## MINERAL LOGISTICS FORUM 2017

The College Hotel, Amsterdam, 10-11 April 2017

The networking and knowledge hub for the industrial minerals logistics market













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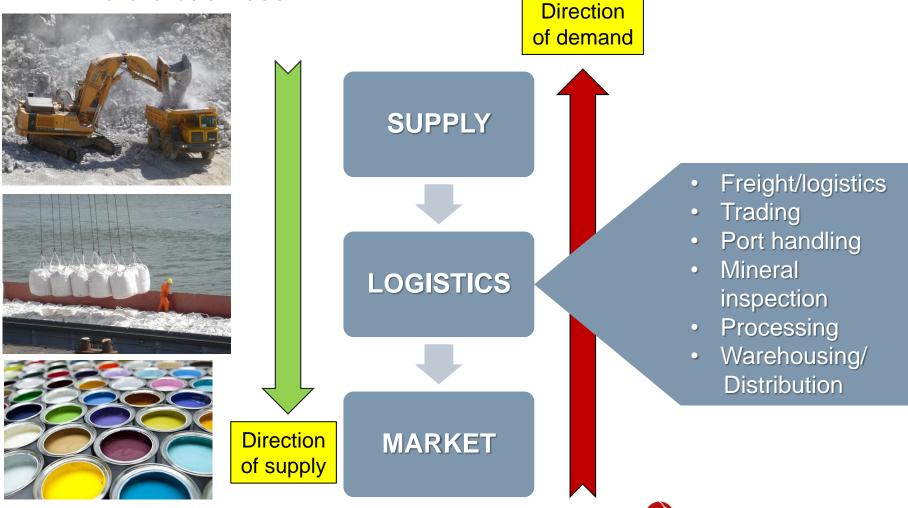
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### **Why Mineral Logistics?**

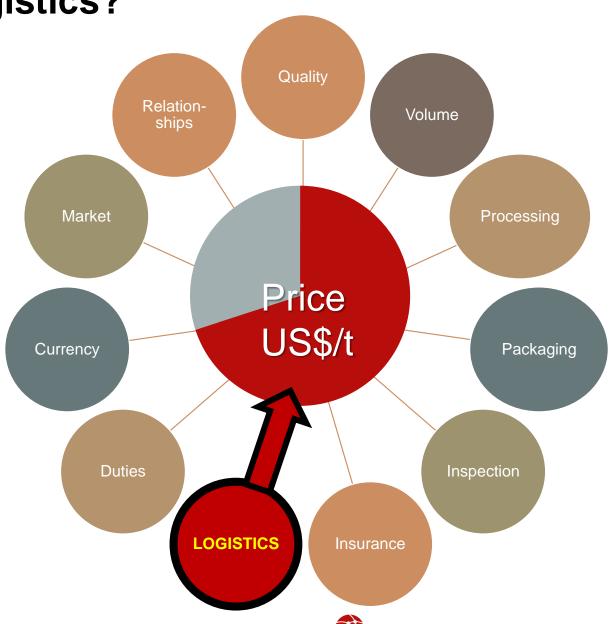
Logistics is one of the three principal sectors of the industrial minerals business



Why Mineral Logistics?

- Factors influencing delivered mineral prices
- Logistics can account for up to 70% of the mineral's delivered price.





#### **Programme Monday AM**

#### OVERVIEWS | DRY BULK | SECURE TRANSIT

- 09.00 Opening Remarks
  Ismene Clarke, Director, IMFORMED, UK
  Introduction
  Mike O'Driscoll, Director, IMFORMED, UK
- 09.15 **Dry bulk shipping market overview**Marc Pauchet, Senior Dry Analyst, Maersk Broker, Denmark
- 09.45 The CORE project: enhancing speed, reliability, and efficiency of global supply chains while safeguarding supply chain security Nik Delmeire, Secretary General, European Shippers' Council, Belgium

