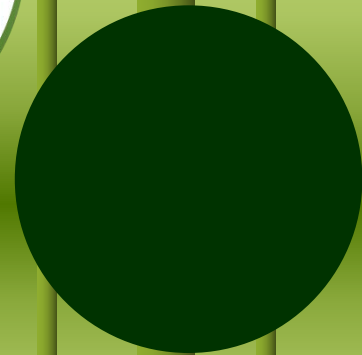
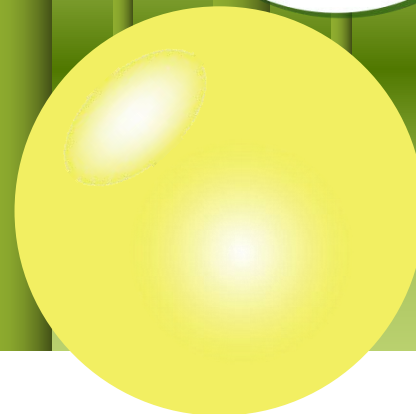
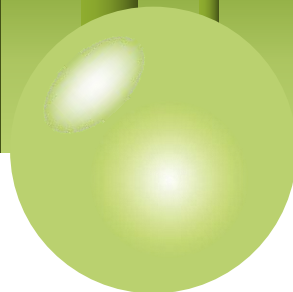


New Application Fields of Architecture Membrane

**—Shanghai Shenda Kobond
New Materials**



Overview

1. Development History

2. Application Areas

3. Other New Materials

Development Hoistory



Development History

End of
Han Dynasty

20th
century

Early of
90 time

End of
90 time

NOW

Making textile into wax cloth, using on vehicle flashing, sun shade and tent.

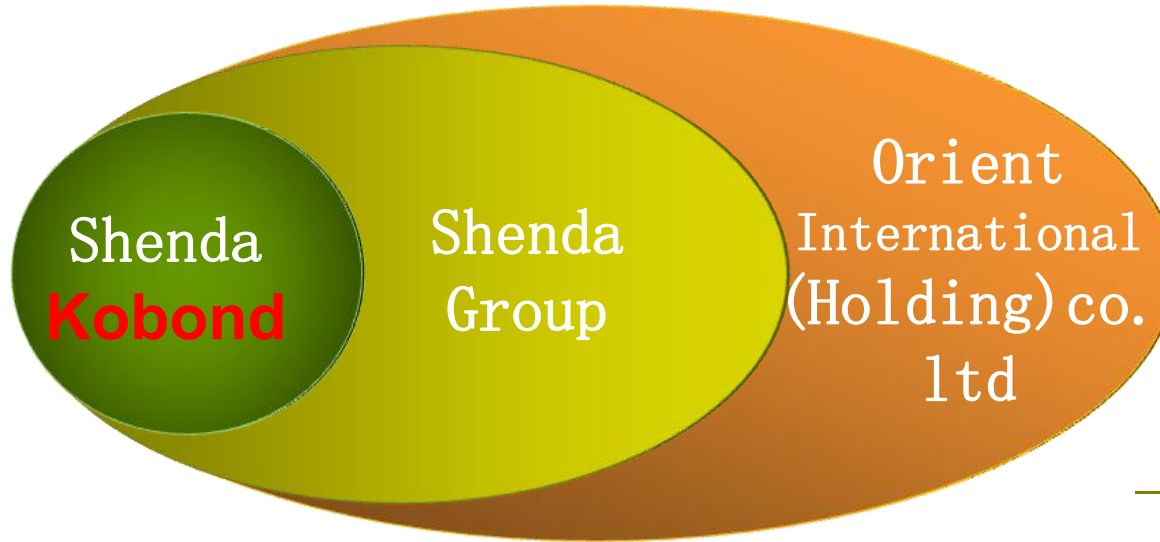
Tarpaulin with coated dry plant oil on gray fabric, as shelter, raincoat and umbrella.

First production line about banner flex, ad and storage materials, etc.

Membrane rising in China with many projects.

