

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM SD**

**Specialized Disclosure Report**

**KVH Industries, Inc.**

(Exact Name of Registrant as Specified in its Charter)

**Delaware**

(State or Other Jurisdiction of  
Incorporation or Organization)

**0-28082**

(Commission File Number)

**05-0420589**

(I.R.S. Employer  
Identification No.)

**50 Enterprise Center, Middletown, RI 02842**

(Address of Principal Executive Offices) (Zip Code)

**Felise Feingold (401) 847-3327**

(Name and telephone number, including area code, of the person to contact in connection with this report.)

Check the appropriate box to indicate the rule pursuant to which this form is being filed, and provide the period to which the information in this form applies:

Rule 13p-1 under the Securities Exchange Act (17 CFR 240.13p-1) for the reporting period from January 1 to December 31, 2016.

**Section 1. Conflict Minerals Disclosure**

KVH Industries, Inc. ("KVH", "we", or "our") is a leading manufacturer of solutions that provide global high-speed Internet, television, and voice services via satellite to mobile users at sea and on land as well as a leading provider of commercially licensed entertainment including news, sports, movies, and music to commercial and leisure customers in the maritime, hotel, and retail markets. We develop and distribute training films and e-Learning computer-based training courses to commercial maritime customers. We are also a premier manufacturer of high-performance navigational sensors and integrated inertial systems for defense and commercial inertial navigation applications.

**Item 1.01 Conflict Minerals Disclosure and Report**

This Form SD is filed pursuant to Rule 13p-1 promulgated under the Securities Exchange Act of 1934, as amended, for the reporting period January 1, 2016 to December 31, 2016.

**Item 1.02 Exhibit**

KVH's Conflict Minerals Report is provided as Exhibit 1.01 to this Form SD. A copy of our Conflict Minerals Report may be found at <http://www.kvh.com/secfilings>.

**Section 2. Exhibits**

**Item 2.01 Exhibits**

<u>Exhibit No.</u>	<u>Description</u>
1.01	Conflict Minerals Report of KVH Industries, Inc.

**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned on May 25, 2017.

KVH Industries, Inc.  
(Registrant)

By: /s/ Donald W. Reilly  
**Donald W. Reilly, Chief Financial Officer**

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## KVH Industries, Inc.

## CONFLICT MINERALS REPORT

This Conflict Minerals Report of KVH Industries, Inc. (“KVH”, “we”, or “our”) has been prepared pursuant to Rule 13p-1 promulgated under the Securities Exchange Act of 1934, as amended, for the reporting period January 1, 2016 to December 31, 2016.

Rule 13p-1 and Form SD require companies to disclose certain information regarding products that they manufacture, or contract to manufacture, when: (a) those products contain one or more of the minerals gold, columbite-tantalite (coltan), cassiterite, or wolframite, or their derivatives tantalum, tin, and tungsten (the “Conflict Minerals”); (b) those Conflict Minerals are necessary to the functionality or production of those products; and (c) those Conflict Minerals originated, or may have originated, in the Democratic Republic of the Congo or in a country that shares an internationally recognized border with the Democratic Republic of the Congo (the “Covered Countries”).

## Section 1. Product Review and Reasonable Country of Origin Inquiry

### Section 1.1 Product Review

KVH conducted an analysis of its product lines and determined that Conflict Minerals are used in its system-level products and components.

### Section 1.2 Reasonable Country of Origin Inquiry and Conclusion

KVH’s international supply chain is complex. KVH is several layers removed from the smelters in its supply chain, making it difficult to trace the origin of any Conflict Minerals necessary to the functionality or production of its products. Due to the breadth and complexity of our products and supply chain, it will take time for many of our suppliers to verify the origin of all of the Conflict Minerals supplied to us.

For our 2016 reasonable country of origin inquiry (“RCOI”), we reviewed our suppliers of direct materials, components and system-level products (collectively referred to as “Supplier Materials”). We generated internal reports analyzing all Supplier Material purchases for 2016 (“Total Supplier Spend”). We then ranked each supplier based on the aggregate Total Supplier Spend. We determined that suppliers with \$50,000 or more in Total Supplier Spend accounted for 95% of Total Supplier Spend made by KVH during 2016, and determined that it would be reasonable to concentrate our RCOI efforts on this group of 77 suppliers. We refer to this group of suppliers as our “Primary Suppliers.”

We then elected to survey all our Primary Suppliers. For 2016, KVH did not exclude any suppliers based on the type of Supplier Materials sold to KVH. Although this same approach was taken in 2015, we discovered that the number of Primary Suppliers surveyed by KVH increased from 70 in 2015 to 77 in 2016.

In our 2016 RCOI, we surveyed our Primary Suppliers using a template developed by the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI) (the “Conflict Minerals Reporting Template”). KVH sent the Conflict Minerals Reporting Template to all 77 Primary Suppliers and received 77 responses, which represented 100% of our targeted supplier group. Of the 77 responses received by KVH, 9 indicated that the Conflict Minerals used in Supplier Materials supplied to KVH came from “conflict-free” sources and furnished a list of their verified smelters; 40 confirmed that no Conflict Minerals were used in the Supplier Materials supplied to KVH; and 28 indicated that they were unsure of the origin of the Conflict Minerals in the Supplier Materials that they supplied to us.

Consequently, we concluded that, for 2016, as in 2013, 2014 and 2015, we do not have sufficient information from our suppliers or other sources to determine with specificity the countries of origin of the Conflict Minerals used in our products or whether they are from recycled or scrap sources. Therefore, we cannot exclude the possibility that some of these Conflict Minerals may have originated in the Covered Countries and/or are not from recycled or scrap sources.

## Section 2. Due Diligence

KVH’s due diligence efforts related to products: (i) for which Conflict Minerals are necessary to the functionality or production of that product; (ii) that were manufactured, or contracted to be manufactured, by KVH; (iii) for which the manufacture was completed during 2016; and (iv) for which KVH was unable to form the basis for a reasonable belief that none of the Conflict Minerals necessary to the functionality or production of those products originated in a Covered Country. The products, which are hereinafter referred to collectively as the “Covered Products,” include KVH’s mobile satellite communications products and components, as well as inertial navigation products and components.

### Section 2.1 Design of KVH’s Due Diligence Measures

KVH designed its due diligence measures to conform to the framework set forth in the Organisation for Economic Co-operation and Development Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High Risk Areas (Second Edition), including the related supplements on gold, tin, tantalum and tungsten (the “OECD Guidance”).

### Section 2.2 Due Diligence Measures Performed by KVH

The due diligence processes followed by KVH are described below under sub-headings corresponding to the five-step framework of the OECD Guidance.

#### 1. Management Systems

We previously established and have maintained throughout 2016 internal processes for Conflict Minerals supply chain due diligence and reporting. As part of that step, we implemented a Conflicts Minerals Policy Statement and related procedures to help

support our supply chain due diligence efforts and communication processes designed to provide information, including our Conflict Minerals Policy Statement, to our suppliers and to the public. In this regard, our supplier purchase contracts include terms and conditions and other contractual flow-downs requiring supplier cooperation and compliance with KVH's due diligence efforts. We also maintain a "Supplier Information" web page to facilitate supplier access to important documents, including but not limited to KVH's Conflicts Minerals Policy Statement, Standard Terms and Conditions of Purchase and General Quality Clauses, each of which can be found at <http://www.kvh.com/suppliers>.

For 2016, our efforts to identify smelters/refiners in our supply chain was facilitated through the use of due diligence tools created by the Conflict-Free Sourcing Initiative ("CFSI") founded by EICC and GeSI for independent third-party audit information, including the Conflict Minerals Reporting Template. The information furnished by our Primary Suppliers was reviewed and analyzed by our internal team led by KVH's Director of Global Supply Chain and retained within the company's document retention system. The data obtained from our Primary Suppliers was vetted by our Global Supply Chain team and then used to generate a comprehensive list of all smelters/refiners that had been identified by our Primary Suppliers, which list was then cross-referenced against information from CFSI's Conflict Free Smelter Program ("CFSP") to help us identify the compliant smelters/refiners and origin of minerals processed.