#### **10.15 COFFEE**

#### **GHENT | NEW SILK ROUTE**

- 11.15 Specifics of mineral handling in the Port of Ghent
  Danny Vancoppenolle, Commercial Manager, Port of Ghent, Belgium
- 11.45 **New Silk Way Logistics**Hanno Reeser, BU Manager East Region, H. Essers, the Netherlands

#### 12.15 LUNCH

#### **Programme Monday PM**

#### GRAPHITE | FERTILISER | MINERAL INSPECTION

- 14.00 Logistics challenge: the Mahenge Graphite Project
  Steve Tambanis, Managing Director, Black Rock Mining Ltd, Australia
- 14.30 Supply chain logistics for fertilizer minerals Manfred Stolk, European Supply Chain Manager, ICL Fertilizer Europe CV, the Netherlands
- 15.00 Risks, role & importance of inspection in the supply chain of minerals David Chanet, Control Union, Belgium

#### **15.30 COFFEE**

#### PANEL DISCUSSION

16.00 Total supply chain management

Geoffrey Verheul , CEO, Wide Scope Shipping & Forwarding BV, Netherlands

Hans Mattheyer, Commercial Director, OBA Bulk Terminal Amsterdam, Netherlands

Jef Brepoels, Supply Chain Manager, KaMin, the Netherlands Manfred Stolk, European Supply Chain Manager, ICL Fertilizer Europe CV, the Netherlands Abel Coplet, CEO, Yasheya Ltd, Switzerland

#### 16.45 CLOSE OF CONFERENCE

Alliancell

Black Rock Mining

BSR-Van Uden Stevedoring BV

**Control Union** 

**Ecotradex** 

**Eggerding Industrial Minerals** 

Euro Nordic Logistics BV

**European Shippers Council** 

Euroports

Grecian Magnesite

H. Essers

Hudig & Veder

ICL Fertilizer Europe CV

**IMFORMED** 

Imperial Shipping

Kaolin AD

Maersk Broker

Maja Stuwadoors

Midegasa

NEM BV

NPRC

**OBA** 

Overslag Bedrijf Moerdijk BV

Ovet BV

Port of Amsterdam

Port of Ghent

Port of Rotterdam Authority

Port of Sillamae

Rietlanden Terminals BV

Sea-Invest

SSP

Tolsa Nederland BV

Wessem Port Services Group BV

Widescope Shipping & Forwarding BV

Yasheya

ZHD Stevedores

Good programme, broad range of topics, diverse; good opportunities for networking.

Hugo du Mez, Advisor Business Intelligence, Port of Rotterdam, the Netherlands

Diverse, professional and relevant programme, well organised.

Michiel Vos, Logistics & Customer Services, Eggerding, the Netherlands

Again a good mix of commercial/technical issues handled with various stakeholders among the attendees.

Danny Vancoppenolle, Commercial Manager, Port of Ghent, Belgium

I am glad to have learned more about challenges in logistics by industry experts

Pim Steenhuis, Commercial Manager Energy & Bulk, Port of Amsterdam, the Netherlands

Good programme, venue, and organisation; keep up the good work

Michael Tsoukatos, Director of Business Development, Grecian Magnesite SA, Greece

Well balanced programme, very good for networking, efficient and well staffed registration; like to see break-bulk, container, and trucking covered next time.

Joep Stevens, Managing Director, Alliancell, the Netherlands

Nice quiet venue, well arranged, good interaction with organisers.

Marco de Wit, Business Development Manager, Euroports, Belgium

It is very interesting to meet people from different businesses and see how it fits together to develop new projects and improve current ones.

Alex Aizpurua, General Manager, Midegasa, Spain

Missed attending **Mineral Logistics Forum 2017**?

