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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY  
986 NATIONAL CENTER  
RESTON, VIRGINIA 20192

INDIVIDUAL COMPANY  
DATA - PROPRIETARY

The data furnished in this report will be treated in confidence by the Department of the Interior, except that they may be disclosed to Federal defense agencies, or to the Congress upon official request for appropriate purposes. Unless objection is made in writing to the USGS, the information furnished in this report may be disclosed to the respondent's State Geological Survey (or similar State Agency) if the State has appropriate safeguards to prevent disclosing company proprietary data.

ZIRCONIUM AND HAFNIUM



(Please correct if name or address has changed.)

FACSIMILE NUMBER  
1-800-543-0661

Public voluntary reporting burden for this collection of information is estimated to average 2 HOURS per response. A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Comments regarding this collection of information should be directed to: U.S. Geological Survey, Statistics and Information Systems Section, 988 National Center, Reston, VA 20192. **Please do not mail canvass forms to this address.**

Collection of nonfuel minerals information is authorized by Public Law 96-479 and the Defense Production Act. This information is used to support executive policy decisions pertaining to emergency preparedness, national defense, and analyses for minerals legislation and industrial trends. The USGS relies on your voluntary and timely response to assure that its information is complete and accurate. Please return this form in the enclosed envelope or fax to the above toll-free number as soon as possible. Complete a separate form for each mineral establishment that was active during the reporting period. A mineral establishment is defined as a single physical location where mineral operations are conducted; for example, a mine only, a mine and preparation plant, or a preparation plant only. If you do not have exact data, please enter your best estimates and mark with an /e. Use zero (0) when appropriate. Do not report decimals or fractions. Round to the nearest whole number. If you have nothing to report, please complete "Location of Plant Covered by this Report", sign, and return the form. Please do not make entries in shaded areas. Please use the space for "Remarks" to provide any specific information that will help us in the use or interpretation of the data. Any statement on the effect of changes in economic conditions upon the reporting establishment will be useful. Additional forms are available upon request.

If you have any questions concerning completion of this form, please contact the Mineral Commodities Data Unit, U.S. Geological Survey, 985 National Center, Reston, VA 20192, Telephone (703) 648-7960.

Location of plant: Nearest city or town \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_

If beginning stocks, production, and receipts in each of SECTIONS 1, 3, 4, or 5 are less than 1,000 pounds, DO NOT complete the SECTION. If beginning stocks, production, and receipts in SECTION 7 are less than 100 pounds, DO NOT complete that SECTION.

**SECTION 1. Stocks, production, receipts, and disposition of zirconium raw materials.**

Item	Code	Concentrates (pounds)	Milled (pounds)	Baddeleyite (pounds)
Stocks beginning of year.....	101			
Production during year.....	102			
Domestic purchases during year: From mine.....	103			
From dealer or miller.....	104			
Imports during year: Direct.....	105			
From dealer or miller.....	106			
Shipments during year.....	107			
In-plant consumption during year.....	108			
Processing losses during year.....	109			
Stocks end of year.....	110			

**SECTION 2. Shipments of zircon concentrates and milled zircon, by use.** Totals should agree with shipments reported in SECTION 1.

Use	Code	Zircon concentrates (pounds or percent of total)	Milled zircon (pounds or percent of total)
Foundry.....	201		
Refractory.....	202		
Ceramic.....	203		
Zirconium chemicals.....	204		
Metal.....	205		
Alloys.....	206		
Other (please specify) _____			
<b>TOTAL.....</b>	<b>299</b>		

**SECTION 3. Stocks, production, purchases, and disposition of zirconium compounds.**

Item	Code	Carbonitride (pounds)	Chloride (pounds)	Oxide (pounds)	OTHER (Specify)	
					(pounds)	(% ZrO <sub>2</sub> )
Stocks, beginning of year.....	301					
Production during year.....	302					
Domestic purchases during year.....	303					
Shipments during year.....	304					
In-plant consumption during year.....	305					
Processing losses during year.....	306					
Stocks end of year.....	307					

**SECTION 4. Stocks, production, purchases, and disposition of zirconium metal, over 90% Zr.**

Item	Code	Sponge or other primary form (pounds)	Ingot (pounds)	Scrap (pounds)	Powder (pounds)	Other (pounds)
Stocks, beginning of year.....	401					
Production during year.....	402					
Domestic purchases during year.....	403					
Shipments during year.....	404					
In-plant consumption during year.....	405					
Processing losses during year.....	406					
Stocks end of year.....	407					

**SECTION 5. Stocks, production, and shipments of zirconium-bearing ceramics, refractories, and alloys.**

Item	Code	Ceramics		Refractories		Alloys	
		Pounds	% ZrO <sub>2</sub>	Pounds	% ZrO <sub>2</sub>	Pounds	% Zr
Stocks, beginning of year.....	501						
Production during year.....	502						
Shipments during year.....	503						
Stocks end of year.....	504						

**SECTION 6. Stocks, production, and disposition of zirconium alloys, by type.**

Type of alloy	Code	Percent Zr	Stocks beginning of year (pounds)	Production (pounds)	Shipments to consumers (pounds)	In-plant consumption (pounds)	Stocks end of year (pounds)
Zircaloy.....	601						
Ferrozirconium.....	602						
Other 1) _____							
2) _____							
<b>TOTAL.....</b>	<b>699</b>						

**SECTION 7. Stocks, production, receipts, and disposition of hafnium materials.**

Item	Code	Oxide (pounds)	Sponge (pounds)	Crystal bar (pounds)	OTHER (specify)	
					Pounds	% Hf or HfO <sub>2</sub>
Stocks beginning of year.....	701					
Production during year.....	702					
Receipts during year.....	703					
Shipments during year.....	704					
In-plant consumption during year.....	705					
Stocks end of year.....	706					

**Remarks:**

Name of person to be contacted regarding this report			Tel. area code		No.		Ext.				
Address		No.		Street		City		State		ZIP Code	
Signature						Title			Date		