



# Civelek Porselen

Industrial Ceramics and Laboratory Materials

Crucibles

Oxide Ceramic Materials

Laboratory Instruments

# INDEX

● Ceramic Crucibles Oxide Ceramic Crucibles .....	04
● Oxide Ceramic and Laboratory Materials Aluminum / Zirconium, Labware, Boat.. ..	05
● Powders Synthetic Diamond, Silver, Carbides ... ..	08
● Industrial Ceramic Materials Industrial Ceramic Applications .....	09
● Metal Crucibles Nickel, Platinum, Zirconium .....	10
● Heat Elements Thermocouple, MoSi <sub>2</sub> Heater Element .....	11
● For Mould Polishing Diamond Paste .....	12
● Laboratory Furnaces Standard and High Temperature Furnaces .....	13

# Civelek Porselen

## About Us

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***Our company, founded by Osman Nuri Civelek, has been producing laboratory porcelain and ceramic materials since 1982.***

It is an R&D, service and sales company established to share knowledge in the ceramics, chemistry and laboratory fields and to develop a different perspective of the sector. By the investments we have made in our R&D operations, we continue to produce high quality oxide ceramic materials for the last four years.

Our goal of working in ceramics and chemical industry in Turkey to products of international standards, is to reach the appropriate conditions. At the same time by working in the field of biotechnology to lead the development of new ceramic products.

We can provide all kinds of solutions to our customers by producing economic and permanent solutions.



# CERAMIC CRUCIBLES



## Aluminum Oxide ( $\text{Al}_2\text{O}_3$ )

They are made of high-purity aluminum oxide for resistant to chemicals. Usage temperature varies between 1500-1750 °C.

**PURITY:** % 95 – % 98 – % 99 – % 99,7

**DIMENSIONS:** 15 ml, 25 ml, 40 ml, 50 ml, 60 ml, 80 ml, 100 ml, 120 ml, 150 ml, 250 ml, 400 ml, 500 ml, 600 ml, 800 ml, 1000 ml, 1200 ml, 1500 ml, 2500 ml



## Zirconium Oxide ( $\text{ZrO}_2$ )

They are made of pure zirconium oxide, resistant to chemicals.

Unlike other ceramic materials, zirconium oxide is a ceramic material with very high crack resistance.

**PURITY:** % 95 – % 99

**USAGE TEMPERATURE:** 1650-1800°C

**DIMENSIONS:** 5 ml, 10 ml, 20 ml, 25 ml, 35 ml, 40 ml, 50 ml

60 ml, 80 ml, 100 ml, 120 ml, 150 ml, 250 ml

## OXIDE CERAMIC AND LABORATORY MATERIALS

Porcelain, ceramics and laboratory equipments which are widely used in laboratories and the products required for your R&D work are supplied and delivered in the fastest time.

Glass Materials, Laboratory Equipments, Chemical Materials, Ceramic Materials, Oxide Ceramics, Alloy Metals, Pure Metal Powders, Synthetic Diamond.



### ALUMINUM OXIDE LABWARE

$Al_2O_3$  Aluminum Oxide Labware with 99% purity can withstand high temperatures and can also be produced in desired sizes.



### ALUMINUM OXIDE BOAT

Aluminum Oxide Boats with 99% purity it can withstand high temperatures. Usually metal melting, ceramic powder synthesis, calcination, heat treatment and so on. it can be used as a container or base in operations.



### CERAMIC MORTAR AND PESTLE

Ceramic animals with  $Al_2O_3$  99% purity are recommended for Contaminated grinding operations.

Dimensions: 60mm, 80mm, 100mm, 120mm, 130mm



### MILL JARS

**Material:** The  $Al_2O_3 - ZrO_2$  99% pure ceramic is sold as capped with Jet Mill Jars and the sealing is top grade.

**Capacity:** 50 ml – 500 ml – 1000 ml

## OXIDE CERAMIC AND LABORATORY MATERIALS

### Carbon - Sulfur - Moisture Analysis

Carbon, sulfur and the crucibles used in moisture analysis.

It is widely used for research, experiments, chemical analyzes, tests and quality control. Depending on the material, the lid contains a lid or the lid can be purchased as an option.