A set of presentations (as PDF) maybe purchased: Price £500 – please contact:

Ismene Clarke, T: +44 (0)208 224 0425; M: +44 (0)7905 771 494; E: <u>ismene@imformed.com</u>

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Networking and knowledge for the industrial minerals business





- Launched in January 2015
- Extensive experience & reputation
- Market research
- Specialist conferences













#### **About our Forums**

- Programmed with intelligence
- Moderated by experts
- To engage & serve the industry
- And we enjoy it!







**AT A GLANCE A-Z GUIDE** WHICH MINERALS FOR WHICH **MARKETS** 

|  |          |                |              |                 |              |             |            |              |              |                             |  | MAR                        | KETS2       |                             |                 |                        |            |              |          |           |                              |                             |                          |                      |  |  |   |  |  |
|--|----------|----------------|--------------|-----------------|--------------|-------------|------------|--------------|--------------|-----------------------------|--|----------------------------|-------------|-----------------------------|-----------------|------------------------|------------|--------------|----------|-----------|------------------------------|-----------------------------|--------------------------|----------------------|--|--|---|--|--|
| MINERAL¹ ¹Derivative **Synthetic   | Abr      | divers<br>Arts | arbents Agri | narkets<br>Bare | site's Cent  | ent can     | Cher       | nteals Cone  | Sucios Cosme | de la compa                 | ents dedrone   | of Electrical Control      | rator ch    | the retardar                | Anatha<br>Found | Friction               | Glass      |              | inded by | ind plate | as Poly                      | et's Refrat                 | dorles Rubb              | at wheel             | MINERAL' 'Derivative "Synthetic  | MAIN RAW MATERIAL FEEDSTOCK(S) <sup>3</sup>  | KEY SPECIFIED<br>CHEMICAL<br>COMPONENT(S) <sup>4</sup>                              | WORLD<br>PRODUCTION <sup>5</sup>             | MAIN SOURCE<br>COUNTRIES <sup>6</sup>              |
|  | •        |                |              |                 |              | •           | •          |              | - (          | 0                           | •  |                            | •           |                             |                 | 0                      |            | 0            | 0        | 0         | 0                            | •                           |                          |                      | ALUMINA*   | Bauxite  | Al <sub>2</sub> O <sub>3</sub>  |  | China, USA, Germany                                |
| IDALUSITE  | 0        |                |              |                 |              | •           |            |              |              |                             |  |                            |             |                             | •               |                        |            |              |          |           |                              | •                           |                          |                      | ANDALUSITE  ANTIMONY TRIOXIDE  |  | Al <sub>2</sub> O <sub>3</sub>  |  | South Africa, France, Peru                         |
| ITIMONY TRIOXIDE*  | _        | _              | _            | •               |              | •           | •          |              |              | -                           | _  |                            | •           |                             | -               | •                      | -          | _            |          |           |                              | _                           | _                        |                      | ANTIMONY TRIOXIDE  | ONLY NO.   | Sb <sub>3</sub> O <sub>3</sub>  |  | China, Russia, Tajikistan<br>Russia, China, Brazil |
| TAPULGITE  |          |                |              |                 | •            |             | -          | •            |              |                             |  |                            |             | 0                           |                 | •                      |            | -            | •        | •         |                              |                             |                          |                      | ASSESTOS   | Chrysottle   | n.a.  |  | USA, Senegal, Spain                                |
| IDDELEYITE   |          | •              | •            |                 |              | •           | •          |              | 0            |                             |  |                            | 0           | 0                           |                 |                        | 0          |              | •        |           | 0                            | •                           |                          |                      | BADDELEYITE  |  | ZrO,  |  | Russia   |
| RYTES (BARITE)   |          |                |              |                 | 0            |             |            |              |              |                             | 2  |                            |             | 0                           | -               | 0                      |            | •            |          |           |                              |                             | 0                        |                      | BARYTES (BARITE)   |  | BaSO,   |  | China, India, Morocco                              |
|  | •        |                |              |                 | •            |             | •          |              |              |                             |  |                            |             |                             | 0               |                        |            |              | Ť        |           |                              | •                           |                          |                      | BAUXITE  |  | Al <sub>2</sub> O <sub>3</sub>  |  | China, Guyana, Greece                              |
| NTONITE  |          | •              | 0            |                 |              | 0           | 0          | $\neg$       | 0            |                             |  | •                          |             | 0                           | •               |                        |            | •            | 0        | 0         | 0                            |                             | $\overline{}$            |                      | BENTONITE  | (also Hectorite serves similar markets)  | n.a.  | 17,500                                       | USA, China, India                                  |
| PRATES   |          |                | •            |                 |              |             |            | 0            |              | • (                         |  |                            | 0           | 0                           |                 |                        |            |              |          |           |                              | 0                           |                          |                      | BORATES  | Borax; Colemanite; Kernite; Ulexite  | B <sub>2</sub> O <sub>3</sub>   |  | Turkey, USA, China                                 |