## 2. Assessment of Risk in the Supply Chain

In order to determine the origin of Conflict Minerals in the Covered Products:

- On January 30, 2017, we sent letters to our Primary Suppliers, explaining the rule and referring the suppliers to online training materials and instructions, and solicited survey responses using the Conflict Minerals Reporting Template.
- We sent follow-up emails to the Primary Suppliers on February 21, 2017 to remind them of the response requirement and deadline of March 1, 2017.
- Having received responses from 51 of the 77 Primary Suppliers within the first week of March 2017, our Global Supply Chain team sent additional follow-up emails to all non-responsive Primary Suppliers on March 9, 2017.
- By April 3, 2017, KVH had received responses from 56 of the 77 Primary Suppliers, and over the next 3 weeks, members of KVH's Global Supply Chain team began making telephone calls to the remaining 21 Primary Suppliers, and, on April 24, 2017, KVH had received responses from all 77 of its Primary Suppliers.
- Having received responses from 100% of our Primary Suppliers, KVH then reviewed the responses in detail and followed up on any incomplete or ambiguous responses.
- KVH then compared the smelters/refiners identified by its Primary Suppliers against the list of facilities that have received a "conflict-free" designation from the CFSI's CFSP, which designations provide country of origin and due diligence information on the Conflict Minerals sourced by such facilities.

## 3. Strategies to Respond to Identified Risks

KVH's due diligence efforts are an evolving process that we strive to improve by: (i) focusing on the reliability and quality of the information received from our Primary Suppliers; (ii) reviewing responses and following up on incomplete, inaccurate or ambiguous data; and (iii) maintaining internal processes designed to emphasize the importance of supplier cooperation and compliance with our Conflict Minerals Policy Statement through readily accessible policies and contractual flow-down clauses governing the business relationship, which not only provide us with leverage to promote compliance but also the flexibility needed to reassess and/or terminate certain relationships, as appropriate.

## 4. Independent Third-Party Audits

As a result of KVH's position in the supply chain, there are generally several tiers of suppliers between KVH and the smelters/refiners in our supply chain, and therefore we do not conduct or commission independent third-party audits of the smelters and refiners from which our Primary Suppliers source Conflict Minerals. KVH has relied upon industry initiatives, including the CFSI, for independent third-party audit information.

## 5. Reporting

With the preparation and submission of this Conflict Minerals Report, KVH has provided a public report of its due diligence measures with regard to the sourcing of Conflict Minerals. A copy of this report is available at <http://www.kvh.com/secfilings>.

## Section 3. Results of Due Diligence

The response rate among our Primary Suppliers in 2016 was 100%. Among the responses, some of our Primary Suppliers were unable to identify any of the smelters or refiners used in the Supplier Materials supplied to us and certain responses also included names of smelters or refiners that we believe may have been incomplete or misidentified. Such names have not been included among the list of smelters and refiners identified by our Primary Suppliers in Annex 1 below. In total, we identified approximately 835 smelters as potential sources of Conflict Minerals that were reported to be in the supply chain at some point during the 2016 calendar year. The table below presents the total number of identified smelters or refiners for each mineral and the corresponding percentage of each group that we have been able to verify as conflict-free according to information provided on the CFSI website.

<b>Metal</b>	<b>Total Number of Identified Smelters for Each Metal</b>	<b>Identified Smelters or Refiners Verified as CFSP Conflict-Free</b>
Gold	251	36%
Tantalum	61	70%
Tin	410	16%
Tungsten	113	35%

For the Conflict Minerals contained in the Covered Products, KVH's due diligence efforts failed to clarify whether the Conflict Minerals contained in those products may have originated in a Covered Country or came from recycled or scrap sources. Furthermore, we were unable to validate that any of the smelters or refiners identified by our Primary Suppliers are actually in our supply chain. KVH has therefore concluded that we do not have sufficient information to determine with specificity the country of origin of all of the Conflict Minerals in our Covered Products or to determine whether the Conflict Minerals were from recycled or scrap sources. Based on the information received from our Primary Suppliers, KVH believes that the facilities that may have been used to process Conflict Minerals in our Covered Products include the smelters and refiners listed in Annex 1 below.

#### Section 4. Future Steps to Improve Due Diligence

In order to improve our due diligence process and compliance efforts for 2017, KVH intends to:

- Provide mandatory online training covering the fundamentals of the Conflict Minerals Rule to key personnel involved in our Global Supply Chain and Purchasing operations;
- Continue to gather additional information which will assist us in determining whether the Conflict Minerals we utilize benefit armed groups contributing to human rights violations;
- Continue to collect and evaluate supplier responses and follow-up with those suppliers that we have deemed to be a higher risk due to incomplete or ambiguous responses, and
- Continue to review, and, if necessary, reassess supplier relationships based on information and resources provided by third-party conflict minerals audit programs such as the CFSI's Conflict Free Smelter Program and other industry initiatives promoting responsible mineral sourcing practices.

KVH will continue to expect our suppliers to reasonably assure us that the minerals in the products they supply are conflict free.

#### Section 5. Forward Looking Statements

This report includes forward-looking statements that involve risks and uncertainties, including for example statements regarding our due diligence processes with respect to Conflict Minerals. Forward-looking statements are not guarantees of future performance. KVH assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

#### Annex 1

Metal	Smelter or Refiner Name	Country
Gold	Abington Reldan Metals, LLC	United States
Gold	Acade Metals Co., Ltd.	China
Gold	Acade Noble Metal (Zhao Yuan) Corporation	China
Gold	Advanced Chemical Company*	United States
Gold	Aida Chemical Industries Co. Ltd.*	Japan
Gold	Al Etihad Gold LLC*	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	ANZ	Australia
Gold	Argor-Heraeus S.A.*	Switzerland
Gold	Asahi Pretec Corp.*	Japan
Gold	Asahi Refining Canada Ltd.*	Canada
Gold	Asahi Refining USA Inc.*	United States
Gold	Atasay Kuyumculuk Sanayi Ve Ticaret A.S.	Turkey
Gold	AU Traders and Refiners*	South Africa
Gold	AURA-II	United States
Gold	Aurubis AG*	Germany
Gold	Bangalore Refinery	India
Gold	Bangko Sentral ng Pilipinas (Central Bank of the Philippines) *	Philippines
Gold	Bauer Walser AG	Germany
Gold	Boliden AB*	Sweden
Gold	C. Hafner GmbH + Co. KG*	Germany
Gold	Caridad	Mexico
Gold	CCR Refinery - Glencore Canada Corporation*	Canada
Gold	Cendres & Métaux SA	Switzerland
Gold	Changzhou Chemical Research Institute Co. Ltd.	China
Gold	Cheong Hing	China
Gold	Chimet S.p.A.*	Italy
Gold	China Sino-Platinum Metals Co.,Ltd	China
Gold	China Gold International Resources Corp. Ltd.	China
Gold	Chugai Mining	Japan
Gold	Cookson	Spain
Gold	Cookson	United States
Gold	Daejin Indus Co. Ltd.*	Korea, Republic Of
Gold	DaeryungENC	Korea, Republic Of
Gold	Daye Non-Ferrous Metals Mining Ltd.	China
Gold	Degussa Sonne / Mond Goldhandel GmbH	Germany
Gold	DODUCO GmbH*	Germany
Gold	Dongguan CameroonChemical Materials Co., Ltd.	China
Gold	Dong'guan Dong wu Violent-toxic Chemical Products Co., Ltd.	China
Gold	Dongguan Dongxu Metal Surface Hanlde Co Ltd	China

Gold	Dongguan Standard Electronic Material.Co.,Ltd	China
Gold	Dongguanshi Sutande Dianzi Cailiao Youxiangongsi	China
Gold	Dosung Metal	Korea, Republic Of