Our products are produced in high quality in accordance with the standard. It is recommended that cracks should not come into direct contact with fire in terms of prevention and controlled cooling. For more information about our products, visit our website.

[www.civelekporselen.com/en/products](http://www.civelekporselen.com/en/products)

### TGA701 CRUCIBLE



TGA701 Crucible for thermogravimetric analysis is used for analysis of organic, inorganic and synthetic materials. Standards are high quality products.

### PORCELAIN CRUCIBLE



101/30 & 101/35 Porcelain crucibles are produced in high quality in accordance with the standard. They are delivered without a cap. Cover alternatives are available.

# POWDERS

Boron Nitride, Silver Dust, Carbides (Boron, Silicon, Tungsten, Titanium and Zirconium Carbide), Oxide Products (Aluminum Oxide, Cerium Oxide, Chrome Oxide, Cobalt Oxide, Erbium Oxide, Indium Oxide, Lanthanum Oxide, Molybdenum Trioxide, Nickel Oxide, Niobium Pentoxide, Tantalum Oxide, Tantalum Pentoxide, Titanium Dioxide, Tungsten Oxide, Tungsten Trioxide, Vanadium Pentoxide, Yttrium Oxide, Zirconium Oxide), Synthetic Diamond Powders

Pure Metal Powders: Aluminum, Iron, Gallium, Silver, Hafnium, Tin, Chrome, Cobalt, Molybdenum, Nickel, Niobium, Platinum, Rhodium, Selenium, Tellerium, Titanium, Tungsten, Vanadium, Zirconium

## BOR NITRIDE



HBN, 1-3-5-7-10 Micron Powder or Putty (Mold Lubricant)

## SILVER POWDER



Purity: 99.999% Intervals: 10-20 nm, 30-50 nm, 50-80 nm

## CARBIDES



Boron, Silicon, Tungsten, Titanium and Zirconium Carbide ...

## OXIDE PRODUCTS



Aluminium Oxide, Cerium Oxide, Chrome Oxide, Cobalt Oxide, vb...

## PURE METAL POWDERS



Aluminum, Iron, Gallium, Silver, Nickel, Cobalt etc ...

## SYNTHETIC DIAMOND POWDERS



1 Micron to 600 Micron Synthetic Diamond Powders

# INDUSTRIAL CERAMICS MATERIALS

Advanced ceramic materials make possible applications that are considered impossible until now. Technical ceramics are regarded as the most efficient materials of today because of their unique properties.



## METAL AND CERAMIC FERRULE

Ceramic Ferrule Purity: 85% - 99% Material: Al<sub>2</sub>O<sub>3</sub> - ZrO<sub>2</sub>,  
Working Temperature: 1250-1750 ° C  
Metal Ferrule: Inconel - Incoloy - 310 S



## ALUMINIUM / ZIRCONIUM OXIDE BALL

Aluminum and Zirconium Oxide Ball: Dry and wet grinding, also used in precision ball valves, pumps and bearings.



## CERAMIC BARS

Ceramic Bars, Industrial Ceramics  
Material: Alumina Ceramic, Al<sub>2</sub>O<sub>3</sub> Purity: 99.5%



## ALUMINA TUBES

Material: Al<sub>2</sub>O<sub>3</sub>, Diameter: 1 mm - 500 mm Purity: 95% - 98% - 99% - 99,7%, Length: 1 mm - 3000 mm



## METAL CRUCIBLE

It is one of the basic tools that are used frequently in laboratories. The most commonly used are those made of nickel, platinum and zirconium. It is usually used in solubilization of the assay sample. The sizes of our Metal Closures are as follows. We also produce in sizes depending on demand. Please contact us for different sizes.



### NICKEL CRUCIBLE

**Nickel Crucible Purity:** 99.99%

**Dimensions:** 10-15-20-25-30-35-40

50-70-100-130-150 ml

It can be produced in sizes dependent on demand.



### PLATINUM CRUCIBLE

**Platinum Crucible Purity:** 99.99%

**Dimensions:** 1-3-5-10-15-20-25-30-35

40-50-75-100-150 ml

X-Ray-XRF-analysis



### ZIRCONIUM CRUCIBLE

**Dimensions:** 25 ml - 35 ml - 42 ml - 60 ml

100 ml - 120 ml - 150 ml

**Quality:** 702 - 703 - 704 - 705 - 706

It can be produced in sizes dependent on demand.

