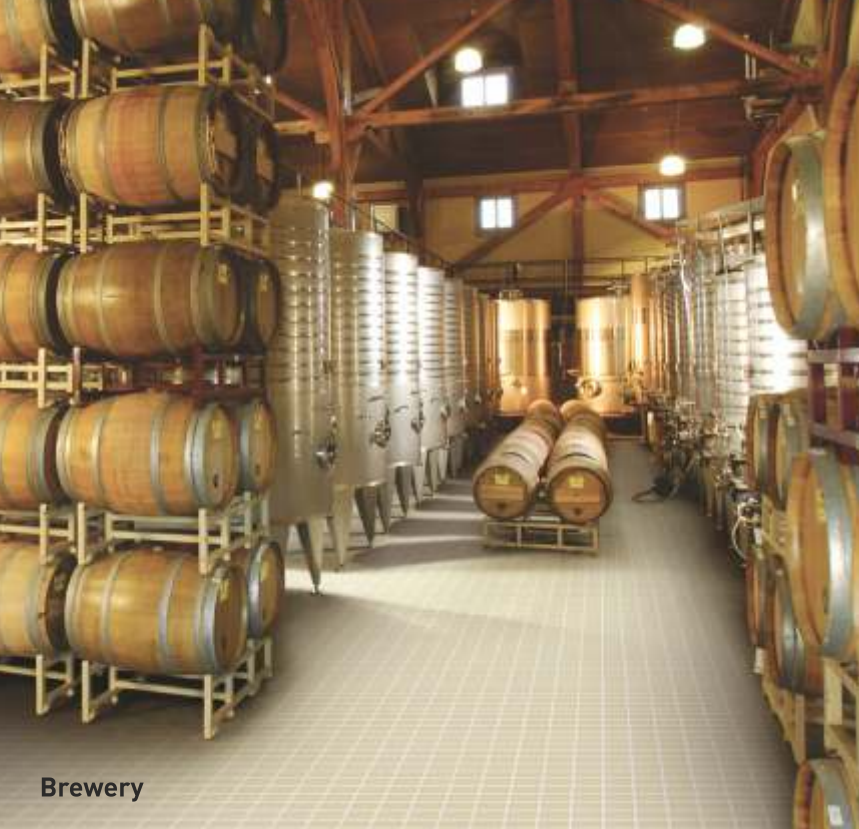


Endura Acid & Alkali Resistant Tiles



 **JOHNSON**[®]
ENDURA
INDUSTRIAL TILING SOLUTIONS



Brewery



Battery Room

Endura Acid & Alkali Resistant Tiles

Feature	Advantage	Benefit
Resistance to concentrated Acid – Weight loss < or = 1%	Extremely high acid resistance of Johnson Endura Industrial tiles meeting the stringent specification norms of IS 4457:2007 ensure excellent performance in Acid/Chemical/Alkali (except HF acid and its derivatives) attack area thus helping corrosion protection of reinforcement in concrete & protecting erosion of the structure.	Customer benefitted by the long service life of the structure and enhanced safety. Application areas of pollution control & corrosion protection, lend themselves well to Johnson Endura Industrial tiles.
Low water absorption < 0.5%	Helps in protecting the reinforcement of the underneath concrete structure by restricting the percolation of chemicals.	Enhancement of structural service life.



Pharmaceutical Plant

Salient Features :

- Highly resistant to Acid / Alkali
- Highly abrasion resistant
- Small size suitable for installing on vertical surfaces
- High flexural strength
- Can withstand very heavy loads
- Gives a great degree of traction to vehicle wheels
- Scratch resistant
- Fire resistant
- Antiskid
- Stain resistant
- Easy of application and repair
- Low maintenance
- Neutral to the sun's UV effect



Application Areas for AR Tiles :

- Pickling Plant
- Water Treatment Plant
- Effluent Treatment Plant
- DM Plant
- Battery Rooms
- Sinter Plants
- Oleum Plant
- Sulfuric Acid Plants
- Phosphoric Acid Plants
- Urea Prilling Towers
- Diammonium Phosphate Plant
- Floors
 - Ammonium Sulphate Plants
 - Acid Storage Tanks
 - Tank Farm Areas
 - Petrochemical Plants
 - Electroplating Plants
 - Paper & Pulp Plant
 - Active Pharmaceutical Ingredients Plants
 - Dairy Plants
 - Food & Beverages
 - Breweries
 - Automotive Plants Surface
- Pretreatment & Paint Shop Area

Acids and Alkalies are the greatest enemies of standard flooring materials.

