

**MS JAIN GROUP
WELCOMES YOU ALL**

**GEOPOLYMER
WORKSHOP**

2015



Sodium silicate to Geopolymer

By R. V. RAMANI

KIRAN GLOBAL CHEMS LIMITED



KIRAN GLOBAL CHEMS LIMITED

- **Manufacturing Silicates and derivatives since 1979**
- **33 silicate manufacturing units in India, UAE, Egypt, South Africa & Qatar**
- **Largest manufacturer in all 5 countries**



AN INDIAN
MULTINATIONAL
ORGANISATION



- **In – house R & D approved by DSIR, GOI**
- **First to develop silicates for quick setting tunnel grouts**
- **Developed technology for Geopolymer concrete in collaboration with SRMU**

PRODUCTS

- ❖ Silicate liquid/cullets -Sodium & Potassium
- ❖ KIRANSIL – Geopolymer Tunnel grouts
- ❖ Precipitated silica – Tyre & Oral
- ❖ ALACRETE –Geopolymer concrete products

MSDS

**Product Name : SODIUM SILICATE
LIQUID**

HSS code No : 28 39 19 00

CAS NO : 13 44 09 8



HYDRO THERMAL PROCESS

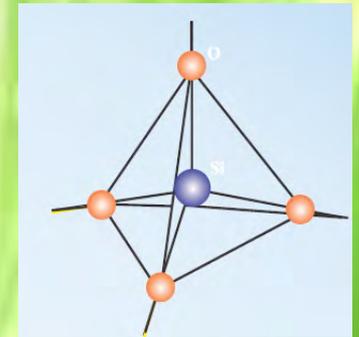
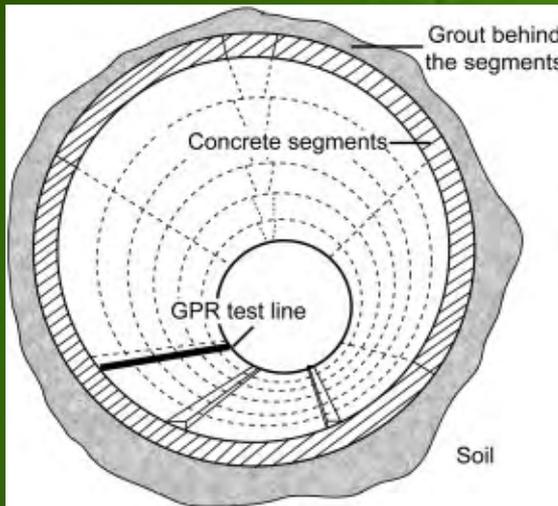


R & D

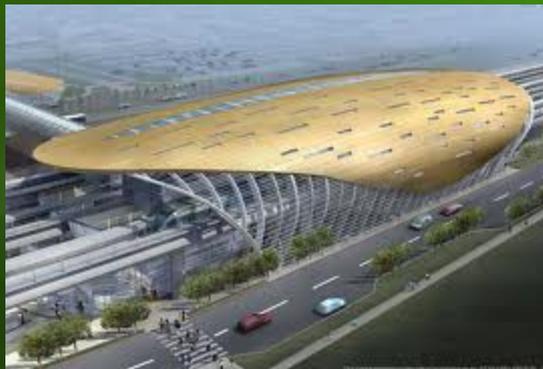
- NEW PRODUCT DEVELOPMENT
 - PRODUCTION / PLANT IMPROVEMENT
 - PROCESS – TECHNOLOGY DEVELOPMENT
 - ENERGY CONSERVATION – WASTE RECYCLING
 - VALUE ADDED PRODUCTS