| OMINE  |          |                |              | 0               | _            |             | •          |              | 0            |                             | •  |                            | •           | 0                           |                 |                        | 0          |              |          |           |                              | _                           | 0                        |                      | BROMINE  | Brines; Seawater; Salt lakes   | n.a.  |  | Israel, USA, Jordan                                |
| LCIUM CARBONATE  | 0        |                | •            |                 |              |             | -          | •            | 0            |                             | •  |                            |             | 0                           |                 | •                      |            |              |          | •         | •                            |                             | •                        |                      | CRIESTITE  | Limestone; Dolomite; Marble; Chalk   | CaCO,   | ≥12,000,000                                  |  |
| LESTITE<br>IDOMITE   | _        | _              |              |                 |              |             | 0          | _            |              | _                           |  |                            |             | 0                           | _               | •                      | 0          |              |          | 0         |                              | -                           | -                        | _                    | CHROMITE   |  | SrSO <sub>4</sub>   |  | China, Spain, Mexico<br>South Mrica, Turkey, Oman  |
| AMOND (INDUSTRIAL)   |          |                | _            |                 | -            | 0           | •          | -            |              |                             |  |                            |             |                             | •               |                        |            |              | •        | 0         |                              | •                           |                          |                      | DIAMOND (INDUSTRIAL)   |  | Cr <sub>2</sub> O <sub>3</sub>  |  | DR Congo, Russia, Australia                        |
| ATOMITE  | 0        | •              | 0            |                 | 0            |             |            | •            | 0            |                             |  |                            |             | 0                           |                 |                        |            | 0            |          |           |                              |                             |                          |                      | DIAMOND (INDUSTRIAL)   |  | n.a.<br>SiO,  |  | USA, China, Denmark                                |
|  | 0        |                | •            |                 |              | •           | •          | •            | _            |                             |  |                            |             | 0                           |                 |                        |            |              |          | 0         |                              |                             |                          |                      | DOLOMITE   |  | CaO:MgO   | ≥2,000,000                                   |  |
|  | 0        |                |              |                 |              | •           |            |              |              |                             |  |                            |             | Ť                           |                 |                        |            |              |          | •         |                              |                             |                          |                      | FELDSPAR   |  | Al <sub>2</sub> O <sub>2</sub> K <sub>2</sub> O <sub>2</sub> Na <sub>2</sub> O      |  | Turkey, Italy, China                               |
| UORSPAR  |          |                |              |                 | 0            | 0           | •          |              |              |                             |  |                            |             |                             |                 | 0                      |            |              |          |           |                              |                             |                          |                      | FLUORSPAR  |  | CaF <sub>2</sub>  | 6,250  | China, Mexico, Mongolia                            |
|  | •        |                |              |                 |              |             |            |              |              |                             |  | •                          |             |                             |                 |                        |            |              |          |           |                              |                             |                          |                      | GARNET   |  | n.a.  |  | India, China, Australia                            |
| RAPHITE  |          |                | 0            | •               |              | 0           |            |              |              | - 0                         | )  |                            | 0           |                             | • •             | •                      |            | 0            |          | 0         |                              | •                           |                          |                      | GRAPHITE   |  | С   |  | China, Brazil, India                               |
| PSUM   |          |                | •            |                 |              | 0           |            | •            |              |                             |  |                            |             | 0                           |                 | О                      |            |              |          | 0         |                              |                             |                          |                      | GYPSUM   | Anhydrite  | CaSO <sub>4</sub>   |  | China, USA, Iran                                   |
|  | 0        | _              | _            | _               | _            |             | •          | _            | 0 (          |                             |  |                            |             | 0                           |                 |                        | 0          |              | •        | •         | •                            |                             | 0                        |                      | ILMENITE   |  | TIO,  |  | Australia, South Africa, China                     |
| DINE<br>ON OXIDE   |          | _              | •            |                 |              | _           | •          |              |              |                             | •  |                            |             | •                           | _               |                        | 0          |              | 0        |           |                              |                             | _                        |                      | IODINE<br>IRON OXIDE   | Brines; Caliche nitrate  |   |  | Chile, Japan, USA<br>India, Pakistan, Spain        |
