CHRYSO is one of the world leaders in the development, manufacture and supply of chemical additives for concrete, cement and plaster. Founded in 1942, CHRYSO is a technology leader who constantly develops innovative products, breaking technological barriers to add value to its customers’ businesses.

With its well positioned international Network, the CHRYSO Group ensures a close and efficient response to its Customer’s needs with a high level of expertise and know-how in the formulation of construction materials.

A few figures
CHRYSO employs over 900 people and is present in 70 countries.
CHRYSO is ranked as one of the top leaders in the admixtures market worldwide.

CHRYSO: a branch of the Materis group
One of the world’s leading manufacturers of specialty chemicals for the construction industry, Materis operates 4 autonomous divisions: Admixtures, Aluminates, Mortars and Paints. Materis employs more than 9,400 people over 88 industrial sites around the world.

Key dates
1942: Creation of CHRYSO.
2001: Creation of the Materis Group, including CHRYSO.
2001-2010: Acquisition and creation of 5 subsidiaries.

CHRYSO’s innovative solutions
CHRYSO offers a wide range of innovative and technological products for 3 main markets:

Cement:
- Grinding-aids
- Activators
- Chromium VI reducing agents
- Air entraining agents
- Specialty products

Concrete:
- Admixtures
  (Superplasticizers, Plasticizers, Air entrainers, Set retarders, Accelerators, Water repellents)
- Mould-release agents
- Surface retarders
- Colouring agents
- Curing agents
- Fibres
- Protection agents for concrete and equipment

Plaster:
- Fluidizers
- Mould-release agents
CHRYSO’s Innovation and R&D

CHRYSO’s central Research & Development laboratory is based south of Paris (France). Over 50 scientists and technicians work continuously on innovative and cost-effective solutions. It has developed partnerships with various universities and public research institutes worldwide and close cooperation with customers on innovative technological programs.

In addition to CHRYSO’s central Research & Development facility, most of our subsidiaries have dedicated product application laboratories which are at our customer’s service.

Furthermore, we have invested in modern industrial equipment in all our plants around the world, for the production of new generation polymers and formulated products. Our systems are constantly evolving and reacting to keep abreast of the rapidly changing production processes and product needs of the world cement manufacturers.

A strong commitment to respect Environment and Safety

CHRYSO is an active supporter of Sustainable Development: we aim at minimizing the environmental impact of our industrial processes and take this issue into account in the design of our products. Indeed, either in our customers’ process (formulation of biodegradable and vegetable-based products, optimisation of recycled aggregates, Chromium VI reduction in cement…), or in our industrial policy, CHRYSO assesses each element and makes it a priority to respect and protect the Environment.

CHRYSO’s major objective has always been to constantly improve the quality of its products and services. In 1994, CHRYSO was the first admixture company to be ISO 9001 certified. Since July 2003, many subsidiaries (France, South Africa, Italy, Turkey, Spain…) have obtained ISO 9001: 2000 version certifications, and other quality, safety and environmental certifications.
**CHRYSO selection guide**

**CHRYSO** provides 5 different ranges of formulated additives, to optimize cement or raw material production at all stages of the process.

<table>
<thead>
<tr>
<th>APPLICATIONS</th>
<th>Standard material</th>
<th>Specific material</th>
<th>Specific process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Portland cement</td>
<td>Blended cement</td>
<td>Raw Meal</td>
</tr>
<tr>
<td></td>
<td>Masonry cement</td>
<td>White cement</td>
<td>Slag</td>
</tr>
<tr>
<td></td>
<td>Rawcement cement</td>
<td>Aluminate cement</td>
<td>Limestone</td>
</tr>
<tr>
<td></td>
<td>Raw Meal</td>
<td>Slag</td>
<td>Quick Lime</td>
</tr>
<tr>
<td></td>
<td>Raw Meal</td>
<td>Limestone</td>
<td>Vertical Mills</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Roller Press</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Horomill</td>
</tr>
</tbody>
</table>