To counter this menace, Endura offers Acid and Alkali Resistant Tiles which can withstand the most corrosive of chemicals without as much as a stain on them. Endura AR tiles have unmatched technical standards that conform to Indian as well as international standards.

They are resistant to all types of acids and alkalies (In high concentration), except Hydrofluoric Acid and its derivatives.

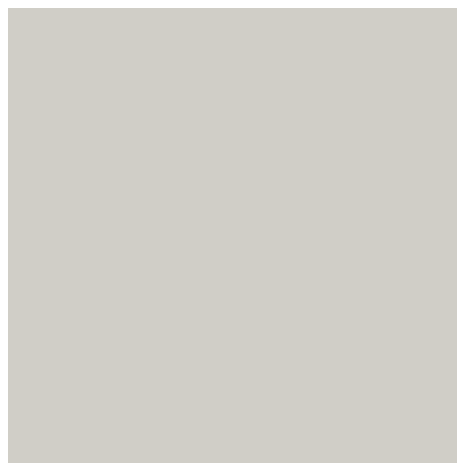
Endura Acid and alkali Resistant Tiles are perfect for the floors of chemical, petrochemical, oil, pharmaceutical, food and textile industries.

They are the ultimate solution to recurring costs of repairing damaged floors.

Sizes	Thicknesses
30x30cm	1.2cm / 1.5cm / 2cm Ivory, Terracotta & Grey
20x10cm	2cm
20x20cm*	1.5cm
20x10cm*	1.2cm / 1.5cm

*Available against Minimum Order Quantity of 2000 sqm

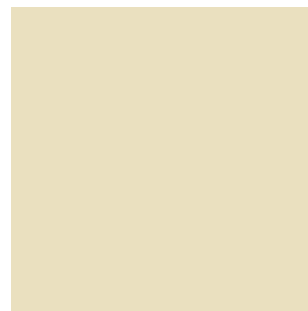
30x30cm



20x10cm



20x20cm





Chemical Plant



Food Processing Unit

Prestigious Clients :

FOOD PROCESSING :

- Ruchi Soya Oil Extraction Unit, Indore
- Nestle, Baddi
- Hindustan Unilever Ltd., Rajpura, Mysore, Nashik & Kolkata
- Tricom Agrochem Ltd., Pune
- Nilons Enterprise, Jalgaon
- ITC Ltd., Ranjangaon, Pune
- SDC Agrofoods, Hyderabad
- Ravindranath Fruit Canning Industries, Hyderabad
- FIL Industries Ltd., Jammu
- Perfetti Van Melle Pvt. Ltd., Manesar
- Narmada Drinks Pvt. Ltd., Bilaspur
- Cargill Industries, Daund, Pune
- Tetrapack Industries, Chakan, Pune
- Hindustan Coca Cola Beverages, Kheda, Hyderabad & Guntur
- Pepsico Holdings, Kanpur
- Dharampal Satyapal Ltd., Kullu, H.P.

