

AWARENESS ABOUT GLASS & ITS USE

Purely bio-degradable.



Purely eco-friendly.



Purely recyclable.



What is Glass?

- **Made from all natural and sustainable raw material**
- **Mixture of silica sand, soda-ash, lime stone and other trace elements**
- **Glass is chemically inert and pure**
- **Melts at 1500° F**
- **It is no longer an undifferentiated commodity**
- **Glass is rated “GRAS” or “generally regarded as safe” by the U.S. Food & Drug Administration**

GLASS HAS PURE AND CLASSY IMAGE WITH SUSTAINABLE FUTUTRE

Glass adds nothing, and is eco-friendly

History of Glass

Discovered in
3000 BC

India's first
glass plant was
setup at
Talegaon
(Maharashtra),
Pune

All India Glass
Manufacturers
Association
established
(AIGMF)

Glass is given
GRAS
(Generally
recognized as
safe) by FDA

Initiation of
global
competition &
speedy growth in
float glass
industry

1908

1909-49

1944

1950

1960

1970-90

End of
20th
century

Today

Glass industry
in the primitive
stage

First use of
modern
equipment in
India to
manufacture
glass

Collaboration
with
Multinational
companies

Glass is a high-
tech industry.
Evolved from
craft to precise
high tech
industry

Glass adds nothing, and is eco-friendly

100 Years Long Glass Journey in India

- **Indian glass Industry is more than 100 years old.**
- **Estimated to be more than 2.7 billion USD worth**
- **Growth of Glass Industry in India has even outpaced growth of Indian Economy**
- **Growth sustained even during recent global recession**

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Indian Glass Industry - Burgeoning Growth

Indian glass industry - mix of float, container and miscellaneous industry

Indian glass industry remained cottage industry for long time

Industry evolved to adopt modern processes and automation in large way

Container glass

**Industry Size - Rs.4500 crores
Installed capacity - 7000 TPD**

Float Glass

**Industry size - Rs.3400 crores
Installed capacity - 4700 TPD**

Per capita consumption (INDIA)

**Container glass - 1.4kg
Float Glass - 0.8kg**

Growth Driving Factors

Expansion of Construction and Automotive industries

Increased acceptance of Green Building concept

Government regulation for Toughened and Laminated glasses

Global concerns about energy conservation and environment

Nanotechnology – The future in world of glass

Increasing demand of Decorative glasses with Digital print technology.

Demand for value-added products is enriching the product mix and boosting the sales line