**RANGES OF PRODUCTS**

- **CHRYSO® Grinding Aids**
  - ✔ ✔ ✔ ✔ ✔
- **CHRYSO® Activators**
  - ✔ ✔ ✔ ✔
- **CHRYSO® Reductis**
  - ✔ ✔ ✔ ✔
- **CHRYSO® Air Entraining Agents**
  - ✔ ✔ ✔ ✔
- **CHRYSO® Specialty Products:**
  - Water reducers and Set time retarders
  - ✔ ✔ ✔ ✔
All CHRYSO formulated products are **easy-to-use** and **ready-to-use**. They can be dosed directly into the mill or onto the mill-feed belt. The optimum dosage is set with our technical assistance during trials. **No dilution is required.**

<table>
<thead>
<tr>
<th>TECHNICAL ADVANTAGES</th>
<th>ECONOMICAL ADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase of Production capacity</td>
<td>Gain in capacity production</td>
</tr>
<tr>
<td>Improvement of Fineness</td>
<td>Energy savings</td>
</tr>
<tr>
<td>Improvement of the separator efficiency</td>
<td>Storage improvement</td>
</tr>
<tr>
<td>Elimination of coating on grinding media</td>
<td>Blockages prevention</td>
</tr>
<tr>
<td>Cement handling improvement</td>
<td>Maintenance costs savings</td>
</tr>
<tr>
<td>Pack set reduction</td>
<td>Reduction of CO₂ emissions</td>
</tr>
<tr>
<td>Increase of cement strengths</td>
<td>Mineral addition increase</td>
</tr>
<tr>
<td>Increase of mineral addition</td>
<td></td>
</tr>
<tr>
<td>Reduction of cement water demand</td>
<td></td>
</tr>
<tr>
<td>Air entrainment</td>
<td></td>
</tr>
<tr>
<td>Improvement of Cement Workability</td>
<td></td>
</tr>
<tr>
<td>Chromium (VI) reduction</td>
<td></td>
</tr>
<tr>
<td>Setting time control</td>
<td></td>
</tr>
<tr>
<td>Gain in capacity production</td>
<td></td>
</tr>
<tr>
<td>Energy savings</td>
<td></td>
</tr>
<tr>
<td>Storage improvement</td>
<td></td>
</tr>
<tr>
<td>Blockages prevention</td>
<td></td>
</tr>
<tr>
<td>Maintenance costs savings</td>
<td></td>
</tr>
<tr>
<td>Reduction of CO₂ emissions</td>
<td></td>
</tr>
<tr>
<td>Mineral addition increase</td>
<td></td>
</tr>
</tbody>
</table>

- **Main Objectives**
- **Secondary Objectives**
- **Optional**
In order to optimize cement or raw materials production at different stages of the manufacturing process, CHRYSO offers a full range of grinding aids for both clinker and raw meal grinding.

Main objectives
- Increase grinding process productivity
- Reduce production costs
- Improve cement quality (Pack Set, Blaine, Particle size distribution…)
- Improve cement storage and transport

Technical advantages
- Prevention of cement agglomeration by reduction of:
  - coating on grinding media
  - cement particles reagglomeration after grinding

CHRYSO® Grinding Aids modify the surface charges’ density on the cement particles, therefore offsetting the Van Der Waals forces. As a consequence, the cement particles reagglomeration is significantly decreased after grinding and the coating effect on the media is eliminated.

- Improvement of the separator efficiency
  As reagglomeration of the grinded particles is eliminated, the separator return is significantly reduced.
Improvement of particle size distribution
As the coating of grinding media is eliminated, grinding of each range of particle sizes is improved.

Improvement in pack-set and cement handling (silos, bulk tankers)
On account of the reduction of the electro-static effect of cement particles, cement fluidity is increased. By way of consequence, cement handling is improved and blockages are prevented.

Economical advantages

Increase of productivity
- Increase of mill productivity (from 10% to 25%)
  Thanks to CHRYSO® Grinding Aids properties on mill efficiency, productivity can be increased up to over 25%, without any additional energy consumption.
- Fast truck loading and packing
  Pack set improvement allows the reduction of interruptions due to blockages. Truck loading speed and packing are therefore improved thanks to better cement fluidity.