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Gold	Dowa*	Japan
Gold	DSC (Do Sung Corporation) *	Korea, Republic Of
Gold	DUOXIN	China
Gold	Echememi Enterprise Corp. (FUTURES EXCHANGE)	China
Gold	Eco-System Recycling Co., Ltd.*	Japan
Gold	Elemetal Refining, LLC	United States
Gold	Emirates Gold DMCC*	United Arab Emirates
Gold	Empresa Metallurgica Vinto,Empresa Nacional de Fundiciones (ENAF), Complejo Metalurico Vinto S.A.	Bolivia
Gold	ESG Edelmetallservice GmbH & Co. KG	Germany
Gold	Faggi Enrico S.p.A.	Italy
Gold	Gansu Seemine Material Hi-Tech Co., Ltd.	China
Gold	Gansu-based Baiyin Nonferrous Metals Corporation (BNMC)	China
Gold	Geib Refining Corporation*	United States
Gold	Gejiu Zili Mining & Smelting Co. Ltd.	China
Gold	Gold and Silver Refining Strokes Ltd.	China
Gold	Gold Refinery of Zijin Mining Group Co., Ltd.*	China
Gold	Great Wall Precious Metals Co., Ltd. of CBPM	China
Gold	Guangdong Jinding Gold Limited	China
Gold	Guangdong MingFa Precious Metal Co., Ltd.	China
Gold	Gujarat Gold Centre	India
Gold	Guoda Safina High-Tech Environmental Refinery Co., Ltd.	China
Gold	Handok	Korea, Republic Of
Gold	Hangzhou Fuchunjiang Smelting Co., Ltd.	China
Gold	Harima Smelter	Japan
Gold	Harmony Gold Refinery	South Africa
Gold	Heesung Catalysts Corp.	Korea, Republic Of
Gold	Heesung Metal Ltd	Australia
Gold	Heesung Metal Ltd	Korea, Republic Of
Gold	Heimerle & Meule GmbH*	Germany
Gold	Henan San Men Xia	China
Gold	Henan Sanmenxia Lingbao Jinyuan Mining Co., Ltd.	China
Gold	Henan Yuguang Gold and Lead Co., Ltd	China
Gold	Henan zhongyuan gold melter	China
Gold	Heraeus Materials Technology	Germany
Gold	Heraeus Metals Hong Kong Ltd.*	China
Gold	Heraeus Precious Metals GmbH & Co. KG*	Germany
Gold	Heraeus Precious Metals, Inc, Newark New Jersey, USA	United States
Gold	Heraeus Zhaoyuan (Changshu) Electronic Material Co., Ltd.	China
Gold	Hisikari Mine	Japan
Gold	Hon Shen Co. Ltd	Taiwan
Gold	HonHai Precision Co., Ltd.	Taiwan
Gold	Hunan Chenzhou Mining Co., Ltd.	China
Gold	HwaSeong CJ Co., Ltd.	Korea, Republic Of
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	Japan Mint*	Japan

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Gold	Japan Pure Chemical	Japan
Gold	Jia Lung Corp	Taiwan
Gold	Jiangxi Copper Co., Ltd.*	China
Gold	Jie Sheng	China
Gold	Jin Dong Heng	China
Gold	Jin Jinyin Refining Company Limited	China
Gold	JinBao Electronic Co. Ltd.	China
Gold	Jinfeng Gold Mine Smelter	China
Gold	Jinlong Copper Co. Ltd	China
Gold	Johnson Matthey Hong Kong Ltd.	China
Gold	JSC Ekaterinburg Non-Ferrous Metal Processing Plant*	Russian Federation
Gold	JSC Uralelectromed*	Russian Federation
Gold	JX Nippon Mining & Metals Co. Ltd*	Japan
Gold	K.A.Rasmussen AS	Norway
Gold	Kanfort Industrial (Yantai) Co. Ltd.	China

Gold	Kazakhmys Smelting LLC	Kazakhstan
Gold	Kazzinc*	Kazakhstan
Gold	Kee Shing	China
Gold	Kennecott Utah Copper LLC*	United States
Gold	KGHM Polska Miedź Spółka Akcyjna	Poland
Gold	Kojima Chemicals Co. Ltd*	Japan
Gold	Korea, Republic of Metal	Korea, Republic Of
Gold	Korea, Republic of Metal Co., Ltd.	Korea, Republic Of
Gold	Korea, Republic of Zinc Co., Ltd.*	Korea, Republic Of
Gold	Kunshan Jinli Chemical Industry Reagents Co., Ltd.	China
Gold	Kyrgyzaltyn JSC*	Kyrgyzstan
Gold	L'azurde Company for Jewelry	Saudi Arabia
Gold	LBMA	Japan
Gold	LG-Nikko	Korea, Republic Of
Gold	Lingbao Gold Co., Ltd.	China
Gold	Lingbao Jinyuan Tonghui Refinery Co., Ltd.	China
Gold	LINXENS	France
Gold	LITTELFUSE	United States
Gold	London Bullion Market Association	United Kingdom
Gold	L'Orfebre S.A.	Andorra
Gold	LS-NIKKO Copper Inc.*	Korea, Republic Of
Gold	Luoyang Zijin Yinhui Gold Refinery Co., Ltd.	China
Gold	Materion*	United States
Gold	Matsuda Sangyo Co. Ltd*	Japan
Gold	Metalor Technologies (Singapore) Pte., Ltd.*	Singapore
Gold	Metalor Technologies (Suzhou) Ltd.*	China
Gold	Metalor Technologies S.A.*	Switzerland
Gold	Metalor USA Refining Corporation*	United States
Gold	Metalúrgica Met-Mex Peñoles S.A. De C.V.*	Mexico
Gold	Mitsubishi Materials Corporation*	Japan
Gold	Mitsui & Co Precious Metals Inc	Japan
Gold	Mitsui & Co. Precious Metals Inc. Hong Kong Branch	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Gold	Mitsui Mining and Smelting Co., Ltd.*	Japan
Gold	MK Electron	Korea, Republic Of
Gold	MMTC-PAMP India Pvt., Ltd.*	India
Gold	Modeltech Sdn Bhd	Malaysia
Gold	Morigin Company	Japan
Gold	Morris and Watson	Netherlands
Gold	Morris and Watson Gold Coast	Australia
Gold	Moscow Special Alloys Processing Plant*	Russian Federation
Gold	N.E.Chemcat Corporation	Japan
Gold	Nadir Metal Rafineri San. Ve Tic. A.Ş.*	Turkey
Gold	Natsuda Sangyo Co., Ltd	Japan
Gold	Navoi Mining and Metallurgical Combinat	Uzbekistan
Gold	Neomax Hitachi	Japan
Gold	Nihon Material Co. Ltd.*	Japan
Gold	Niihama Nickel Refinery	Japan
Gold	Nippon Mining & Metals	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	OJSC Kolyma Refinery	Russian Federation
Gold	OJSC Novosibirsk Refinery*	Russian Federation
Gold	PAMP S.A.*	Switzerland
Gold	Pease & Curren	United States
Gold	Penglai Penggang Gold Industry Co., Ltd.	China
Gold	Precious Metals Sales Corp.	United States
Gold	Prioksky Plant of Non-Ferrous Metals*	Russian Federation
Gold	PT Aneka Tambang (Persero) Tbk*	Indonesia
Gold	PT Indra eramulti Logam Industri	Indonesia
Gold	PX Précinox S.A.*	Switzerland
Gold	Rand Refinery (Pty) Ltd.*	South Africa
Gold	Remondis Argentia B.V.	Netherlands
Gold	Republic Metals Corporation*	United States
Gold	Rohm & Haas Elec. Mat'ls	Singapore
Gold	Royal Canadian Mint*	Canada
Gold	SAAMP	France
Gold	Sabin Metal Corp.	United States
Gold	SAFINA A.S.	Czech Republic
Gold	Sai Refinery	India
Gold	Samduck Precious Metals*	Korea, Republic Of

Gold	SAMWON Metals Corp.	Korea, Republic Of
Gold	Sanmenxia hang seng science and technology, research and development Co., Ltd.	China
Gold	SAXONIA Edelmetalle GmbH*	Germany
Gold	Schone Edelmetaal B.V.*	Netherlands
Gold	Scotia Mocatta	China
Gold	Scotia Mocatta, The Bank of Nova Scotia	United States
Gold	SEMPSA Joyería Platería S.A.*	Spain