| OLIN   | 0        | _              | 0            |                 | •            | •           |            | •            | _            | _ (                         | )  | •                          |             | 0                           | 0               |                        | •          | 0            | •        | •         |                              | •                           | •                        |                      | KAOLIN   | Haematite; Goethite; Magnetite; Micaceous IO; Ochre; Umber<br>Kaolinite; Halloysite  | Fe <sub>3</sub> O <sub>3</sub><br>Al <sub>4</sub> O <sub>4</sub> : SiO <sub>4</sub> |  | USA, Germany, China                                |
|  | 0        |                | U            |                 |              | •           |            | •            | 0            |                             |  |                            | 0           |                             | • (             |                        |            | 0            | 0        | •         |                              | •                           |                          |                      | KYANITE  | Navillite, naloysie  | Al <sub>2</sub> O <sub>3</sub> , SiO <sub>3</sub>                                   |  | USA, India Rezil                                   |
| VE.  |          |                | •            |                 |              |             | •          | •            |              |                             |  |                            |             | 0                           |                 |                        |            | 0            |          |           | 0                            | •                           |                          |                      | LIME,  | Limestone; Dolomite; Chalk   | CaO   |  | China, USA, India                                  |
| THIUM  |          |                |              | •               | 0            |             | 0          | -            |              |                             | _  |                            |             | 0                           | -               |                        |            |              |          | 0         |                              |                             | 0                        |                      | LITHIUM  | Spodumene; Petalite; Lepidolite; Brines; Salt lakes; Hectorite; Zinnwaldite  |   |  | Australia, Chile, China                            |
| AGNESITE   |          | 0              | •            |                 |              |             | •          | •            |              |                             |  |                            |             |                             |                 | 0                      |            |              | 0        | 0         | 0                            |                             | 0                        |                      | MAGNESITE  |  | MgCO,   |  | China, Russia, Turkey                              |
| AGNESIA'   |          |                | •            |                 |              |             | •          | •            | 0            |                             |  |                            | •           | 0                           | 0 0             |                        |            |              |          |           |                              | •                           | 0                        | 0                    | MAGNESIA*  | Magnesite; Serpentinite; Brucite; Dolomite; Seawater; Brines   | MgO   | 12,000                                       | China, Russia, Turkey                              |
| ANGANESE   |          |                | 0            | •               |              | 0           | •          | 0            |              |                             | 0  |                            |             | 0                           |                 | C                      |            | 0            |          |           |                              |                             |                          |                      | MANGANESE  | Pyrolusite; Psilomelane  | Mrc MnO <sub>2</sub>  |  | China, South Africa, Australia                     |
| ICA  |          |                |              |                 | •            |             |            |              | 0            | (                           | 0  |                            |             |                             | 0 (             | )                      |            | •            | •        | •         |                              |                             | •                        |                      |  | Muscovite; Phiogopite  | n.a.  |  | China, Russia, USA                                 |
| ULLITE"  |          |                |              |                 |              | •           |            |              |              |                             |  |                            |             |                             | •               |                        |            |              |          |           |                              | •                           |                          |                      | MULLITE"   | Alumina; Bauxite; Kaolin; Kyanite; Pyrophylite   | Al <sub>2</sub> O <sub>3</sub>  |  | USA, China, Brazil                                 |
| PHELINE SYENITE  | 0        | _              |              |                 |              |             |            | 0            |              | _                           |  |                            |             |                             |                 |                        |            |              | •        | •         |                              |                             | 0                        |                      | NEPHELINE SYENITE<br>NITRATES  | Caliche ore: Nitratine   | Al <sub>2</sub> O <sub>2</sub> : K <sub>2</sub> O; Na <sub>2</sub> O                |  | Russia, Canada, Norway<br>Chile                    |
|  | •        |                | 0            |                 |              | 0           | •          |              |              |                             | 0  |                            |             | 0                           | •               | С                      | 0          |              | 0        |           |                              |                             |                          |                      | OLVINE   | Dunite; Serpentine   | NaKNO <sub>3</sub><br>MgO   |  | Norway, Japan, Spain                               |
|  |          | 0              | •            |                 |              |             | 0          |              |              |                             | -  |                            |             |                             | 0               |                        | 0          |              | •        | •         | _                            | 0                           |                          |                      | PERLITE  | burne, seperate  | n.a.  |  | China, Greece, Turkey                              |