Significant production cost reduction
- Energy savings
  CHRYSO® Grinding Aids improve clinker grinding efficiency. This allows for a shortened cement retention time in the mill which, in the end, leads to significant energy savings for each ton of cement produced.
- Maintenance cost reduction
  Shortened cement retention time in the mill leads to a less intensive use of the grinding system, therefore reducing mill maintenance cost per ton of cement. Moreover, the reduction of the mill media coating and the improvement of pack set prevent the mill stoppage due to blockage (diaphragm and outlet grit cleaning, silo blockage…).
CHRYSO® Activators
more strengths with less clinker

CHRYSO offers a full range of Activators, designed to improve cement strengths. They aim at either increasing strengths at equal cement composition and same cement fineness, or reducing clinker/cement ratio. Moreover, CHRYSO® Activators also deliver grinding properties which can be adapted to our Customers’ specific technical needs.

CHRYSO® Activators are available in both chloride and chloride-free versions.

Objectives

- Increase cement strengths (early and final strengths), at equal cement composition, to meet all applicable standards: ASTM C465, EN 197-1 and other local standards,
- Decrease clinker factor (percentage of clinker in cement), while increasing SCM (supplementary cementitious materials): slag (S), fly ash (V/W), limestone (L/LL) and pozzolans (P/Q), in order to decrease cement production costs and CO₂ emissions.

Technical advantages

- **Increase of early and/or long-term compressive strengths at equal cement composition and same cement fineness**
  CHRYSO® Activators major property is to activate early strengths (1 and 2 days), final strengths (7 and 28 days) or both. Therefore, they can be used:
  - when clinker reactivity is low and strengths are not complying with the standards specification,
  - when the objective is to reach a higher cement strength class,
  - when the objectives is to reach higher performance.

- **Clinker factor reduction**
  CHRYSO® Activators are designed to meet multiple technical requirements:
  Increased mineral additions such as fly ash, pozzolans, GGBS (Ground granulated blastfurnace slag) or limestone, whilst complying with the cement standards, in order to decrease production costs and CO₂ emissions, or increased strengths at equal cement composition.
Chloride-free
All these technical benefits are also available in chloride-free version.

Reduction of cement agglomeration eliminates the coating on grinding media and the reagglomeration of cement particles after grinding
CHRYSO® Activators modify the surface charges’ density on the cement particles, therefore offsetting the Van Der Waals forces. As a consequence, the cement particles reagglomeration is significantly decreased after grinding and the coating effect on the media is eliminated.

Improvement of the separator efficiency
As reagglomeration of the grinded particles is eliminated, the separator return is significantly reduced.

Improvement of particle size distribution
As the coating of grinding media is eliminated, grinding of each range of particle sizes is improved.

Improvement in pack set and cement handling (silos, bulk tankers)
On account of the reduction of the electro-static effect of cement particles, cement fluidity is increased.

Economical advantages

Savings on Clinker
The cost of SCM is lower than the cost of clinker. By substituting SCM to clinker, the total cost of cement is reduced while boosting performance thanks to the use of CHRYSO® Activators.

Reduction of CO₂ emissions
CO₂ emission is caused by the calcination of limestone (CaCO₃) during the clinker manufacturing process. As each ton of cement produced requires less clinker, CO₂ emissions are decreased. Therefore CO₂ quotas can be respected, CO₂ taxes reduced or C/K ratio company target achieved.

Significant reduction of the production costs
- Energy savings. CHRYSO® Activators improve clinker grinding efficiency. This allows for a shortened cement retention time in the mill which, in the end, leads to significant energy savings per ton of cement. CHRYSO® Activators allow for up to 20% Energy consumption (KWh/ton)
- Reduction of maintenance costs. Shortened cement retention time in the mill leads to a less intensive use of the grinding system, therefore reducing mill maintenance cost per ton of cement. Moreover, the reduction of the mill media coating and the improvement of pack set prevent the mill stoppage due to blockage (diaphragm and outlet grit cleaning, silo blockage…).

Increase of productivity
- Increase of mill productivity (from 10% to 25%). CHRYSO® Activators impact on improving grinding mill efficiency, productivity can be increased up to +25%, without any additional energy consumption.
- Fast truck loading and packing. Pack-set improvement positively reduces interruptions due to blockage. Truck loading speed and packing are therefore improved thanks to better cement fluidity.
CHRYSO® Reductis is a range of liquid patented products, which offers a significant and durable reduction of Hexavalent Chromium, even at low dosages.

Objective

Reduce the Chromium VI content in cement, on a long-term basis, to meet the European Directive 2003/53/CE requirements (CrVI content below 2 ppm).