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Gold	Sen Silver	Japan
Gold	Sendi (Japan): Kyocera Corporation	Japan
Gold	Senju Metal Industries Co., Ltd.	Japan
Gold	Sewon Korea, Republic of	Korea, Republic Of
Gold	Shandong Tiancheng Biological Gold Industrial Co., Ltd.	China
Gold	Shandong Yanggu Xiangguang Co. Ltd.	China
Gold	Shandong Zhaojin Gold & Silver Refinery Co., Ltd.*	China
Gold	Shanghai Gold Exchange (SGE)	China
Gold	Shen Zhen Thousand Island Ltd.	China
Gold	Shenzhen Fujun Material Technology Co., Ltd.	China
Gold	Shenzhen Heng Zhong Industry Co., Ltd.	China
Gold	Shenzhen Tiancheng Chemical Co. Ltd.	China
Gold	ShenZhen Urban Pubic Bureau of China	China
Gold	Shinko Electric Industries Co., Ltd.	Japan
Gold	Sichuan Tianze Precious Metals Co., Ltd.*	China
Gold	Singway Technology Co., Ltd.*	Taiwan
Gold	SKE (China): Shanghai Kyocera Electronics Co Ltd.	China
Gold	So Accurate Group, Inc.	United States
Gold	SOE Shyolkovsky Factory of Secondary Precious Metals*	Russian Federation
Gold	Sojitz	Japan
Gold	Solar Applied Materials Technology Corp.*	Taiwan
Gold	Soochow University's	China
Gold	Standard Bank	China
Gold	Strain DS Force Shop	Japan
Gold	Sumisho	Japan
Gold	Sumitomo Metal Mining Co., Ltd.*	Japan
Gold	SungEel HiTech	Korea, Republic Of
Gold	Suzhou Xingrui Noble	China
Gold	T.C.A S.p.A*	Italy
Gold	Tai Zhou Chang San Jiao Electron Co., Ltd.	China
Gold	Tanaka Kikinzoku Kogyo K.K.*	Japan
Gold	Technic Inc.	United States
Gold	The Hutti Gold Mines Co., Ltd.	India
Gold	The Refinery of Shandong Gold Mining Co., Ltd.*	China
Gold	Timah Company	Indonesia
Gold	Tokuriki Honten Co., Ltd.*	Japan
Gold	Tongling Nonferrous Metals Group Co., Ltd.	China
Gold	Tony Goetz NV	Belgium
Gold	TOO Tau-Ken-Altyn	Kazakhstan
Gold	Torecom*	Korea, Republic Of
Gold	UBS AG	Switzerland
Gold	Umicore	Netherlands
Gold	Umicore Brasil Ltda.*	Brazil
Gold	Umicore Galvanotechnik GmbH	Germany
Gold	Umicore Precious Metals Thailand*	Thailand
Gold	Umicore S.A. Business Unit Precious Metals Refining*	Belgium
Gold	Uniforce Metal Industrial Corp.	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Gold	United Precious Metal Refining, Inc.*	United States
Gold	UYEMURA	United States
Gold	Valcambi S.A.*	Switzerland
Gold	Western Australian Mint trading as The Perth Mint*	Australia
Gold	Williams Gold Refining Co., Inc.	Canada
Gold	Williams Gold Refining Co., Inc.	United States
Gold	Wuxi Middle Treasure Materials	China
Gold	Yamamoto Precious Metal Co., Ltd.*	Japan
Gold	Yantai Zhaojin Kanfort Precious Metals Co., Ltd.	China
Gold	Yokohama Metal Co., Ltd.*	Japan
Gold	Yoo Chang Metal	Korea, Republic Of
Gold	Yunnan Copper Industry Co., Ltd.	China



Gold	Yunnan Metallurgical Group Co., Ltd.	China
Gold	Zhaojin Gold & Silver Refinery Co., Ltd.	China
Gold	Zhaojin Gold Argentine Refining Company Limited	China
Gold	Zhaojin Group&Gold Mineral China Co., Ltd.	China
Gold	Zhe Jiang Guang Yuan Noble Metal Smelting Factory	China
Gold	Zhongkuang Gold Industry Co., Ltd.	China
Gold	Zhongyuan Gold Smelter of Zhongjin Gold Corporation *	China
Tantalum	Advanced Metallurgical Group N.V.	United States
Tantalum	Changsha South Tantalum Niobium Co., Ltd.*	China
Tantalum	CIF	Brazil
Tantalum	Conghua Tantalum and Niobium Smeltry*	China
Tantalum	D Block Metals, LLC*	United States
Tantalum	Duoluoshan*	China
Tantalum	E.S.R. Electronics	United States
Tantalum	Ethiopian Minerals Development Share Company	Ethiopia
Tantalum	Exotech Inc.*	United States
Tantalum	F&X Electro-Materials Ltd.*	China
Tantalum	FIR Metals & Resource Ltd.*	China
Tantalum	Fombell,	United States
Tantalum	Fujian Nanping	China
Tantalum	Global Advanced Metals Aizu*	Japan
Tantalum	Global Advanced Metals Boyertown*	United States
Tantalum	Guangdong Zhiyuan New Material Co., Ltd.*	China
Tantalum	Guizhou Zhenhua Xinyun Technology Ltd., Kaili Branch	China
Tantalum	H.C. Starck Co., Ltd.*	Thailand
Tantalum	H.C. Starck GmbH Goslar*	Germany
Tantalum	H.C. Starck GmbH Laufenburg	Germany
Tantalum	H.C. Starck Hermsdorf GmbH*	Germany
Tantalum	H.C. Starck Inc.*	United States
Tantalum	H.C. Starck Ltd.*	Japan
Tantalum	H.C. Starck Smelting GmbH & Co. KG*	Germany
Tantalum	Hengyang King Xing Lifeng New Materials Co., Ltd.*	China
Tantalum	Hi-Temp Specialty Metals, Inc.*	United States
Tantalum	Jiangxi Dinghai Tantalum & Niobium Co., Ltd.*	China
Tantalum	Jiangxi Tuohong New Raw Material*	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tantalum	JiuJiang JinXin Nonferrous Metals Co., Ltd.*	China
Tantalum	Jiujiang Nonferrous Metals Smelting Company Limited*	China
Tantalum	Jiujiang Zhongao Tantalum & Niobium Co., Ltd.*	China
Tantalum	KEMET Blue Metals*	Mexico
Tantalum	KEMET Blue Powder*	United States
Tantalum	King-Tan Tantalum Industry Ltd.*	China
Tantalum	LSM Brasil S.A.*	Brazil
Tantalum	Metal Do	Japan
Tantalum	Metallurgical Products India Pvt., Ltd.*	India
Tantalum	Mineração Taboca S.A.*	Brazil
Tantalum	Mitsui Mining and Smelting Co., Ltd.*	Japan
Tantalum	Nantong Tongjie Electrical Co., Ltd.	China
Tantalum	Ningxia Non-ferrous Metal Smeltery	China
Tantalum	Ningxia Orient Tantalum Industry Co., Ltd.*	China
Tantalum	Nippon Mining & Metals	Japan
Tantalum	Nippon Mining & Metals	Singapore
Tantalum	NPM Silmet AS*	Estonia
Tantalum	NTET, Thailand	Thailand
Tantalum	Plansee SE Liezen	Austria
Tantalum	Plansee SE Reutte	Austria
Tantalum	Posco	Korea, Republic Of
Tantalum	Power Resources Ltd.*	Macedonia
Tantalum	QuantumClean*	(The Former Yugoslav Republic Of)
Tantalum	QuantumClean*	United States
Tantalum	RFH Tantalum Smeltry Co., Ltd.*	China
Tantalum	Solikamsk Magnesium Works OAO*	Russian Federation
Tantalum	Taki Chemical Co., Ltd.*	Japan
Tantalum	Tantalite Resources	South Africa
Tantalum	Telex Metals*	United States
Tantalum	Tranzact, Inc.*	United States
Tantalum	Ulba Metallurgical Plant JSC*	Kazakhstan
Tantalum	XinXing HaoRong Electronic Material Co., Ltd.*	China
Tantalum	Yichun Jin Yang Rare Metal Co., Ltd.*	China
Tantalum	Zhuzhou Cemented Carbide Group Co., Ltd.*	China
Tin	Academy Precious Metals (China) Co., Ltd.	China
Tin	Alpha*	United States