| HOSPHATE   | 0        | 0              |              |                 | _            |             | •          | •            | -            |                             |  | -                          | 0           | 0                           | _               | 0                      |            |              | -        | -         |                              |                             | _                        |                      | PHOSPHATE  | Fluorapatite   | P,O <sub>s</sub>  |  | China, Morocco, USA                                |
| DTASH  | 0        |                |              | 0               |              | _           | -          | 0            |              |                             |  |                            | Ŭ           | 0                           |                 | Ĭ                      |            | 0            |          |           |                              |                             |                          |                      | POTASH   | Carnalite; Kainite; Langbeinite; Sylvite   | K,O   |  | Canada, Russia, Belarus                            |
| IMICE  | •        | 0              | •            | _               |              |             |            | •            | 0            |                             |  | 0                          |             |                             |                 |                        |            |              | 0        | 0         |                              |                             |                          |                      | PUMICE   |  | n.a.  | 17,400                                       | Turkey, Italy, Saudi Arabia                        |
| ROPHYLLITE   |          |                | 0            |                 | 0            | •           |            | 0            |              |                             |  |                            |             |                             |                 |                        |            |              | 0        | 0         | 0                            | •                           | 0                        |                      | PYROPHYLLITE   |  | n.a.  | 1,000  | South Korea, Japan, Pakistan                       |
| JARTZ*   |          |                |              |                 |              | •           |            |              |              | •                           | •  |                            |             |                             |                 |                        |            |              |          | •         |                              | 0                           |                          |                      | QUARTZ*  |  | SIO,  |  | USA, China, Norway                                 |
| ARE EARTHS   | 0        |                |              | 0               |              | •           | •          |              |              | •                           | •  |                            |             | 0                           |                 |                        |            |              |          |           |                              |                             |                          |                      | RARE EARTHS  | Bastnaesite; Monazite; Xenotime; Ionic clays   | RE oxides   |  | China, Australia, USA                              |
| JTILE  |          |                |              |                 |              |             | 0          | 4            | 0 0          | 0                           |  |                            |             | 0                           | _               | _                      | 0          |              | •        | •         |                              |                             |                          |                      | RUTILE   |  | TIO <sub>2</sub>  |  | Australia, Sierra Leone, South Afr                 |
| EPIOLITE   |          |                | •            |                 |              |             | •          |              |              |                             | •  |                            |             | •                           |                 |                        | 0          | 0            |          |           | 0                            |                             | 0                        |                      | SALT   | Halite   | NaCl  |  | China, USA, India                                  |
|  | •        | •              | 0            |                 | •            | •           | •          |              |              |                             |  | 0                          |             |                             | •               | -                      | 0          |              | 0        | •         |                              |                             | 0                        |                      | SEPIOLITE<br>SILICA SAND   | Quartz   | n.a.<br>SiO,  |  | Spain, Turkey, USA<br>China, USA, Italy            |
|  | :        |                |              |                 |              | •           | -          | •            |              |                             |  | 0                          |             |                             | -               | •                      | •          |              | -        |           |                              |                             |                          |                      | SILICA SAND<br>SILICON CARBIDE**   | Silica+Coke  | SIC SIC   |  | China, Norway, Japan                               |
|  | 0        |                |              |                 |              | •           |            |              |              |                             |  | Ĭ                          |             |                             | 0               |                        | ď          |              |          |           |                              | •                           |                          |                      | SILLIMANITE  |  | Al <sub>2</sub> O <sub>3</sub>  |  | India  |
| NET.   |          |                |              |                 |              | •           |            |              |              | -                           | 0 0  |                            |             |                             |                 | 0                      |            |              | 0        |           |                              | •                           |                          |                      | SPINEL"  | Magnesia+Alumina   | MgO; ALO,   |  | China, Germany, USA                                |
| DA ASH   |          |                | 0            |                 |              |             | •          |              | 0            |                             | 0  |                            |             | 0                           |                 |                        |            | 0            |          |           | 0                            |                             |                          |                      | SODA ASH   | Trona; Nahcolite   | Na <sub>2</sub> CO <sub>3</sub>   | 14,000                                       | USA, Turkey, China                                 |