KIRANSIL

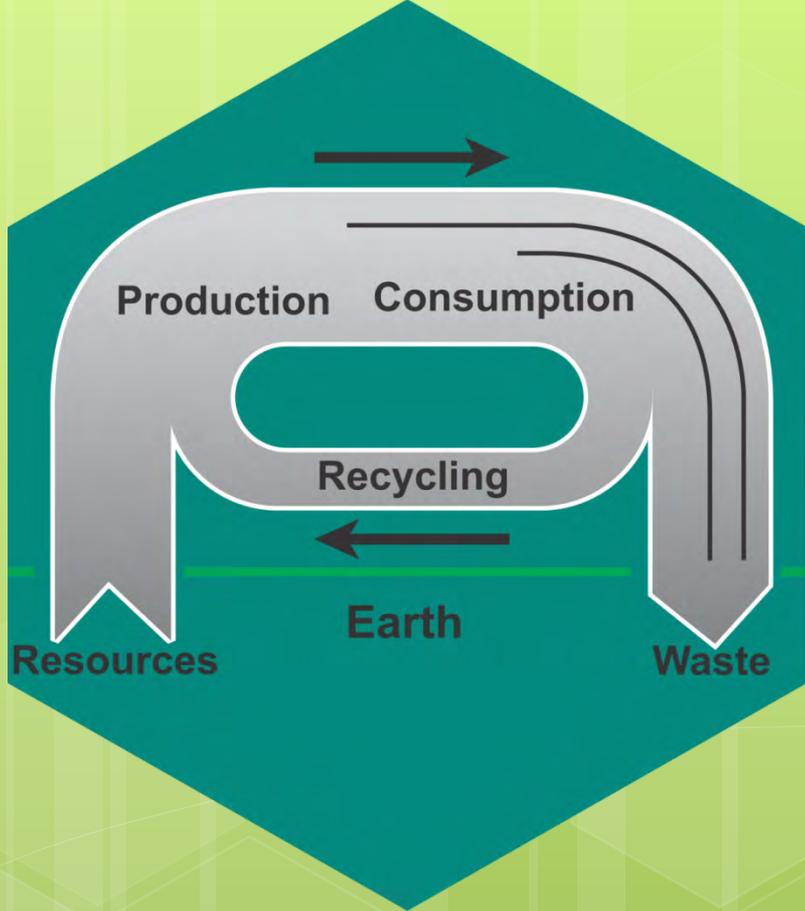
SILICATE GROUTS



GROUTING FACILITY AT SITE



GROUTS IN METROS



'ALACRETE'TM

Geopolymer Concrete

Highly resistant to acids, toxic waste and salt water
high compressive strength, low shrinkage

Reduces carbon dioxide/ particle emissions

Uses no Portland cement, no water for curing

Fire and heat resistance (- 20 to 700o C)

Benefits of Geopolymer concrete Green buildings

Waste industrial products like fly ash and GGBS used

Conserve acres of land used for land fil & limestone mining

THE GREEN QUOTIENT



GEOPOLYMER CEMENT/ CONCRETE

- **EARTH FRIENDLY MATERIALS**
- **ENERGY SAVING – LOW CARBON**
- **WASTE UTILISATION – RECYCLING**
- **LOCAL MATERIALS – LOGISTICS**
- **MORE STRONGER**
- **DURABLE**
- **EASILY AVAILABLE**
- **AFFORDABLE**



CHENNAI METROPOLITAN WATER SUPPLY AND SEWAGE BOARD

In **nur**m

36MLD STP TAILORED TO TREAT 18MLD BASED ON SEQUENTIAL
BATCH REACTOR(SBR) TECHNOLOGY AT SHOLINGANALLUR

CONTRACTOR



Dee - Tech Projects Pvt.Ltd.