Tin	Amalgamated Metals Corporation	Peru
Tin	Amalgamated Metals Corporation	United Kingdom
Tin	Amalgamated Metals Corporation	United States
Tin	American Iron and Metal	Canada
Tin	Ami Bridge Enterprise Co., Ltd.	Taiwan
Tin	An Thai Minerals Co., Ltd.	Vietnam
Tin	An Vinh Joint Stock Mineral Processing Company	Vietnam
Tin	An Xin Xuan Xin Yue You Se Jin Shu Co. Ltd.	China
Tin	Aoki Laboratories Ltd.	China
Tin	Asahi Solder Technology (Wuxi) Co., Ltd.	China
Tin	ATI Metalworking Products	United States

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Atlantic Metals	United States
Tin	Ausmelt Limited	Australia
Tin	Balver Zinn	Germany
Tin	Banka	Indonesia
Tin	Beijing Oriental Guide Welding Materials Co., Ltd.	China
Tin	Best Metals	Brazil
Tin	Bonoka.Beliting INDONESIA	Indonesia
Tin	Britannia Refined Metals Ltd.	United Kingdom
Tin	Butterworth Smelter	Malaysia
Tin	CFC Cooperativa dos Fundidores de Cassiterita da Amazonia Ltda.	Brazil
Tin	Changzhou Chemical Research Institute Co. Ltd.	China
Tin	Chenzhou Gold Arrow Solder Co., Ltd.	China
Tin	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.*	China
Tin	Cheong Hing	China
Tin	China Shenzhen Morgan Sputtering Targets & Technology Co., Ltd.	China
Tin	China Sino-Platinum Metals Co., Ltd	China
Tin	China Gold International Resources Corp. Ltd.	China
Tin	China Hongqiao	China
Tin	China Huaxi Group Nandan	China
Tin	China Tin Group Co., Ltd.*	China
Tin	China Tin Smelter Co., Ltd.	China
Tin	CIF	China
Tin	CINTAS METALICAS S.A.	Spain
Tin	CNMC (Guangxi) PGMA Co. Ltd.	China
Tin	Cookson	Spain
Tin	Cooperativa Metalurgica de Rondônia Ltda.*	Brazil
Tin	CV Ayi Jaya*	Indonesia
Tin	CV Dua Sekawan*	Indonesia
Tin	CV Gita Pesona*	Indonesia
Tin	CV Serumpun Sebalai*	Indonesia
Tin	CV United Smelting*	Indonesia
Tin	CV Venus Inti Perkasa*	Indonesia
Tin	Daewoo International	Korea, Republic Of
Tin	Dongguan Cameroon Chemical Materials Co., Ltd	China
Tin	Dong'guan Dong wu Violent-toxic Chemical Products Co., Ltd.	China
Tin	Dongguan Dongxu Metal Surface Hanlde Co., Ltd	China
Tin	Dongguan Standard Electronic Material Co., Ltd	China
Tin	Dongguan Yuecheng metal materials Co., Ltd.	China
Tin	Dongguanshi Sutande Dianzi Cailiao Youxiangongsi	China
Tin	Dowa*	Japan
Tin	Dr.-Ing. Max Schloetter GmbH & Co. KG	Germany
Tin	Dr.-Ing. Max Schloetter GmbH & Co. KG	Peru
Tin	DUKSAN HI-METAL	Korea, Republic Of
Tin	Duoluoshan Sapphire Rare Metal Co. Ltd.	China
Tin	DUOXIN	China
Tin	Echememi Enterprise Corp. (FUTURES EXCHANGE)	China
Tin	Electroloy Coroperation Sdn Bhd	Malaysia

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Electroloy Metal Co., Ltd.	China
Tin	Electroloy Metal Pte.	Singapore
Tin	Electro-Mechanical Facility of the Cao Bang Minerals & Metallurgy Joint Stock Company	Vietnam
Tin	Elmet S.L.U.*	Spain
Tin	EM Vinto*	Bolivia
Tin	Empresa Metalurgica Vinto,Empresa Nacional de Fundiciones (ENAF), Complejo Metalurico Vinto S.A.	Bolivia
Tin	ESG Edelmetallservice GmbH & Co. KG	Germany

Tin	Estanho de Rondônia S.A.	Brazil
Tin	Ethiopian Minerals Development Share Company	Ethiopia
Tin	Feinhütte Halsbrücke GmbH	Germany
Tin	Fenix Metals*	Poland
Tin	Fombell,	United States
Tin	Fuji Metal Mining	Thailand
Tin	Fujian Nanping	China
Tin	Full armor Industries (shares) Ltd.	Taiwan
Tin	Funsur	Brazil
Tin	Furukawa Electric	Japan
Tin	Gansu-based Baiyin Nonferrous Metals Corporation (BNMC)	China
Tin	Gejiu Fengming Metallurgy Chemical Plant*	China
Tin	Gejiu Jinye Mineral Company*	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	Gibbs Wire & Steel Co.	United States
Tin	Gold and Silver Refining Strokes Ltd.	China
Tin	Grant Manufacturing and Alloying	United States
Tin	Guangdong MingFa Precious Metal Co., Ltd.	China
Tin	Guangxi China Tin Group Co.	China
Tin	Guangxi Huaxi Group Limited	China
Tin	Guangxi taixing electronic welding material co., Ltd.	China
Tin	Guangzhou Special Copper & Electronics material Co., Ltd.	China
Tin	GuanXi China Tin Group Co., Ltd.	China
Tin	H.J.Enthoven & Sons (Division of H.J.Enthoven, Ltd., Reg. No. 2821551)	United Kingdom
Tin	Hana-High Metal	Malaysia
Tin	Hanbaek Nonferrous Metals	Korea, Republic Of
Tin	Handok	Korea, Republic Of
Tin	Harima Smelter	Japan
Tin	Harmony Gold Refinery	South Africa
Tin	Hayes Metals	Netherlands
Tin	HeChi Metallurgical Chemical Factory	China
Tin	Heesung Catalysts Corp.	Korea, Republic Of
Tin	Heesung Metal Ltd.	Australia
Tin	Heesung Metal Ltd.	Korea, Republic Of
Tin	Henan San Men Xia	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Henan Sanmenxia Lingbao Jinyuan Mining Co., Ltd.	China
Tin	Henan Zhongyuan Gold Smelter Co., Ltd.	China
Tin	Heraeus Materials Singapore Pte, Ltd.	Singapore
Tin	Heraeus Materials Technology	Germany
Tin	Heraeus Oriental Hitec Co., Ltd.	Korea, Republic Of
Tin	Heraeus Precious Metals, Inc, Newark New Jersey	United States
Tin	Heraeus Technology Center	China
Tin	Heraeus Zhaoyuan (Changshu) Electronic Material Co., Ltd.	China
Tin	High-Power Surface Technology	China
Tin	High-Tech Co., Ltd. Taiwan	Taiwan
Tin	Hikaru Suites Ltd.	Japan
Tin	Hisikari Mine	Japan
Tin	Hitachi Cable	Japan
Tin	Hon Shen Co. Ltd.	Taiwan
Tin	Hongqiao Metals (Kunshan) Co., Ltd.	China
Tin	HonHai Precision Co., Ltd.	Taiwan
Tin	Hua Eng Wire & Cable Co., Ltd.	Taiwan
Tin	Huaxi Guangxi Group	China
Tin	HuiChang Hill Tin Industry Co., Ltd.*	China
Tin	Huichang Jinshunda Tin Co. Ltd.	China
Tin	Hyundai-Steel	Korea, Republic Of
Tin	IBF IND BRASILEIRA DE FERROLIGAS LTDA	Brazil
Tin	IMLI	Indonesia
Tin	Increasingly and Chemical Co. (Suzhou) Ltd.	China
Tin	Indonesian Tin Ingot	Indonesia
Tin	IPS	France
Tin	Ishikawa Metal Co., Ltd.	Japan
Tin	Jan Janq	Taiwan
Tin	Japan Pure Chemical	Japan
Tin	Jau Janq Enterprise Co., Ltd.	Taiwan
Tin	Jean Goldschmidt International	Belgium
Tin	Jia Lung Corp	Taiwan
Tin	Jiangxi Copper Corporation (JCC)	China