Technical advantages

- **Ease of use and dosing**
  CHRYSO® Reductis is a ready-to-use range, which can be dosed directly into the mill or onto the mill-feed belt. Standard pumping equipment can be used for dosing, therefore no additional investment is required.

- **No discolouring or staining concrete**
  CHRYSO® Reductis range specific formulation ensures no colour modification of concrete (neither discolouring nor staining).

- **No changes of concrete mechanical strength, setting times, water demand or air entrainment**
  The chemical formulations of the CHRYSO® Reductis range do not modify cement performances, such as initial and final strengths and setting times.
High efficiency, even at low dosage rates
CHRYSO® Reductis enables efficient reduction of Chromium VI, even at low dosage rates. For example, cement treated with maximum 50 ppm of CHRYSO® Reductis 50 per ppm of CrVI, keeps Cr VI rate below 2 ppm during a minimum of 6 months.

Temperature resistance
The formulation of the CHRYSO® Reductis range is stable, consistent, and is not sensitive to temperature fluctuations.
Even at low temperature (-20°C), the product does not separate.

Back-up solution compared to powder products
The fluidity and stability of the CHRYSO® Reductis range prevents any blockage in the process. Moreover, storage period shelf-life is 12 months in its original packaging.
CHRYSO® Reductis 50 dosage is 60 times less than Iron Sulafte.

Economical advantages

Savings on installation equipment
The methods of incorporation of CHRYSO® Reductis are standard. Therefore, there is no need to invest in any special material or installation to use this product range, making it an economical solution.

Savings on maintenance costs
The fluidity and stability of CHRYSO® Reductis range prevents any blockage in the process. Therefore, maintenance costs due to blockages are suppressed.

No loss in cement productivity
CHRYSO® Reductis is a range of liquid products which prevents cement plant production from blockages which occur when using powder Cr VI reducer.
Cement plants can pursue production with this ready, easy-to-use and reliable back-up solution.
The CHRYSO® Air Entraining Agents range is specifically designed to entrain air in masonry cement.

Objectives

- Entrain air in masonry cement (up to 20%)
- Produce masonry cement conforming to the NF EN 413, ASTM C91 or other local standards
- Stabilise air level while optimising the size of the air voids and their dispersion

Technical advantages

- **Entrain and optimize air in mortars (up to 20%)**
  CHRYSO® Air Entraining Agents range easily achieves air requirements for various masonry products. It improves mortar flowability, the consistency of air content and dispersion of the air voids.

- **Increase water retention for mortars: improve adherence on all surfaces**
  CHRYSO® Air Entraining Agents improve water retention for mortars. Consequence is a better adherence to any surface.

- **Improve masonry cement waterproofing properties**
  To meet ASTM standards, CHRYSO adds waterproofing properties to its Air Entraining Agents.

- **Increase freeze-thaw resistance and crack prevention**
  Thanks to the air entrained in cement when using CHRYSO® Air Entraining Agents, the air voids act as expansion chambers which improve the frost resistance of the mortar and therefore prevent cracking.

- **Improve grinding capacity**
  CHRYSO® Air Entraining Agents can be custom formulated to include grinding aids performance.

- **Improve powder transport**
  CHRYSO® Air Entraining Agents also reduce the electro-static effect of cement particles. The cement produced is more fluid which prevents blockages and improves cement handling.

- **Improve setting times and 28-day strength**
  To meet our customer technical needs, CHRYSO® Air Entraining Agents can be specifically formulated to improve setting times and 28-day strengths.
Economical advantages

- **Increase of productivity**

  Industrial Trial with a standard CHRYSO Grinding Aid

  - **Separator return in Tph (ton per hour)**
  - **Feed Tph (ton per hour)**

  - **Cement mill output (Tph)**

  - **Energy consumption in KWh/t**

  - **37 KWh/t**
  - **55 KWh/t**

  **Industrial Trial with a standard CHRYSO Grinding Aid**

  **Energy consumption in KWh/t**

  - **32 KWh/t**

  **Reference data**

  **Standard CHRYSO Grinding Aid**

  **Cement mill output (Tph)**

  - **55 tph**
  - **48 tph**

- **Increase of mill productivity**

  (from 10% to 25%)

  CHRYSO® Air Entraining Agents improve grinding mill efficiency and productivity can be increased up to +25%, without any additional energy consumption.

