

Materials solutions

# **ITAPROCHIM** would like to give a brief introduction of its activities...

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# **ITAPROCHIM** brief history

Foundation ITAPROCHIM was formerly founded in 1990

Ownership Fully privately owned

Main activities Production and trading of high quality first choice chemical raw materials for several industrial applications

Quality assurance In 1998 **ITAPROCHIM** first obtained UNI EN ISO 9001 approval. In 2009 **ITAPROCHIM** accomplished with success new UNI EN ISO 9001:2008 standards for production and trading activities





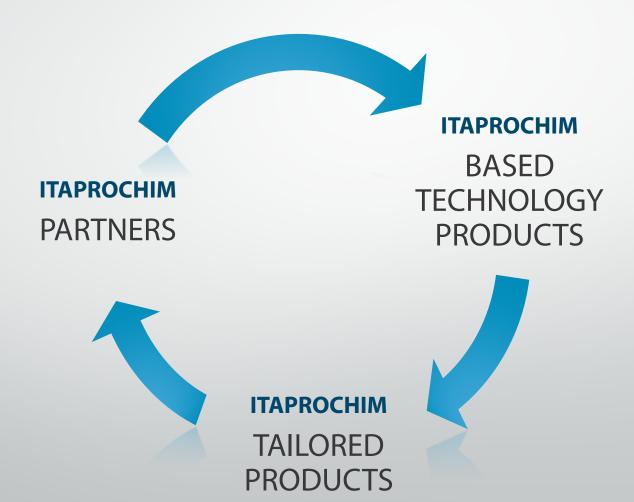




#### **ITAPROCHIM** main units

- Commercial office Milano
- >>> Production unit/warehouse Garlasco (PV)

# **ITAPROCHIM** activities



# **ITAPROCHIM** based technology products

Since the beginning of 1992, **ITAPROCHIM** started developing special products mainly for friction industries with its own technology.

**SICACELL** hydrated calcium silicate mod. with cellulose fiber

**ULTIMATE** antimony and molybdenum replacement

PROCHIM GP special rubber in powder form for fading and noise reduction for PC pads

STILOX F37 special steel flake coated by iron oxide for improve the material performances as friction level and noise reduction

 $\overline{\text{ALOX}}$  calcined aluminum oxide with different particle size and  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> content

PROCHIM D mineral iron aluminosilicate that work as medium-high abrasive

MECHANOMADE ® FA25 metal powder in flake form

TITANATES improves mechanical and thermal strength, stabilizes wear and friction





#### SICACELL

The SICACELL products are composed of hydrated synthetic calcium silicate, silica free.

- Improves the dispersion of the ingredients in the mix.
- Good anti-segregation property of raw materials.
- Improves the affinity with the fibers and the powders in the mix.
- Improves the green strength of the pads.
- Offers good compatibility with phenolic resin.
- Decreases the thermal conductivity of final products.
- Material saving thanks to the low density and higher porosity of friction material.





#### ULTIMATE

Our Ultimate are composed by a series of lubricant mix, specially designed for friction material, that act in a wide range of temperatures.

- Stabilizer of the friction coefficient in a wide range of temperature for all applications of disc brake pads and linings.
- Improve the NVH due to less noise and lower vibrations.
- Less wear, increase durability of brake pads and brake discs.
- Sb<sub>2</sub>S<sub>3</sub> and MoS<sub>2</sub>.





#### PROCHIM GP

An innovative polymer in powder with high damping capacity of both vibration and noise which has been developed and tailored to the brake pad field and can be used without premixes and vulcanizing agents.

Prochim GP compared to NBR rubber

- Increases cold compressibility keeping low values of swelling.
- Improves fading and performances at high temperature.
- Low wear.
- Reduces noise and improves damping.



#### STILOX F37

The best and economic solution to reduce the steel fiber content.

- STILOX F37 can be used in the low steel formulations (suggested amount: of 5÷15%wt) as friction stabilizer under all the test conditions.
- Thanks to its particular composition that changes in function of the temperature, Stilox F37 lowers the friction in cold condition while it enhances the friction at high temperature and improves the speed sensitivity.
- In addition, its lamellar structure facilitates the sliding between the parties reducing the vibrations. Less friction vibrations means better noise properties.







#### **ALOX SERIES**

Calcined aluminum oxide with different particle size and  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> content.

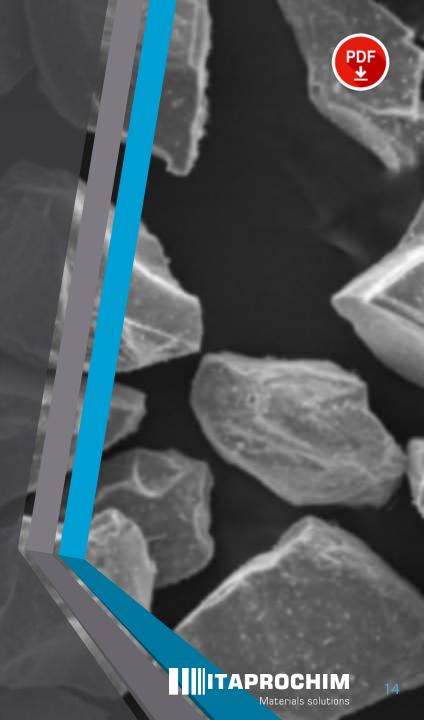
#### ALUMINA IN ABRASIVE AND FRICTION MATERIALS

- Alumina is used in the production of abrasives and friction materials due to the high hardness and strength of its crystals.
- $^{>>}$  Higher is the  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> content and higher is the hardness and the effectiveness on friction.
- This effect increases with increasing particle size and angular shape but an excessive amount can negatively affect the wear, especially of the disc.