Tin	Jiangxi Ketai Advanced Material Co., Ltd.*	China
Tin	Jiangxi Shunda Huichang Kam Tin Co. Ltd.	China
Tin	Jie sheng	China
Tin	Jin Dong Heng	China
Tin	Jin Jinyin Refining Company Limited	China
Tin	Jin Tian	China
Tin	Jin Zhou	China
Tin	JinBao Electronic Co., Ltd.	China
Tin	Jinfeng Gold Mine Smelter	China
Tin	Jinlong Copper Co. Ltd.	China
Tin	Johnson Matthey HongKong Ltd.	China
Tin	Ju Tai Industrial Co., Ltd.	China
Tin	Kanfort Industrial (Yantai) Co. Ltd.	China
Tin	Katapang	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Kee Shing	China
Tin	Ketabang	Indonesia
Tin	Kewei Tin Co., Ltd.	China
Tin	KIHONG T&G	Indonesia
Tin	KOBA	Indonesia
Tin	Koki Japan	Japan
Tin	Kovohute Pribram Nastupnicka, A.S.	Czech Republic
Tin	Kunming High-tech Industrial Developing Area	China
Tin	Kunshan Jinli Chemical Industry Reagents Co., Ltd.	China
Tin	Kuntai	China
Tin	Kupol	Russian Federation
Tin	Kyocera	Germany
Tin	Lai'bin China Tin Smelting Ltd.	China
Tin	LBMA	Japan
Tin	Levitra can, Shenzhen Electronic Technology Co., Ltd.	China
Tin	LG-Nikko	Korea, Republic Of
Tin	Lingbao Jinyuan Tonghui Refinery Co., Ltd.	China
Tin	Linwu Xianggui Mineral Smelting Co., Ltd.	China
Tin	LINXENS	France
Tin	LITTELFUSE	United States
Tin	London Bullion Market Association	United Kingdom
Tin	Lupon Enterprise Co., Ltd.	Taiwan
Tin	Ma On Shuguang Smelting Plant	China
Tin	Magnu's Minerais Metais e Ligas Ltda.*	Brazil
Tin	Malaysia Smelting Corporation (MSC)*	Malaysia
Tin	Materials Eco- Refining Co Ltd. (MERC)	Japan
Tin	Matsuda Sangyo Co., Ltd.	Japan
Tin	Matsushima Metal Corporation	Japan
Tin	MCP Heck	Germany
Tin	MCP Metal Specialist Inc.	United Kingdom
Tin	MCP Metal specialties, Inc. Fairfield, Connecticut, USA	United States
Tin	MCP Mining & Chemical Products Ltd. UK	United Kingdom
Tin	Melt Metais e Ligas S.A.*	Brazil
Tin	Meng neng	China
Tin	Metahub Industries Sdn. Bhd.	Malaysia
Tin	Metal Do	Japan
Tin	Metallic Resources, Inc.*	United States
Tin	Metallo Chimique	Belgium
Tin	Metallo-Chimique N.V.*	Belgium
Tin	Metalor Technologies (Suzhou) Ltd.	China
Tin	Metalor Technologies Singapore Pte. Ltd.	Singapore
Tin	Millard Wire	United States
Tin	Mineração Taboca S.A.*	Brazil
Tin	Ming Li Jia smelt Metal Factory	China
Tin	Minsur*	Peru
Tin	Mitsubishi Materials Corporation*	Japan
Tin	Mitsui & Co Precious Metals Inc.	Japan

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Mitsui & Co. Precious Metals Inc. Hong Kong Branch	China
Tin	MK Electron	Korea, Republic Of
Tin	Modeltech Sdn Bhd	Malaysia
Tin	Morigin Company	Japan
Tin	N.E. Chemcat Corporation	Japan

Tin	Nankang Nanshan Tin Manufactory Co., Ltd.	China
Tin	Nantong Tongjie Electrical Co., Ltd.	China
Tin	Natsuda Sangyo Co., Ltd.	Japan
Tin	Natsuda Sangyo Co., Ltd.	Peru
Tin	Natsuda Sangyo Co., Ltd.	United States
Tin	Neomax Hitachi	Japan
Tin	NGHE TIN NON-FERROUS METAL	Vietnam
Tin	Nghe Tinh Non-Ferrous Metals Joint Stock Company	Vietnam
Tin	Nihon Genma MFG Co., Ltd.	Thailand
Tin	Nihon Kagaku Sangyo Co., Ltd.	Japan
Tin	Nihon Superior Co Ltd.	Japan
Tin	Niihama Nickel Refinery	Japan
Tin	Ningbo Jintian copper (Group) Company Limited	China
Tin	Nippon Filler Metals Ltd.	Japan
Tin	Nippon Mining & Metals	Japan
Tin	Nippon Mining & Metals	Singapore
Tin	Novosibirsk Processing Plant Ltd.	Russian Federation
Tin	NTET, Thailand	Thailand
Tin	O.M. Manufacturing (Thailand) Co., Ltd.*	Thailand
Tin	O.M. Manufacturing Philippines, Inc.*	Philippines
Tin	Operaciones Metalurgical S.A.*	Bolivia
Tin	PL Timah Tbk	Indonesia
Tin	Plansee SE Liezen	Austria
Tin	Poongsan Corporation	Korea, Republic Of
Tin	Posco	Korea, Republic Of
Tin	Precious Metal Sales Corp.	United States
Tin	Pro Wu Xianggui Mining Co., Ltd.	China
Tin	PT Alam Lestari Kencana	Indonesia
Tin	PT Aries Kencana Sejahtera*	Indonesia
Tin	PT Artha Cipta Langgeng*	Indonesia
Tin	PT ATD Makmur Mandiri Jaya*	Indonesia
Tin	PT Babel Inti Perkasa*	Indonesia
Tin	PT Bangka Kudai Tin	Indonesia
Tin	PT Bangka Prima Tin*	Indonesia
Tin	PT Bangka Putra Karya	Indonesia
Tin	PT Bangka Timah Utama Sejahtera	Indonesia
Tin	PT Bangka Tin Industry*	Indonesia
Tin	PT Belitung Industri Sejahtera*	Indonesia
Tin	PT BilliTin Makmur Lestari	Indonesia
Tin	PT Bukit Timah*	Indonesia
Tin	PT Cipta Persada Mulia	Indonesia
Tin	PT Citralogam	Indonesia

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	PT DS Jaya Abadi*	Indonesia
Tin	PT Eunindo Usaha Mandiri*	Indonesia
Tin	PT Fang Di MulTindo	Indonesia
Tin	PT Indra eramulti Logam Industri	Indonesia
Tin	PT Inti Stania Prima*	Indonesia
Tin	PT Justindo	Indonesia
Tin	PT Karimun Mining*	Indonesia
Tin	PT Kijang Jaya Mandiri*	Indonesia
Tin	PT Lautan Harmonis Sejahtera*	Indonesia
Tin	PT Menara Cipta Mulia*	Indonesia
Tin	PT Mitra Stania Prima*	Indonesia
Tin	PT O.M. Indonesia*	Indonesia
Tin	PT Panca Mega Persada*	Indonesia
Tin	PT Pelat Timah Nusantara Tbk	Indonesia
Tin	PT Prima Timah Utama*	Indonesia
Tin	PT Refined Bangka Tin*	Indonesia
Tin	PT Sariwiguna Binasentosa*	Indonesia
Tin	PT Seirama Tin Investment	Indonesia
Tin	PT Stanindo Inti Perkasa*	Indonesia
Tin	PT Sukses Inti Makmur*	Indonesia
Tin	PT Sumber Jaya Indah*	Indonesia
Tin	PT Tambang Timah	Indonesia
Tin	PT Timah (Persero) Tbk Kundur*	Indonesia
Tin	PT Timah (Persero) Tbk Mentok*	Indonesia
Tin	PT Tinindo Inter Nusa*	Indonesia
Tin	PT Tirus Putra Mandiri	Indonesia
Tin	PT Tommy Utama*	Indonesia
Tin	PT Wahana Perkit Jaya	Indonesia
Tin	PT. Supra Sukses Trinusa	Indonesia