The success of bidding the Olympics in 2008 and EXPO in 2010, fast development of architecture membrane

Introduction of Kobond



Promise

**Capital
Structure**

**Establish
background**

**Develop
Idea**

Kobond is high-tech enterprise with **ISO9001**

Shenda Group came into the market in 1993, annual sale revenue more than **13 billion RMB**.

Shangtex is one of the largest textile group, annual sale revenue more than **110 billion RMB**.

Introduction of Kobond

Factory

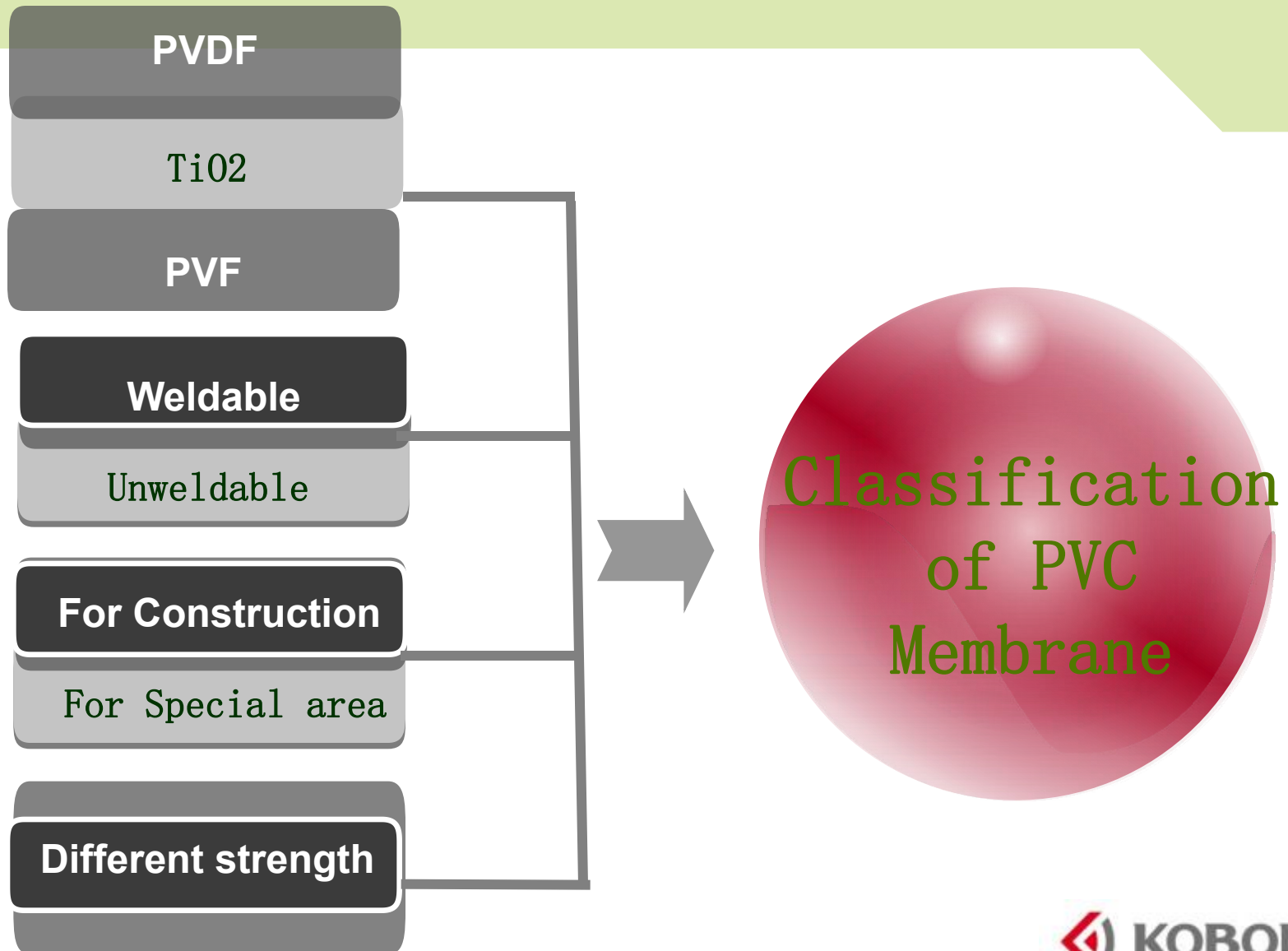


Modernize production base located
in Pudong New Area

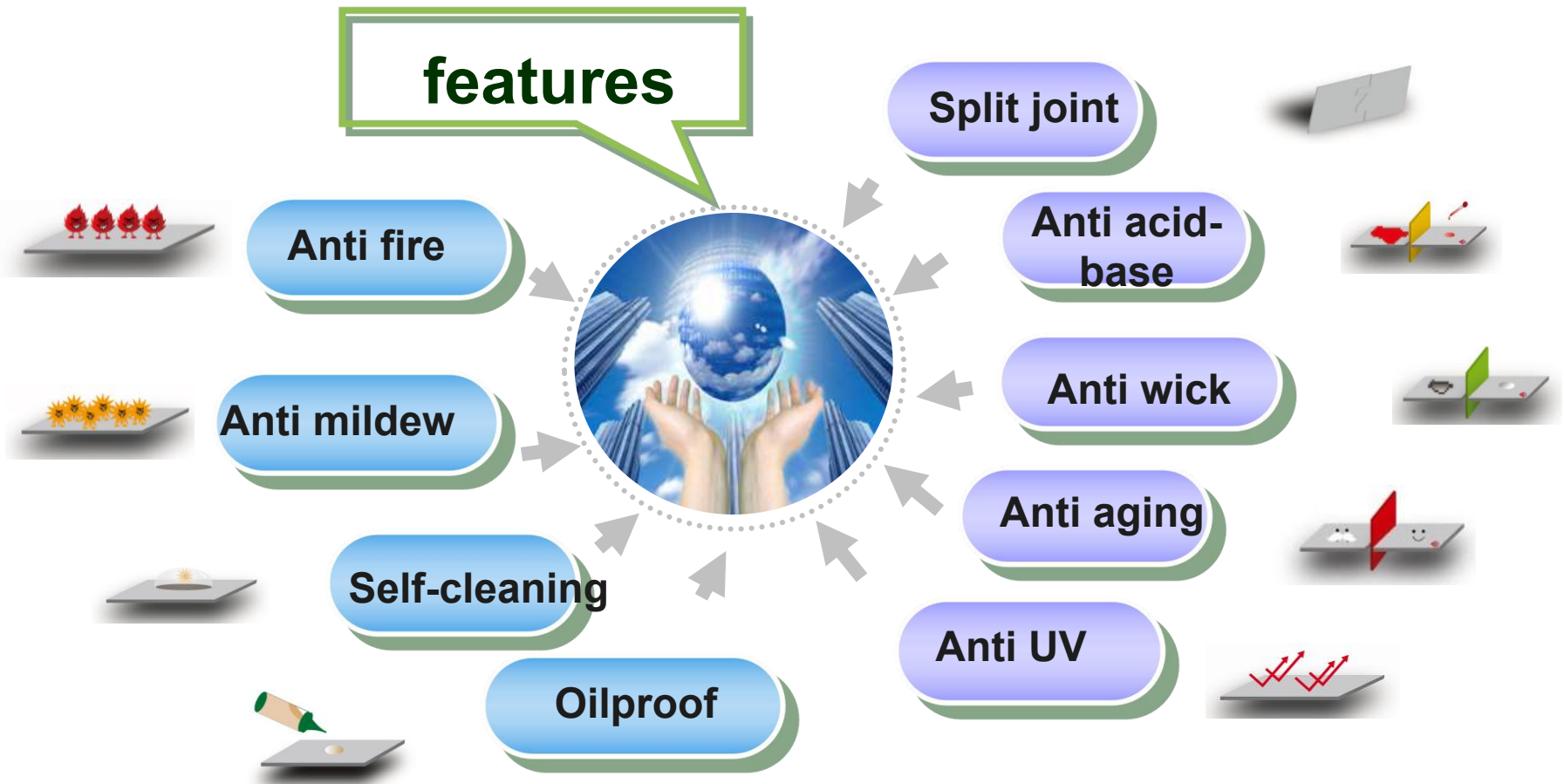
Machine



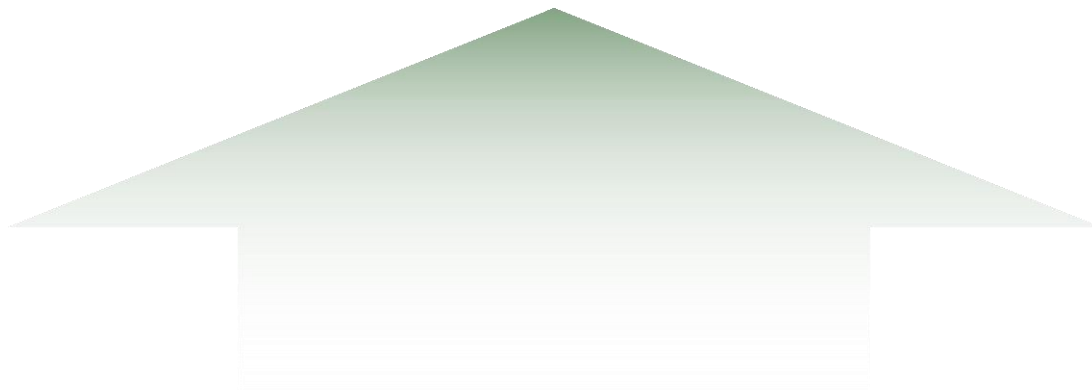
Hot-melt coating production line
imported from Germany



Membrane



Application area



Application area

A. Sports facility

B. Transportation

C. Landscape

D. Temporary build

E. Environment Protection



Item:

Nanhu sports centre

Materials: MH56021

Quantity: 20000 sq.m