TEXTILES :

- Bombay Dyeing DMT Plant, Patalganga
- Reliance, Patalganga
- Lavino Kapur, Boisar
- Arvind Mills, Ahmedabad
- Alok Industries, Silvassa, Vapi
- Bombay Rayon, Boisar, Kolhapur & Bangalore
- Mandana Dyeing, Boisar
- Sheetal Fibre Ltd., Ludhiana
- Choudhary Fashions, Jaipur

PETROLEUM :

- Reliance Industries, Jamnagar, Patalganga
- GAIL Gas Pipe Line, Vizag, Vijayawada
- Guru Gobind Singh Refinery, Bathinda
- HPCL, Mahul
- BPCL, Mahul
- IOCL, Haldia, Mathura
- BPCL, Mumbai Manmad Pipe Line, Manmad Sawai Madhopur Extension

BREWERIES :

- Seagram, Nashik
- United Breweries, Aurangabad, Hyderabad, Orissa
- Arian Breweries, Jaipur

- SAB Miller, Aurangabad
- Varun Breweries, Noida
- Carlsberg India, Hyderabad

GOVERNMENT AGENCIES :

- BARC
- MES
- Railways
- Airport Authority of India
- WBTD, Murli
- Ichapur Rifle Factory, Ichapur
- Chittaranjan Locomotive Works, Chittaranjan
- CPWD, Kolkata

DAIRY INDUSTRIES :

- Hatsun Foods, Dharmapuri
- Vijaya Dairy, Hyderabad
- Amul Dairy, Dharuhera, Manesar, Virar
- NDDDB, Anand
- Gokul Dairy, Kolhapur, Vashi
- Mother Dairy, Anand
- Milma Dairy, Wayanad
- Gowardhan Dairy, Parag Milk Foods, Pune, Chittoor

CORROSION PROTECTION APPLICATION :

- RCF Thal Plant
- Exide Industries Limited, Hosur in Tamilnadu

BULK DRUGS :

- Alchem, Ankleshwar
- Sun Pharma, Ahmednagar
- Unichem, Roha
- Cadila, Ankleshwar
- Lupin Pharma, Boisar
- Nicholas Piramal, Mumbai
- Avantis, Ankleshwar
- Cipla Ltd., Patalganga, Kurkumbh & Bangalore
- Matrix Laboratories, Hyderabad & Vizag
- Dr. Reddy's Laboratories, Hyderabad & Vizag
- Covalent Labs, Hyderabad & Vizag
- Polydrug Pharma, Ambarnath

S. No.	Test Description	IS 4457:2007	Industrial Tiles		
			1.2cm	1.5cm	2cm
A) Dimension Quality					
1	Deviation in Length & Width	±0.75%	±0.6%	±0.6%	±0.6%
2	Deviation in Thickness	±5%	±5%	±5%	±5%
3	Straightness of Sides	±0.5%	±0.4%	±0.4%	±0.5%
4	Rectangularity	±0.6%	±0.5%	±0.5%	±0.5%
5	Surface Flatness	±0.5%	±0.3%	±0.3%	±0.3%
B) Physical Properties					
1	Water Absorption	< 0.5%	< 0.5%	< 0.5%	< 0.5%
2	Mohs Hardness		>7	>7	>7
3	Flexural Strength (Average MOR)	>35N/mm ²	>38N/mm ²	>38N/mm ²	>38N/mm ²
4	Breaking Strength	≥1300N	>2500N	>4000N	>7500N
5	Abrasion Resistance/Deep Abrasion	<175mm ³	<144mm ³	<144mm ³	<144mm ³
6	Skid Resistance	>0.4	>0.6	>0.6	>0.6
7	Density (gm/cc)	>2	>2.2	>2.2	>2.2
8	Moisture Expansion	Nil	Nil	Nil	Nil
C) Chemical Properties					
1	Resistance to Conc. Acid (wt. Loss)	< 1.5 %	≤1 %	≤1 %	≤1 %
2	Resistance to Household Chemicals & Swimming Pool Salts	Resistance	Resistance	Resistance	Resistance
3	Stain Resistance	Resistance	Resistance	Resistance	Resistance
D) Thermal Properties					
1	Thermal Expansion	<9 x 10 ⁻⁴ K ⁻¹	<9 x 10 ⁻⁴ K ⁻¹	<9 x 10 ⁻⁴ K ⁻¹	<9 x 10 ⁻⁴ K ⁻¹
2	Thermal Shock Resistance	No damage	No damage	No damage	No damage

www.enduratile.com

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