#### PROCHIM D

Prochim DF and Prochim DS are mineral iron aluminosilicate that work as medium-high abrasive.

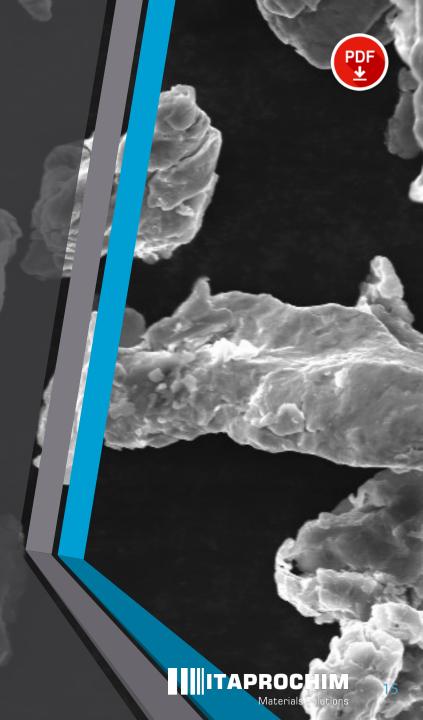
- PROCHIM D series is composed by materials with medium/high abrasive power.
- PROCHIM D have chemical composition different to zirconium silicate and very similar characteristic such as hardness, density and particle size.
- In friction material they show friction level similar to zirconium silicate at a very competitive price.



## MECHANOMADE® FA25

Mechanomade® FA25 is a metal powder manufactured by a mechano-chemical process called High Energy Ball Milling (HEBM).

- The distinctive characteristic of this process is the possibility to intimately mix materials at micro-nano scale and contemporaneously to promote the refinement of crystal structure achieving in this way the modification of physicalmechanical characteristics and the possibility to produce innovative solutions.
- Thanks to this process, specifically functionalized products having singular properties in which the fine elements distribution and the phases integration, favor the achievement of superior performances.







#### **TITANATES**

The titanates have outstanding properties such as high mechanical strength, thermal and chemical stability and wear resistance. For these qualities, they are widely used as reinforcing agents in plastics and composite materials for technological applications.

In the friction materials, titanates help to stabilize the coefficient of friction, reduce wear, give mechanical and thermal resistance. Furthermore, the potassium titanate acts in synergy with the fibrillated organic fibers favoring the stability and the resistance to the temperature of the tribofilm.

# **ITAPROCHIM** tailored products

In order to better fulfill customer requests, especially for small to medium size accounts, **ITAPROCHIM** decided to implement its portfolio with other selected chemical raw materials being sold under the **ITAPROCHIM** trade mark.

#### PRODUCTS TIPOLOGY

- » Abrasives
- » Metals & alloys
- >>> Friction modifiers & fillers





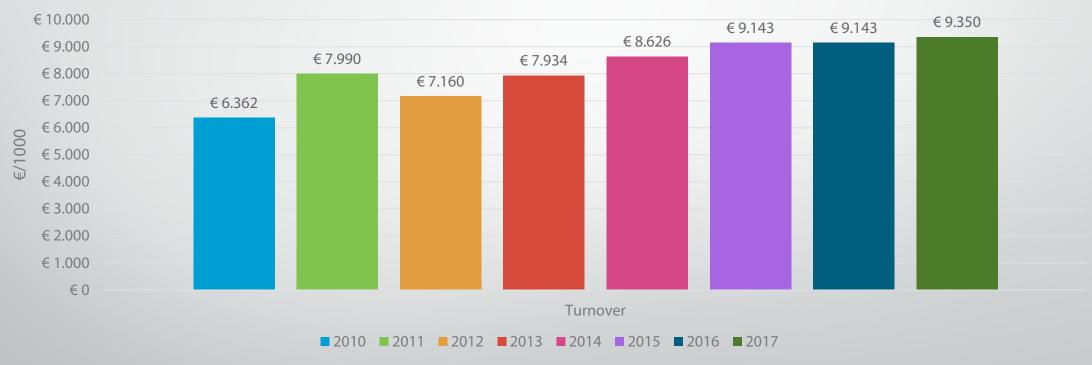
#### **ITAPROCHIM** services

**ITAPROCHIM** offers, thanks to its long experience, a series of complementary services for different fields.

**PROCESSING** 

- » Milling Hammer Mill / Ball Mill
- Mixing High quality ploughshare mixer for powder, granules and short fibers
- Packaging Bagging and palletizing system

### **ITAPROCHIM** turnover



Note: above shown turnover is given by direct and indirect sales



# **ITAPROCHIM** sales network agents



**Keiron Chemicals** Spain / Portugal / Morocco / Tunisia / Mexico

Braschem Int. Negócios Brasil

**PJC Bang & Bonsomer Ukraine** 

**Emc Ticaret - Ebru Cidrof Turkey** 

Risus Ventures OPC India

**Acme International Thailand** 

**Merak Composite Material China** 

**Dure Corporation Korea del Sud** 

Aichi Sangyo Co. LTD Japan

All the other areas are followed directly by **ITAPROCHIM** team



## **ITAPROCHIM** is the official distributor

























# **ITAPROCHIM** quality assurance





1998 ITAPROCHIM obtained first UNI EN ISO 9002 approval.

2009 ITAPROCHIM accomplished with success new UNI EN ISO 9001:2008 standards for production and trading activities.



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