# HEAT ELEMENTS

**Thermocouple:** We can not determine the temperature value of a high temperature environment (oven, cooker, boiler, etc.) with classical thermometers. The two elements we can use in such cases are the thermocouple-based measuring circuit and the resistance-based (thermoreistance) measuring circuit. Thermocouple-based measurement system is a structure that turns on heat stress. Resistance-based measurement systems have elements that vary in resistance to temperature. The resistance based measurement system is used at lower temperatures (-200 to +850 °C).

**Tube Diameters:** 16 mm -18 mm -20 mm -24 mm - 26 mm

**Tube Length:** 150 mm - 1500 mm

**Tube Material:** Al2O3 (99%)

**Type:** K - S - R - B - C

MoSi2 Heater Elements

**Wire Diameters:** 4/9 - 6/12 - 9/18

**Working Heat:** 1800 DEGREE



# FOR MOULD POLISHING DIAMOND PASTE

Diamond pastes for precise processing used in mold polishing and cleaning processes. High concentration, vegetable oils and polishing chemicals are mixtures. The hard material mold removes the chip, including EDM Erosion Marks in difficult areas, from leveling to surface preparation / polishing. During the operation, the cake may be lumpy and dry on the surface. In this case, use 1-2 drops with oil and water based humidifiers.

**Application:** Generally, in applications with felt, it is necessary to apply circular motions in wide scratches on the surface in a straight line to the finishing finish. Cleaning is very important in every step. Be sure to follow the order starting from coarse microns to fine microns. the polishing sets of each micron paste should be determined and used only at that micron.

**Micron Options:** 0,25 - 0,50 - 1 - 2 - 3 - 5

7 - 10 - 12 - 14 - 16 - 20 - 24 - 26

28 - 30 - 32 - 40 - 50 - 60





## STANDARD AND HIGH TEMPERATURE LABORATORY FURNACES

Laboratory Ovens are used in sectors such as Ceramics, Hard Soldering, Heat Treatment, Automotive, Aerospace, Coal and Mine, Petrochemical, Plastic, Electronics, Glass, Pharmaceutical, Semiconductor, Food, Medicine, Dentistry, Nuclear, Education, University, Materials Testing and Quality Control it is used.

The operating temperatures of laboratory furnaces vary between 1100°C and 1750°C according to models. The working principle is made by heating the air in the oven with the help of heating resistors.

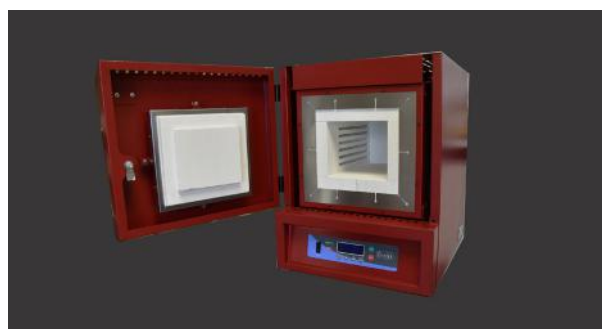
# STANDARD FURNACES

Standard Models are the most preferred models with features that provide a wide range of needs. Ash Analysis, Sintering, Preheating, Melting, Oxidation. One of the most important features is the 4-line LCD display with easy-to-understand menu programming.



## Standard Series

There are working temperature options between 1100 and 1250°C. This range offers volume options of 5, 7, 10, 20, 40, 60 and 100 liters.



## Fast and Stable

Heater resistances selected and designed according to their proper working temperature and which provide fast heating of the furnaces.

# HIGH TEMPERATURE FURNACES

SiC and MoSi<sub>2</sub> Heating Elements. High Temperature Chamber Furnaces are available with 1400° C to 1750° C Continuous Working Temperature and 3, 6, 9, 16, 30, 60 liters.



## SiC Series

SiC Heating Elements High Temperature Chamber Furnaces are available in 1400°C - 1550°C Continuous Working Temperature and 3, 6, 9, 16, 30, 60 liters.