Value-added products are delivering greater functionality to vehicle glazing

Usage of Glass

Industrial usage

- Container glass



- Countertops & floors



- Float Glass



Glass adds nothing, and is eco-friendly

Tiles



Bangles



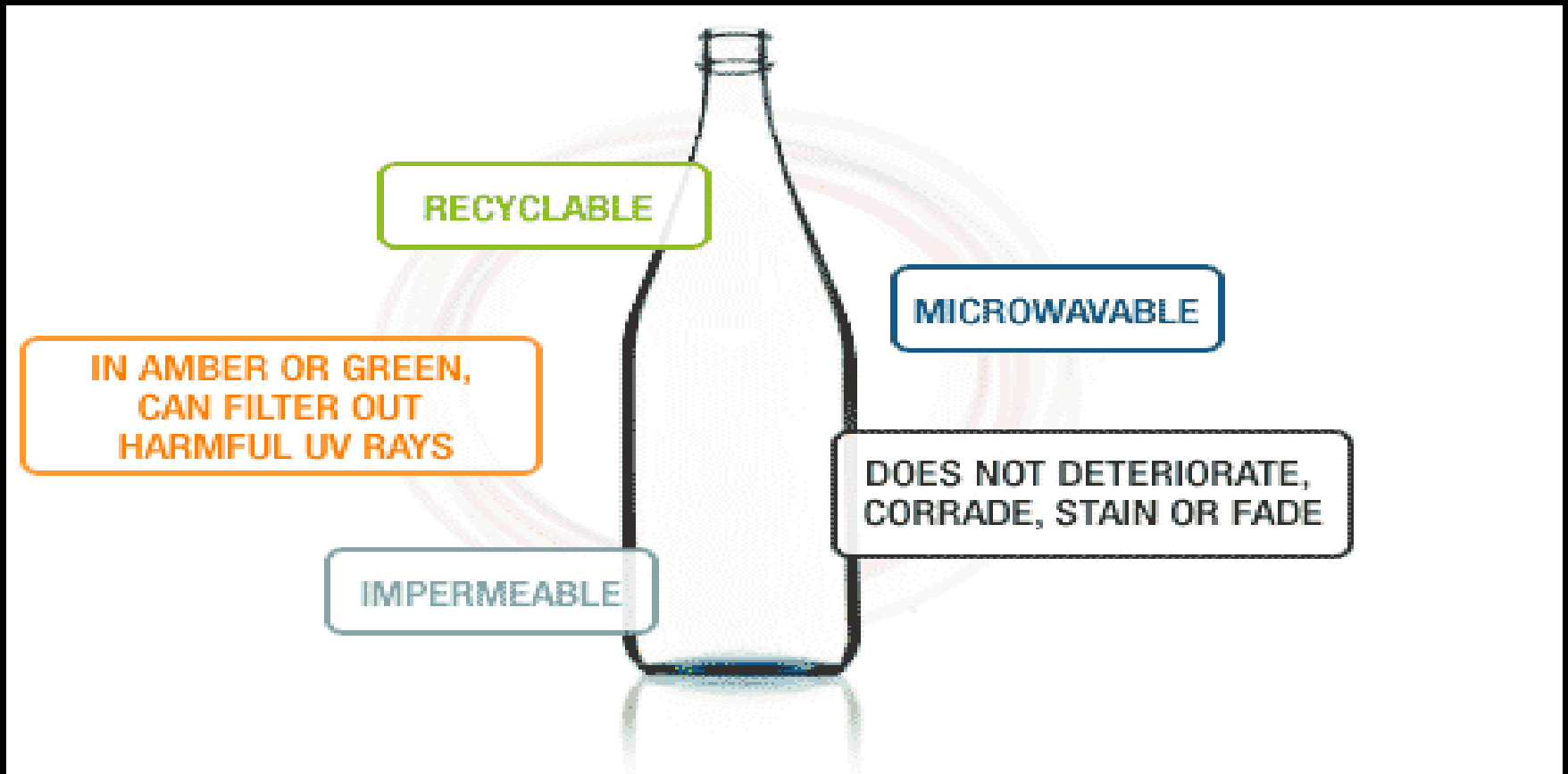
Consumer usage

- Spectacles
- Glass containers used in laboratory
- Bulbs
- Dining sets
- Mirror
- Home Furniture
- Decorative items like chandeliers, pots

Tableware

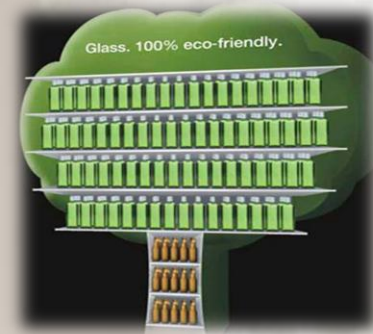


Why glass is the red hot Green material



Glass adds nothing, and is eco-friendly

Benefits of Glass



Every ton of glass recycled saves 322Kwh of energy, 246 kg of CO₂ and 1.2 tonnes of virgin raw material

It helps in savings on Waste transport and disposal costs

Product packaged in glass denotes premiumness in terms of quality and care of the packaging of the product

Glass can be used for high speed filling

Reduces the quantity of waste to be treated or dumped

Glass adds nothing, and is eco-friendly

Container Industry - Uses & Benefits



USES

- Alcohol (IMFL & Beer)
- Food
- Pharmaceutical
- Soft Drinks
- Others

CONSUMPTION(In%)