'ALACRETE'TM

Geopolymer Concrete

- utilize the waste materials as source material
- alkaline activator to acts as binder
- Compressive strength upto 35 mpa in 24 hours
- IDEAL for precast industry

- NO water curing
- QUICK repairs
- Superior to portland cement
- Truly Green building material

BUILDING PRODUCTS

PAVER & KERBS

BRICKS & BLOCKS

ROOFING & WALL PANEL

BALLUSTERS & STAIRWAYS

PREFAB TOILETS &

SECURITY CABIN



AN INDIAN
MULTINATIONAL
ORGANISATION



**Increase
in building
value – 10%**



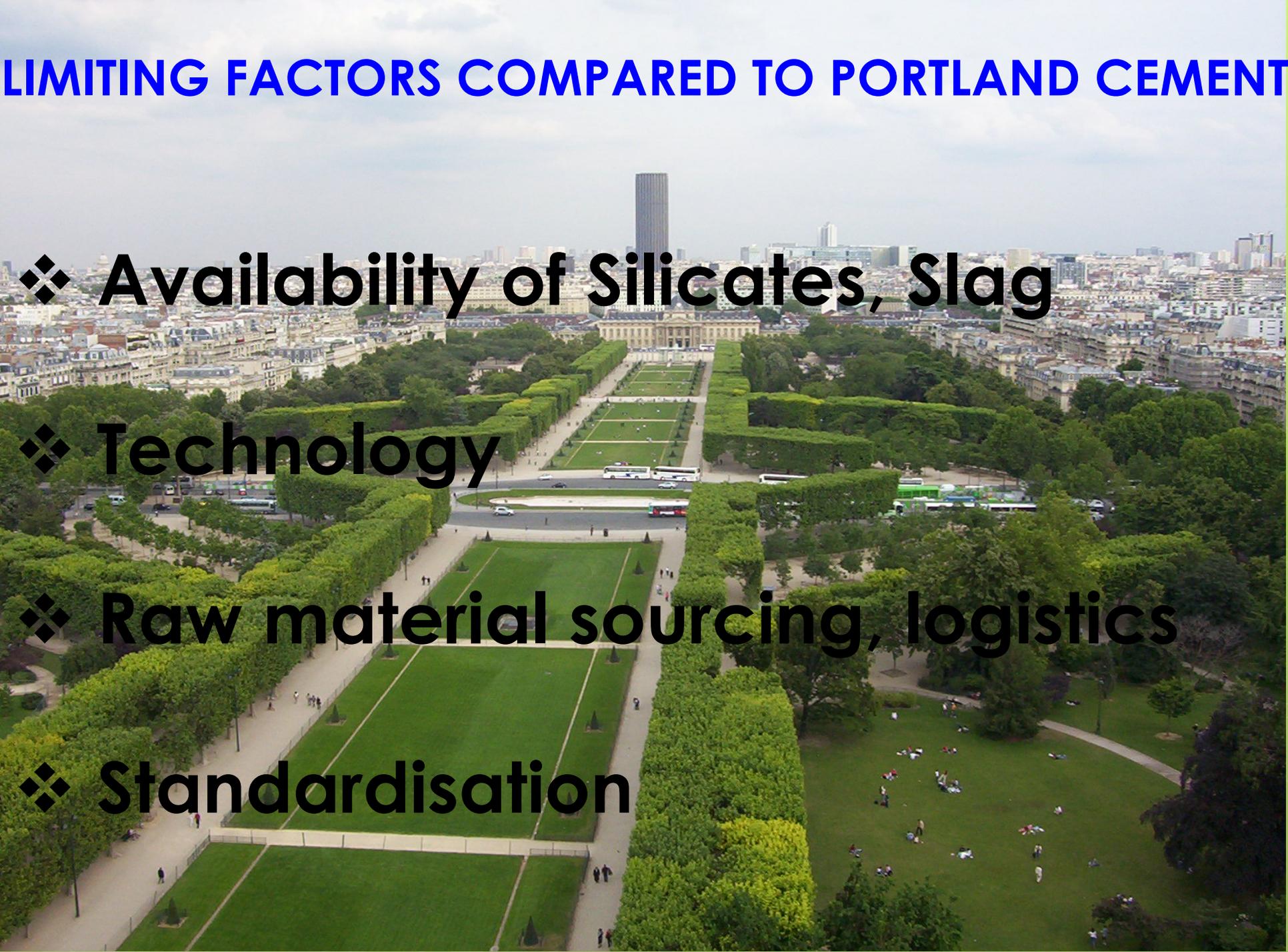
**Decrease
in operating
cost – 13%**

OPPORTUNITIES



- ❖ Growing concern for ecology & sustainability
- ❖ utilisation of industrial waste materials
- ❖ short age of natural sand
- ❖ no water curing required