- **Fast truck loading and packing**

  Pack-set improvement positively reduces interruptions due to blockages. Truck loading speed and packing are therefore improved thanks to better cement fluidity.

- **Significant reduction of the production costs**

  **Energy savings**

  As CHRYSO® Air Entraining Agents improve clinker grinding efficiency. Cement retention time in the mill is shortened, thus enabling significant energy savings per ton of cement. CHRYSO® Air Entraining Agents allow up to 20% Energy consumption (KWh/ton).

- **Maintenance cost reduction**

  Shortened cement retention time in the mill leads to a less intensive use of the grinding system, therefore reducing mill maintenance cost per ton of cement. Moreover, the reduction of the mill media coating and the improvement of pack-set prevent the mill stoppage due to blockage (diaphragm and outlet grit cleaning, silo blockage…).

- **Clinker savings**

  Specific air entraining agents formulated with strength enhancer can reduce the clinker factor. The cost of SCM is lower than the cost of clinker. By substituting SCM to clinker, the total cost of cement is reduced while boosting performance thanks to the use of CHRYSO® Air Entraining Agents.

- **Reduction of CO₂ emissions**

  CO₂ emission is caused by the calcination of limestone (CaCO₃) in the manufacturing process. As each ton of cement produced requires less clinker, CO₂ emissions are decreased. Therefore CO₂ quotas can be respected and CO₂ taxes reduced.
CHRYSO® Specialty Products, tailor-made solutions for specific requirements

CHRYSO® has developed a full range of tailor-made specialty products to meet our customer’s specific needs.

Various Objectives

- Setting time improvement according to local standards
- Water demand reduction according to local standards
- Flowability improved for raw material in wet process allowing water decrease and energy gain

Technical advantages

- Set time retarders

CHRYSO® set retarding additives can extend Initial Set from few minutes up to several hours depending on customer’s requirements. In most cases, CHRYSO® set retarders do not affect early strengths. They improve long term strengths. Cement setting time shifts (caused by seasonal temperature variation) can be adjusted with CHRYSO® set retarding additives.
Water reducers

CHRYSO® water reducing additives are mainly dedicated to reduce water demand in cement.

- According to the cement standards in which cement strengths is evaluated on mortar at constant W/C ratio (generally W/C=0.5):  
  CHRYSO® water reducing agent can increase concrete strengths at constant consistency. They are also adapted to high W/C ratio >0.3. Consequently, there is an enhancement of strengths at all ages in Cement and Concrete. Some PFA or Pozzolana (increasing W/C ratio of the cement) can be used in higher proportion thanks to CHRYSO® water reducing agent.

- According to the standards in which cement strengths are evaluated at constant consistency (W/C ratio adjusted):  
  CHRYSO® water reducing agents are decreasing water demand of the cement at constant consistency.
  CHRYSO® water reducing agents are adapted to both technical targets:
  - Increase of all cement strengths
  - Compensate the loss of strengths due to increased supplementary cementitious materials in the cement.

![Performance of the regular water reducing additives on fly ash-based cement](image)
CHRYSO’s offer goes beyond formulated products but also provides a full range of services. In order to meet customer requirements, CHRYSO provides specific lab studies and tailor-made developments, technical assistance in the field and installation of dosing equipment, tanks and remote inventory systems.

Lab tests, specific studies and product developments in CHRYSO laboratories

In CHRYSO’s International R&D Center (South of Paris), CHRYSO has its own cement laboratories, with dedicated teams of experts. These premises and teams conduct lab tests for customers’ specific needs and develop new products in partnership with our R&D team. Each year, CHRYSO tests and develops numerous tailor-made solutions, in order to offer our customers the most appropriate solutions to their specific requirements. A local team of experts are available in our plant subsidiaries across the world, in order to be ever more efficient, faster to respond and closer to local customers’ specifications.
Installations (pump, tank, remote inventory system…)

Depending on customer demand, we provide different kinds of installations:

■ **Dosing systems**
CHRYSO provides and installs dosing systems on demand. Technical assistance is given for an efficient layout.