Tin	PT. Tanloaug Tinah	Indonesia
Tin	Pure Technology	Russian Federation
Tin	QianDao Co., Ltd.	China
Tin	Qualitek Delta Philippines	Philippines
Tin	Rahman Hydraulic Tin Sdn Bhd	Malaysia
Tin	RBT	Indonesia
Tin	REDRING SOLDER (M) SDN BHD	Malaysia
Tin	Resind Indústria e Comércio Ltda.*	Brazil
Tin	Rohm & Haas Elec. Mat'ls	China
Tin	Rohm & Haas Elec. Mat'ls	Singapore
Tin	RST	Germany
Tin	Rui Da Hung*	Taiwan
Tin	SAAMP	France
Tin	Samatron	Korea, Republic Of
Tin	Samhwa Non-ferrous Metal Ind. Co. Ltd.	Korea, Republic Of
Tin	Samtec	United States
Tin	Sanmenxia Hang Seng Science and Technology, Research and Development Co., Ltd.	China
Tin	Scotia Mocatta	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	ScotiaMocatta, The Bank of Nova Scotia	United States
Tin	Sen Silver	Japan
Tin	Sendi (Japan): Kyocera Corporation	Japan
Tin	Senju Metal Industries Co., Ltd.	Japan
Tin	Sewon Korea, Republic of	Korea, Republic Of
Tin	SGS Bolivia S.A.	Bolivia
Tin	Shan Tou Shi Yong Yuan Jin Shu Zai Sheng Co. Ltd.	China
Tin	Shanghai Gold Exchange (SGE)	China
Tin	ShangHai YueQiang Metal Products co.,	China
Tin	Shaoxing Tianlong Tin Materials Co., Ltd	China
Tin	Shen Mao Solder (M) Sdn. Bhd.	Malaysia
Tin	Shen Zhen Thousand Island Ltd.	China
Tin	Shenmao Technology, Inc.	Taiwan
Tin	Shenzhen Chemicals & Light Industry Co., Ltd.	China
Tin	Shenzhen Fujun Material Technology Co., Ltd.	China
Tin	Shenzhen Heng Zhong Industry Co.,Ltd.	China
Tin	Shenzhen Keaixin Technology	China
Tin	Shenzhen New Jin Spring Solder Products Co., Ltd.	China
Tin	Shenzhen Tiancheng Chemical Co. Ltd.	China
Tin	ShenZhen Urban Pubic Bureau of China	China
Tin	Shenzhen Yi Cheng Industrial	China
Tin	Shinko Electric Industries Co., Ltd.	Japan
Tin	Singapore LME Tin	Singapore
Tin	Sinitron, Shenmao Solder (M) Sdn. Bhd.	Malaysia
Tin	SKE (China): Shanghai Kyocera Electronics Co Ltd.	China
Tin	SMIC SENJU MALAYSIA	Malaysia
Tin	Soft Metais Ltda.*	Brazil
Tin	Sojitz	Japan
Tin	Solar Applied Materials Technology Corp.	China
Tin	Solar Applied Materials Technology Corp.	Taiwan
Tin	Solder Coat Co., Ltd.	Japan
Tin	Soochow University's	China
Tin	Standard Bank	China
Tin	Strain DS Force Shop	Japan
Tin	Stretti	Malaysia
Tin	Sumisho	Japan
Tin	Sun Surface Technology Co., Ltd.	China
Tin	Super Ligas	Brazil
Tin	Suzhou Co. Ltd.	China
Tin	Suzhou Xingrui Noble	China
Tin	Tai zhou chang san Jiao electron Co., Ltd.	China
Tin	Taicang City Nancang Metal Meterial Co., Ltd.	China
Tin	Taicang Jiangsu	China
Tin	Taizhou Changsanjiao Co., Ltd.	China
Tin	Talcang City Nankang Metal Materila Co., Ltd.	China
Tin	Tamura	Japan
Tin	Tantalite Resources	South Africa

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	TCC steel	Korea, Republic Of

Tin	TDK	Japan
Tin	Technic Inc	United States
Tin	Tennant Metal Pty., Ltd.	Australia
Tin	Thaisarco*	Thailand
Tin	The Hutti Gold Mines Co., Ltd.	India
Tin	Tianshui Longbo Business & Trade Co., Ltd.	China
Tin	Tim Plating Gejiu	China
Tin	Timah Company	Indonesia
Tin	Tin Products Manufacturing Co. Ltd.	China
Tin	Tong Ding Metal Company. Ltd.	China
Tin	Traxys	France
Tin	Tuyen Quang Non-Ferrous Metals Joint Stock Company	Vietnam
Tin	UBS AG	Switzerland
Tin	Umicore	Netherlands
Tin	Umicore Galvanotechnik GmbH	Germany
Tin	Umicore Haboken	Belgium
Tin	Uniforce Metal Industrial Corp.	China
Tin	United Precious Metal Refining, Inc.	United States
Tin	Univertical International (Suzhou) Co., Ltd.	China
Tin	UYEMURA	United States
Tin	Vishay Intertechnology	China
Tin	VQB Mineral and Trading Group JSC*	Vietnam
Tin	WC Heraeus Hanau	Germany
Tin	Well-Lin Enterprise Co. Ltd.	Taiwan
Tin	Westfalenzinn	Germany
Tin	Westmetall GmbH & Co. KG	Germany
Tin	White Solder Metalurgia e Mineração Ltda.*	Brazil
Tin	Wilhelm Westmetall, Germany	Germany
Tin	Williams Gold Refining Co., Inc.	Canada
Tin	Williams Gold Refining Co., Inc.	United States
Tin	Wind Yunnan Nonferrous Metals Co., Ltd.	China
Tin	Wu Xi Shi Yi Zheng Ji Xie She Bei Company	China
Tin	Wuxi Lantronic Electronic Co. Ltd.	China
Tin	Wuxi Middle Treasure Materials	China
Tin	Xia Yi Metal Industries (shares) Ltd.	Taiwan
Tin	Xianghualing Tin Industry Co., Ltd.	China
Tin	Xinmao Xiye (Tin Company)	China
Tin	Yantai Zhaojin Kanfort Precious Metals Co., Ltd.	China
Tin	Yantai Zhaojin Kanfort Precious Metals Incorporated Company	China
Tin	Yifeng Tin Industry (Chenzhou) Co., Ltd.	China
Tin	Yoo Chang Metal	Korea, Republic Of
Tin	YTCL,Yuntinic Resources Inc.,Smelting Branch of Yunnan Tin Company Limited	China
Tin	YTMM	China
Tin	Yun Xi	China
Tin	Yun'an Dian'xi Tin Mine	China
Tin	Yunnan Chengfeng Non-ferrous Metals Co., Ltd.*	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tin	Yunnan Chengo Electric Smelting Plant	China
Tin	Yunnan Gejiu Zili Metallurgy Co., Ltd.	China
Tin	Yunnan Gejiu Jinye Minerals	China
Tin	YunNan Gejiu Yunxin Electrolyze Limited	China
Tin	Yunnan Metallurgical Group Co., Ltd.	China
Tin	Yunnan Tin Company Limited*	China
Tin	Yuntinic Chemical GmbH	Germany
Tin	Yun'xin Non-ferrous Electroanalysis Ltd.	China
Tin	Yutinic Resources	United States
Tin	Zhangzhou Macro Real Non-Ferrous Metals	China
Tin	Zhangzhou Xiangcheng Hongyu Building Co., Ltd.	China
Tin	Zhao yuan gold smelter of ZhongJin gold corporation	China
Tin	Zhaojin Gold & Silver Refinery Co., Ltd.	China
Tin	Zhaojin Gold Argentine Refining Company Limited	China
Tin	Zhaojin Group&Gold Mineral China Co., Ltd.	China
Tin	Zhe Jiang Guang Yuan Noble Metal Smelting Factory	China
Tin	Zhejiang Huangyan Xinqian Electrical Equipment Fittings Factory	China
Tin	Zhongshan Jinye Smelting Co., Ltd.	China
Tin	ZhongShi	China
Tin	Zhuhai Horyison Solder Co., Ltd.	China
Tin	Zijin Mining Group Co. Ltd.	China
Tin	Zong Yang Industrial Co., Ltd.	Taiwan
Tin	Zuhai Horyison Solder Co.,Ltd.	China
Tungsten	A.L.M.T. TUNGSTEN Corp.*	Japan
Tungsten	ACL Metais Eireli	Brazil