60
15
12
10
3

BENEFITS

- 100% natural packaging medium
- Preserves taste and aroma
- Proved to be safe and healthy for consumers
- Best packaging material for sterilised products
- Customers is afforded the facility of visually examining the content
- Used for packaging of chemicals and solvents as it does not react
- Best packaging material to maintain nutritional values of the food

Glass adds nothing, and is eco-friendly

Float Industry - Uses & Benefits



USES

- **Architectural**
- **Automobile**
- **Others**

CONSUMPTION(In%)

85
10
5

BENEFITS

- **Harnesses the heat of the sun to warm structures and act as prime ingredient in 'passive solar' designed buildings**
- **Flat glass in doors and windows allows sun light and saves energy**
- **Completely non-toxic & non-pollutive product**
- **Use in partitions checks deforestations**

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Global Consumer Preference

Consumers prefer glass - Key survey figures:

- **84% of consumers want more glass packaging**
- **70% say they would purchase more glass-packed products to promote container glass**
- **42% say they are willing to pay extra for glass packaging**
- **82% want industry to use more glass containers**

Glass adds nothing, and is eco-friendly

Global Consumer Preference (Contd..)

Dominique Tombeur, president of FEVE (**European Container Glass Federation**), said the study also demonstrates that most consumers are concerned about the risk that certain packaging materials may have on the food and drinks they buy:

“Sixty-nine per cent of buyers are convinced that glass is the best at preserving the original taste and nutritional value of their food and beverages, while forty-eight per cent say glass is the safest packaging material for health reasons.”

He said that the participants also claimed that food and drinks packaged in glass seemed more prestigious.

Glass-Sustainable material



Glass sustainability is not just a feel-good Buzzword

European glass packaging industry is committed to Sustainable packaging

Bottle-to bottle glass production minimizes the use of natural resources needed for the production of new glass

Returning glass makes a great deal of sense in environmental terms, since it saves energy and primary mineral resources, as well as reducing waste and Pollution emissions

Glass is 100% recyclable and infinitely so

Glass offers a unique closed loop system

Glass recycling reduces CO₂, saves raw materials and energy

Glass controls its impacts

Glass comes from nature

Glass is safe in landfill

The glass industry is local

Glass containers can be reused

Glass adds nothing, and is eco-friendly

Glass-Sustainable material (contd..)

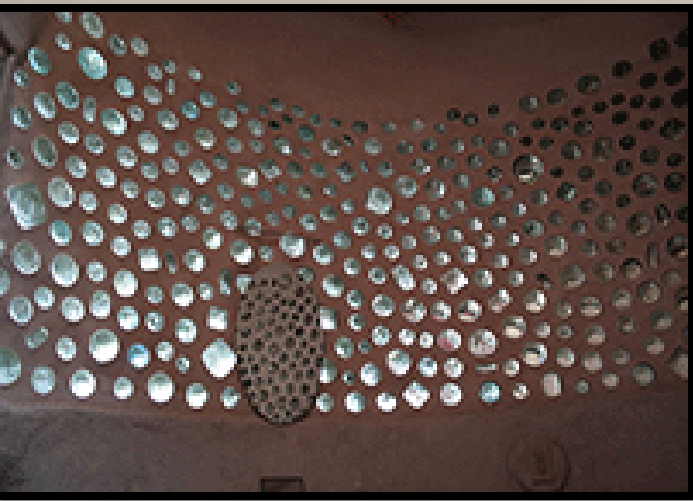
Over 60,000 empty glass bottles are laid on environmentally friendly houses walls with the bottoms toward the exterior



New glass bottle house, Green Home Building Design, U.S

Glass adds nothing, and is eco-friendly

Glass- Sustainable material (Contd..)



Sustainable building materials,
Jacobsen eco friendly house



De heer Heineken WoBo glass
bottles eco friendly products

Glass bottles and glass jars are eco friendly products. Once the content is gone, empty bottles and jars can be recycled and used as one of sustainable building materials for environmentally friendly homes design

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THANK YOU



GLASS
adds
nothing

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