| DA ASH**   |          |                | 0            |                 |              |             | •          |              | 0            | •                           | 0  |                            |             | 0                           |                 |                        | 0          | 0            | 0        |           | 0                            |                             |                          |                      | SODA ASH**   | Salt+Limestone+Coke  | Na <sub>2</sub> CO <sub>3</sub>   |  | China, Russia, Germany                             |
| DIUM SULPHATE  |          |                |              |                 |              |             | 0          |              |              | •                           |  |                            |             | 0                           |                 |                        |            |              | 0        |           | 0                            |                             |                          |                      | SODIUM SULPHATE  | Mirabilite; Thenardite   | Na <sub>2</sub> SO <sub>4</sub>   |  | China, Spain, Mexico                               |
| LPHUR  |          |                | •            |                 |              |             |            | 0            |              |                             |  |                            |             | 0                           |                 |                        | 0          |              | 0        |           |                              |                             | 0                        |                      | SULPHUR  | Pyrites; Recovered as by-product; Native sulphur   | S   |  | China, USA, Russia                                 |
| LC   |          |                | 0            |                 |              | •           |            | •            | •            |                             | 0  |                            |             | 0                           | (               |                        |            |              | •        | •         |                              |                             | •                        |                      | TALC   |  | n.a.  |  | China, India, USA                                  |
| RMICULITE  |          | •              | •            |                 |              | _           |            | •            |              | -                           |  |                            | 0           |                             |                 |                        | 0          |              |          | 0         |                              | 0                           |                          | _                    | VERMICULITE  |  | n.a.  |  | South Africa, USA, China                           |
| OLITES"  | 0        |                | 0            |                 | 0            | •           |            | 0            |              |                             |  |                            |             |                             | (               | 0                      | 0          |              | •        | •         | 0                            |                             | 0                        |                      | WOLLASTONITE<br>ZEOLITES*  | Clinoptilolite; Chabazite; Mordenite   | n.a.  |  | China, India, USA<br>China, South Korea, USA       |
| CON  | 0        | •              | •            |                 |              | •           |            | U            |              | •                           | •  | •                          |             |                             |                 | C                      | 0          |              |          |           | U                            | •                           |                          |                      | ZIRCON   | Cimopuloite; Chabazte; mordefille  | zrO,  |  | Australia, South Mirica, China                     |
| CONIA.   | -        |                |              |                 |              |             |            |              | 0            | ٠.                          |  |                            | 0           |                             | -               |                        | 0          |              |          |           | 0                            |                             |                          |                      | ZIRCONIA*  | Zircon: Baddelevite  | ZrO,  |  | China, USA, Japan                                  |
|  |          |                |              |                 |              | _           | _          |              |              |                             |  | al compens                 |             | in cummercial               | grades, up      |                        |            |              |          |           |                              |                             | D.) & Might              |                      |  |  |   |  |  |
| S in Industrial mitnerals and rocks, and w, asso included and indicated as structured as structured as structured as structured as structured as structured and synthetic reference (**) and mitner (***) interest consumation to certain mitnerals. | commerci | i terms (eg    | asbestos,    | borntes), v     | etich are to | aded for th | et ron-me  | etallung tal | 5.70         | a. not appli<br>200s terros | s main chemic<br>ficable to cert<br>s; Estimate of<br>ucting USGS, i | an minerate<br>annual work | reals which | rely more on<br>known in 20 | physical pro    | parties<br>etallicuser | Production | data from a  | namos of | 1.        | in addition.<br>all forms of | about 4m to<br>sulphus vite | on syntheti<br>ON recess | c Na,50,<br>nel from | 69.99% (90.) quartz<br>, es by-greduct from rayon , boretzs, ill<br>o'Olyas processing<br>los aro usod in agrimentals, chanicals | thism, HC production Creator of Editor: Mike O'D.  Mineral Market Matter CMFCRMED 2011  without prior written consent from M | riscoll - mikağımfermad.com   Ac<br>imfori  | ivertising/More copies: Ismeno Cl<br>ned.com | Ishio - Izhion agamformed.com                      |
|  | -        | 100            | 1000         | mas and         |              | COLUMN S    | Tron redde | de entret    | - 51         | eurces India                | uding USAS, R  | IGS, Roskill,              | MEGEMES :   | estimetes                   |                 |                        |            | utput; "Glob |          |           | natural 201                  | Bac; high sa                | sius systic              | dic soci             | tos aro used in agrimentats, chamicals.<br>Innes is processed<br>and production is about 4,400m carab                            | detargants, environment Minoral Market Metats, CMFCRMED 2011   | <ol><li>All rights reserved. No part of th</li></ol>                                | is chart may be reproduced, stor             |  |