Tensile structure--A Cheng Stadium in Harbin





Item:

Gymnasium in Beijin

Materials :

MC13122G and HB0914

Quantity:10000 sq.m



Item: Shenzhen Daya
Baysailboard base

Material: MC23191

Quantity: 10000sq.m



Item: Tennis stadium in
Beijing

Material:

MC13122G and HB0914

Quantity: 12000sq.m



Blockout

Double layers stadium for Tennis and hockey in Olympic center of QinHuangDao, HeBei



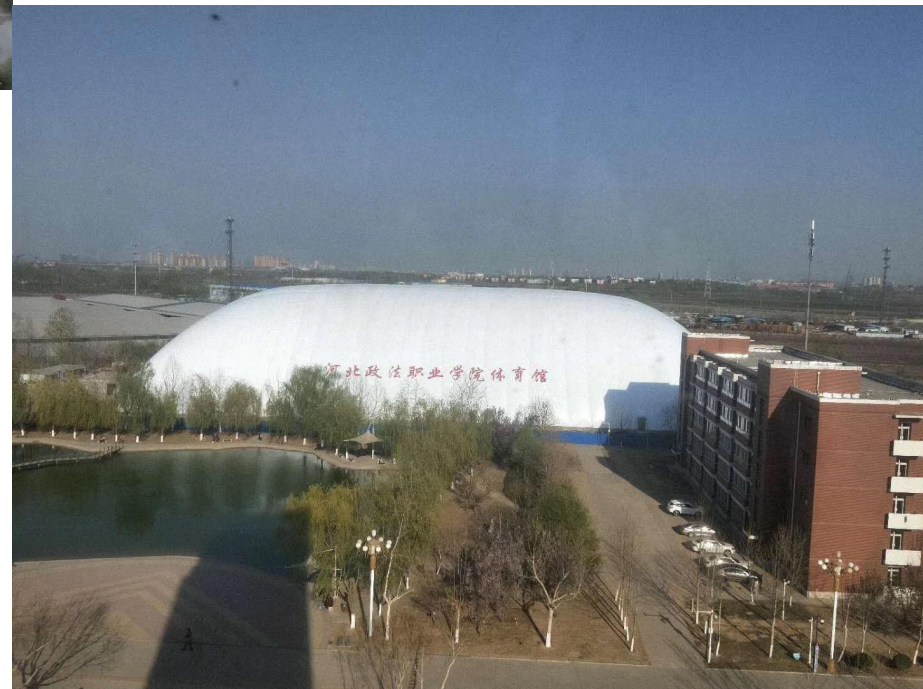
Materials: MC661H1K-1100
Quantity: 15000SQM
PVF membrane