■ **Tanks**
CHRYSO offers grinding aids tank installation in cement plants which reduces:
- Bulk deliveries costs compared to IBC supply
- IBC recycling costs

■ **Remote inventory systems**
CHRYSO offers a remote inventory system which comprises sensors installed on customer tanks and automatic delivery supply.
This system:
- Decreases the risk of GA shortage
- Offers the customer the possibility to outsource logistics (automatic supply when a determined level is reached).

Technical assistance

CHRYSO provides a technical assistance team in every subsidiary, in order to meet our customers local specifications and requirements.
Our teams are trained and have the standard technical expertise to respond to any particular grinding system issue: on customers’ sites during trials, or to respond to specific demands of grinding system optimization.
EUROPE

- **Head office CHRYSO SAS**
  19 Place de la Résistance
  92446 Issy-Les-Moulineaux Cedex
  France
  Tel. +33 (0)1 41 17 18 19
  Fax. +33 (0)1 41 17 18 80

- **CHRYSO Aditivos España**
  Camino Yunclillos S/N
  45520 Villaluenga de la Sagra, Toledo
  Spain
  Tel. +34 925 53 19 52
  Fax. +34 925 53 13 36

- **CHRYSO Aditivos Portugal**
  Estrada de Paço de Arcos nº 9 - 1ºC
  2770-218 Paço de Arcos
  Portugal
  Tel. +351 21 440 58 00
  Fax. +351 21 443 30 09

- **CHRYSO Chemie s.r.o.**
  Sokolovska 55/81
  186 00 Praha 8
  Czech Republic
  Tel. +420 222 311 499
  Fax. +420 296 150 307

- **CHRYSO France**
  7 rue de l’Europe - Z.I
  45300 Servières du Loiret
  France
  Tel. +33 (0)2 38 34 58 00
  Fax. +33 (0)2 38 39 01 72

- **CHRYSO Italia**
  Via Madonna
  24040 Lallio, Bergamo
  Italy
  Tel. +39 035 69 33 31
  Fax. +39 035 69 36 84

- **CHRYSO Polska**
  Ul. Winiowa 40B/14
  02-520 Warszawa
  Poland
  Tel. +48 22 542 42 45
  Fax. +48 22 542 42 46/47

- **CHRYSO Romania**
  Soseaui de Centura Ploiești
  Nord Km 70
  Blejoi
  Romania
  Tel. +40 244 410588 / 89
  Fax. +40 244 410590

- **CHRYSO UK Ltd**
  Unit 1, Badby Park
  Heartlands Business Park
  Daventry, Northamptonshire
  NN11 8YT
  United Kingdom
  Tel. +44 (0)1327 707 976
  Fax. +44 (0)1327 707 968

MIDDLE EAST

- **CHRYSO Gulf**
  P.O. Box 71544
  Dubai
  E.A.U.
  Tel. +971 4 885 1782
  Fax. +971 4 885 1781

- **CHRYSO-KAT Katki Malzemeleri**
  San. Ve Tic. A.S.
  Sanayi Cad. No:26 Darica
  41700 Kocaeli
  Turkey
  Tel. +90 262 653 91 46
  Fax. +90 262 653 78 31

AFRICA

- **CHRYSO SAF (PTY) Ltd**
  26 Malcolm Moodie Crescent
  Jet Park Ext.30
  1469 Boksburg
  South Africa
  Tel. +27 (0)11 379 2334
  Fax. +27 (0)11 397 6644
  Share call number: 0861chryso

INDIAN OCEAN

- **CHRYSO Mascareignes**
  ZAC des Mascareignes
  39 bis rue Pierre Brossolette
  97420 Le Port
  La Réunion
  Tel. +33 (0)2 62 71 00 10
  Fax. +33 (0)2 62 71 00 11

ASIA

- **CHRYSO India**
  38/1, Block GN – Sector V
  Salt Lake
  Kolkata 700 091
  India
  Tel. +91 33 4010 2700
  Fax. +91 33 2597 3881

AMERICA

- **CHRYSO, Inc.**
  1611 State Hwy 276
  Rockwall, TX 75032
  & PO Box 190
  Rockwall, TX 75087
  Tel. +1 972 772 6010 #210

---

CHRYSO

CHEMICAL SOLUTIONS FOR THE CONSTRUCTION MATERIALS INDUSTRY

www.chryso.com