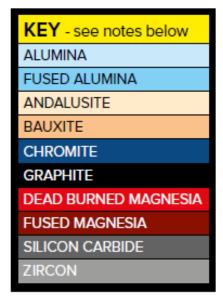
- Leading industrial minerals
- Main raw material feedstock
- Key specified chemical component
- World production
- Main source countries
- Leading consuming markets

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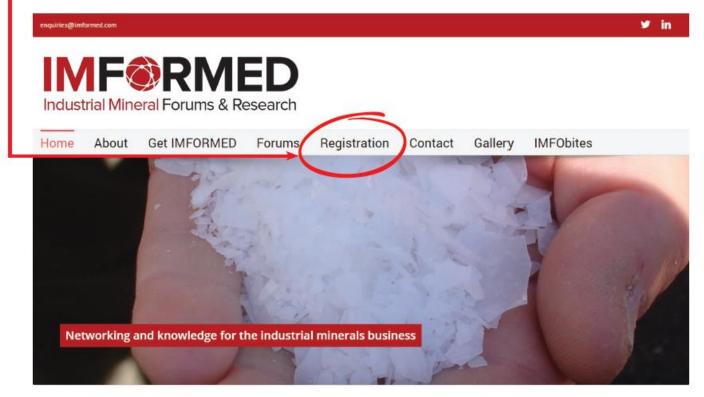
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