Tungsten	Alta Group	United States
Tungsten	Altantic Metals	United States
Tungsten	Asia Tungsten Products Vietnam Ltd.*	Vietnam
Tungsten	ATI Metalworking Products	United States
Tungsten	Axis Material Limited	Japan
Tungsten	Beijing Zenith Materials	China
Tungsten	Bruweiler Precise Sales Co.	United States
Tungsten	Buffalo Tungsten	China
Tungsten	Central Glass / Japan	Japan
Tungsten	ChangChun up-optech	China
Tungsten	Chenzhou Diamond Tungsten Products Co., Ltd.*	China
Tungsten	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.	China
Tungsten	China Alluter Technology (Shenzhen) Co.,Ltd.	China
Tungsten	China National Non-Ferrous	China
Tungsten	Chongyi Zhangyuan Tungsten Co., Ltd.*	China
Tungsten	CWB Materials	United States
Tungsten	Dayu Jincheng Tungsten Industry Co., Ltd.	China
Tungsten	Dayu Weiliang Tungsten Co., Ltd.	China
Tungsten	Degutea	Korea, Republic Of
Tungsten	Fujian Jinxin Tungsten Co., Ltd.*	China
Tungsten	Ganxian Shirui New Material Co., Ltd.	China
Tungsten	Ganzhou Haichuang Tungsten Industry Co., Ltd.	China

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Country</b>
Tungsten	Ganzhou Hongfei Tungsten & Molybdenum Materials Co., Ltd.	China
Tungsten	Ganzhou Huaxing Tungsten Products Co., Ltd.*	China
Tungsten	Ganzhou Jiangwu Ferrotungsten Co., Ltd.*	China
Tungsten	Ganzhou Non-ferrous Metals Smelting Co., Ltd.	China
Tungsten	Ganzhou Seadragon W & Mo Co., Ltd.*	China
Tungsten	Ganzhou Yatai Tungsten Co., Ltd.	China
Tungsten	Global Tungsten & Powders Corp.*	United States
Tungsten	GTP,Osram Sylvania,Global Tungsten & Powders Corp USA	United States
Tungsten	Guangdong Xianglu Tungsten Co., Ltd.*	China
Tungsten	H.C. Starck GmbH*	Germany
Tungsten	H.C. Starck Smelting GmbH & Co.KG*	Germany
Tungsten	HC Starck	Russian Federation
Tungsten	HC Starck	United States
Tungsten	Hitachi Ltd.	Japan
Tungsten	Hitachi Metals, Ltd., Yasugi Works	Japan
Tungsten	Hunan Chenzhou Mining Co., Ltd.*	China
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji*	China
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Yanglin	China
Tungsten	Hunan Chunchang Nonferrous Metals Co., Ltd.*	China
Tungsten	Hunan Chun-chang Non-ferrous Smelting & Concentrating Co., Ltd.	China
Tungsten	Hydrometallurg, JSC*	Russian Federation
Tungsten	IES Technical Sales	United States
Tungsten	Integrated Circuit	Korea, Republic Of
Tungsten	Izawa Metal Co., Ltd.	Japan
Tungsten	Jada Electronic limited (JX Nippon Mining&Matel Co., Ltd)	Japan
Tungsten	Japan New Metals Co., Ltd.*	Japan
Tungsten	Jiangwu H.C. Starck Tungsten Products Co., Ltd.*	China
Tungsten	Jiangxi Dayu Longxintai Tungsten Co., Ltd.	China
Tungsten	Jiangxi Gan Bei Tungsten Co., Ltd.*	China
Tungsten	Jiangxi Minmetals Gao'an Non-ferrous Metals Co., Ltd.	China
Tungsten	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.*	China
Tungsten	Jiangxi Xincheng Tungsten Industry Co., Ltd.*	China
Tungsten	Jiangxi Xiushui Xianggan Nonferrous Metals Co., Ltd.*	China
Tungsten	Jiangxi Yaosheng Tungsten Co., Ltd.*	China
Tungsten	Kanto Denka Kogyo Co., Ltd.	China
Tungsten	Kennametal Fallon*	United States
Tungsten	Kennametal Huntsville*	United States
Tungsten	Kyoritsu Gokin Co., Ltd.	Japan
Tungsten	Malipo Haiyu Tungsten Co., Ltd.*	China
Tungsten	Meterion Advanced Materials Thin Film Products	United States
Tungsten	Micro 100	United States
Tungsten	Midwest Tungsten Wire Co.	United States
Tungsten	Mitsubishi Materials Corporation	Japan
Tungsten	Moliren Ltd.*	Russian Federation
Tungsten	MSC (wei te)	Indonesia
Tungsten	Nanchang Cemented Carbide Limited Liability Company	China
Tungsten	Niagara Refining LLC*	United States



Metal	Smelter or Refiner Name	Country
Tungsten	Ninghua Xingluokeng Tungsten Mining Co. Ltd.	China
Tungsten	Nippon Filler Metals Ltd.	Japan
Tungsten	Nippon Mining & Metals	Japan
Tungsten	Nippon Tungsten Co., Ltd.	Japan
Tungsten	North American Tungsten Corporation Ltd.	Canada
Tungsten	Nui Phao H.C. Starck Tungsten Chemicals Manufacturing LLC*	Vietnam
Tungsten	Philippine Chuangxin Industrial Co., Inc.*	Philippines
Tungsten	Plansee SE Liezen	Austria
Tungsten	Pobedit, JSC	Russian Federation
Tungsten	Praxair	United States
Tungsten	Saganoseki Smelter & Refinery	Japan
Tungsten	Sandvik	United States
Tungsten	Sanher Tungsten Vietnam Co., Ltd.	Vietnam
Tungsten	Sichuan Metals & Materials Imp & Exp Co.	China
Tungsten	Sincemat Co, Ltd.	China
Tungsten	Solar Applied Materials Technology Corp.	Taiwan
Tungsten	South-East Nonferrous Metal Company Limited of Hengyang City*	China
Tungsten	Sumitomo Electric, USA (A.L.M.T.)	Canada
Tungsten	Sumitomo Electric, USA (A.L.M.T.)	United States
Tungsten	Sunaga Tungsten	Japan
Tungsten	Sylham	United States
Tungsten	Taegutec	Korea, Republic Of
Tungsten	Taiyo Nippon Sanso Trading (Shanghai) Co., Ltd.	China
Tungsten	Tamano Smelter, Hibi Kyodo Smelting Co., Ltd.	Japan
Tungsten	Tejing (Vietnam) Tungsten Co., Ltd.*	Vietnam
Tungsten	Tosoh	Japan
Tungsten	Triumph Northwest	United States
Tungsten	ULVAC, Inc.	Japan
Tungsten	Unecha Refractory metals plant*	Russian Federation
Tungsten	Vietnam Youngsun Tungsten Industry Co., Ltd.*	Vietnam
Tungsten	Voss Metals Company, Inc.	United States
Tungsten	Williams Gold Refining Co., Inc.	United States
Tungsten	Wolfram Bergbau und Hütten AG*	Austria
Tungsten	Woltech Korea, Republic of Co., Ltd.*	Korea, Republic Of
Tungsten	Wort Wayne Wire Die	United States
Tungsten	Xiamen Golden Egret Special Alloy Co. Ltd.	China
Tungsten	Xiamen Honglu Tungsten Molybdenum Co., Ltd.	China
Tungsten	Xiamen Tungsten Co., Ltd.*	China
Tungsten	Xianghualing Tin Industry Co., Ltd.	China
Tungsten	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.*	China
Tungsten	Xinhai Rendan Shaoguan Tungsten Co., Ltd.*	China
Tungsten	Zhuzhou Cemented Carbide Group Co., Ltd.	China

\* Denotes smelters/ refiners that received a “conflict-free” designation from an independent third party audit program, as of May 24, 2017.