or scrap sources.

**The smelter/refiner has changed its compliance or operational status since December 31, 2020.

***The smelter/refiner continues to be in the process of removal as of the filing of this report and/or is no longer approved to be in Apple's supply chain.

For more information

For more information about Apple's Supplier Responsibility program, visit <http://www.apple.com/supplier-responsibility>.

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