LIMITING FACTORS COMPARED TO PORTLAND CEMENT



- ❖ **Availability of Silicates, Slag**
- ❖ **Technology**
- ❖ **Raw material sourcing, logistics**
- ❖ **Standardisation**

OUR STRATEGY

- ❖ **DEVELOPMENT** of Industrial products
- ❖ **TARGET** Green building segment only
- ❖ **START** with Prefinished, prefab products
- ❖ **FOCUS** on Roads & Pavements
- ❖ **ACCRA**



INDUSTRIAL PRODUCTS

CHIMNEY & REFRACTORY

RAILWAY SLEPERS &

TUNNEL SEGMENTS

SEWERAGE PIPESLIGHTING &

TRANSMISSION POLES

BALLAST & FURNITURE

R & D SUPPORT

- TIE UP with SRMU
- ACCREDITED R & d CENTRE
- OFFER FREE SILICATES FOR GEOPOLYMER RESEARCH
- STUDENT'S INTERNSHIP PROGRAMME
- EXCLUSIVE FREE WORKSHOPS FOR STUDENTS IN THEIR COLLEGE

Decorative products- Moulded



Architraves, Mouldings, skirting, Balustrades ..

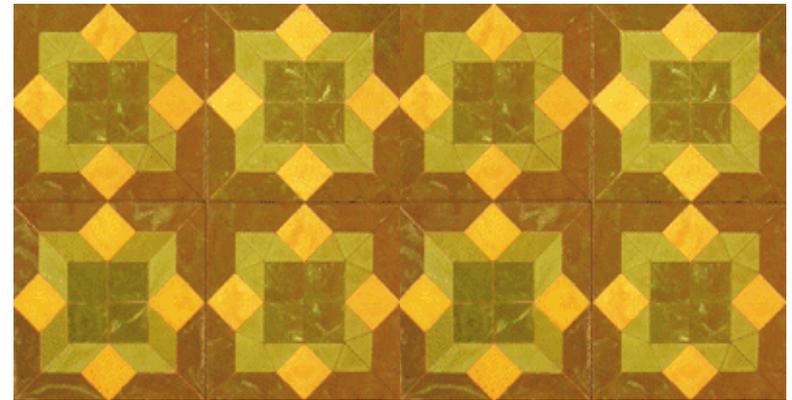
Exciting Solutions for Classy buildings

Mosaic Tiles- Geometric



Exciting Solutions for Classy buildings

Mosaic Tiles- Geometric



Exciting Solutions for Classy buildings

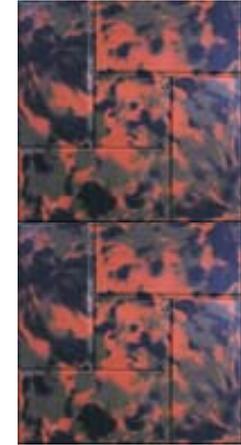
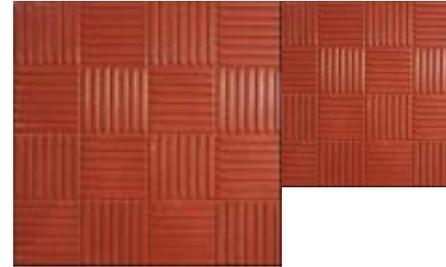
Facing tiles



Exciting Solutions for Classy buildings



Sidewalk & paving Solutions



Exciting Solutions for Classy buildings



THANK YOU



CONTACT

**Kiran Global Chems Limited,
42 New Avadi Road, Chennai 600010, India**

R V Ramani – Director +91 87544 78595

ramani@kiranglobal.com

M Jaypal – Chief engineer +91 9445026595

jaypal@kiranglobal.com

www.kiranglobal.com

www.alacrete.in