## MoSi<sub>2</sub> Series

MoSi<sub>2</sub> Heating Elements High Temperature Chamber Furnaces are available in 1500°C - 1750°C Continuous Working Temperature and 3, 6, 9, 16, 30, 60 liters.

# GENERAL FEATURES OF FURNACES

Below are the general properties of Standard and High temperature furnaces according to their software.

<b>Models</b>	<b>Standard 2</b>	<b>Standard 4</b>	<b>Advance 8</b>	<b>Advance 16</b>
<b>Features</b>	YES	YES	YES	YES
	4 Lines	4 Lines	4 Lines	4 Lines
<i>Heating Program</i>	2 Steps	4 Steps	8 Steps	16 Steps*
<i>Adjustable Program Memory</i>	2	4	6	5
<i>Heating Rate °C/min</i>	3-20	3-20	3-20**	3-20**
<i>Date &amp; Time</i>	YES	YES	YES	YES
<i>Auto Start at Certain Date</i>	NO	YES	YES	YES
<i>Remaining Wait Time Display</i>	NO	YES	YES	YES
<i>Standby Time Display</i>	NO	YES	YES	YES
<i>Skip Standby Step</i>	NO	YES	YES	YES
<i>Temperature Calculation (± 10 ° C)</i>	NO	YES	YES	YES
<i>Audible Warning in Step Changes</i>	YES	YES	YES	YES
<i>Audible Warning During Program</i>	YES	YES	YES	YES
<i>Total Working Hour Counter</i>	YES	YES	YES	YES
<i>Average Working Temperature Calculator</i>	YES	YES	YES	YES
<i>Instant Energy Consumption Indicator</i>	YES	YES	YES	YES
<i>Overheating Automatic Cutting</i>	YES	YES	YES	YES
<i>Door Sensor</i>	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
<i>PC Connection Kit</i>	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
<i>Warranty Time</i>	2 YEARS	2 YEARS	2 YEARS	2 YEARS

\* Only 5th memory supports 16 levels \*\*Independent for each level

CHARACTERISTICS	UNITS	C110/C120	C220/C221	C410	C530	C610	C786	C795	C799	ZIRCONIA	STABILISED WITH Y - TZP	STABILISED WITH Y - PSZ
		HARD PORCELAIN	STEATITE	CORDIERITE	CORDIERITE - AR - SILIKAT	MULLITE	HIGH ALUMINIUM CERAMICS					
Nominal composition	%	Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub>	MgO/SiO <sub>2</sub>	2MgO/2Al <sub>2</sub> O <sub>3</sub> /5SiO <sub>2</sub>	78	62	92	95	97,5			
Specific density	g/cm <sup>3</sup>	2,3	2,7	2,1	2,5	2,7	3,63	3,68	3,8-3,9	6		5,5
Water absorption	%	0	0	0,5	8-12	0	0	0	0	0	0	0
Hardness	Mohs				6	8	9	9	9	8-9		8
Modulus of elasticity, min.	Gpa	60	110	-	-	100	240	280	300	200		200
Compressive strength	Mpa	400	850	300	-	550	2000	2300	3000	2800		2500
Flexural strength	Mpa	50	140	60	30	120	250	280	300	1000		350
Thermal expansion (20-1000C)	10 <sup>-6</sup> K <sup>-1</sup>	4-6	8	2-4	4-6	6	6-8	6-8	7-8	10-11		10
Thermal conductivity (20-1000C)	W/MK	1,4	2,3	1,2-2	1,5-2	3,May	14-23	17-25	20-30	2,2		3
Resistance to thermal shock	°C	150-160	100-150	250	350	150	140	140	150	210-230		180-190
Max. working temperature	°C	-	1200	1200	1450	1500	1500	1550	1650	1300-1400		1100-1200
Dielectric strength	KV/mm	20	20	10	-	17	15	15	17	9		-
Dielectric constant (20deg., 1Mhz)	-	5,5	6	5	5	6	8	8,5	9,5	15-17		-
Dissipation factor at 20 deg., 48-60Hz	10 <sup>-3</sup>	25	1,5	25	-	-	0,5	0,5	0,2	0,001-0,002		-



JAS-ANZ



ISO 9001:2008  
CERTIFIED



ISO 9001:2015

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