Stadium for Hebei Institute of Political Science and Law



Materials: MA807H4I-1300
Quantity: 5000SQM
PVF membrane
Blockout



Application area

A. Sports facility

B. Transportation

C. Landscape

D. Temporary build

E. Environment Protection

Item: Railway station
in Suzhou

Material: MB09121T

Quantity: 3500sq.m





Item: Toll Station

Material: MC55121



Item: Bus station

Material: MC13122

Item: carport

Material: MC23191/601



Application area

A. Sports facility

B. Transportation

C. Landscape

D. Temporary build

E. Environment Protection

Item: Hengdian World
Studios

Material: MC13122





Item: Coast landscape

Material: MC23191/306

Ecological lobster city in Qianjiang,China



Materials:MC231E1G-1100
Quantity:5000SQM
TiO2 Membrane



WORLD EXPO 2010

Broad Pavilion at World Expo 2010



Application area

A. Sports facility

B. Transportation

C. Landscape

D. Temporary build

E. Environment Protection

Item: Temporary work area in
Athens Olympics 2004

Material: HI0914G、HB0914

Quantity: 80000sq.m



Item: Command center of sail in
Beijin Olympics

Materials: HI0914G、HB0914

Quantity: 50000sq.m



Item: Folding storage
in Italy

Material: MB23191/301

Quantity: 4000sq. m



Application area

A. Sports facility

B. Transportation

C. Landscape

D. Temporary build

E. Environment Protection

Item: Power station in Turkey

Material: ZC1214

Volume: 10000 stere



Item: Cattle farm in Gansu

Material: ZH1509

ZB1019



Item: Sewage treatment
plant in Italy

Material: ZC1214

Quantity: 5000sq.m





Item: Sewage treatment
plant in Zhejiang

Material: ZC1419

Quantity: 4000sq.m



Item: Garbage landfill

Material: MC55121

Quantity: 13000sq.m



4 different ways of surface treatment for Membrane

Features	Surface property	Self-cleaning	Aging resistance
PVF Film(Dupont Tedlar)	fully covered by film	Superior performance during whole life span	Superior performance during whole life span
PVDF lacquering	Covered with close points,non-film	Good performance at beginning,but decreasing fast	Middle level
TiO ₂ +PVDF lacquering	Covered with close points,non-film	Good performance at beginning,but decrease fast	Great for first 5 years,but decrease rapidly after 10years
Acrylic lacquering	Covered with close points,non-film	Limited performance at beginning,decreased rapidly after 3years	Limited

Comparison of PVF and PVDF membrane

PVDF



PVF

PVF Membrane projects in domestic

我们做的PVF膜案例

常州威雅公学



我们做的PVF膜案例

上海进才实验学校



我们做的PVF膜案例

北京篮球文化中心



PVF membrane projects in overseas

Lawn ball stadium in Sokcho



Tattoo outdoor stage in Wonju



Ochang Soccer Stadium Stand in Cheongju



Gateball stadium in Yeongdeok



Outdoor stage in Hwasun Dolmen Site



Wangseung lake park outdoor stage in Uiwang



Green Narae Park outdoor stage in Hadong



Sukji park's Waterplay facility in Suwon



Yongu market outdoor stage in Gongju



Multi-purpose stadium in Andong



Other new material



Other new material



→ TP0 waterproof

→ PVC waterproof

→ **Oil boom**

→ Water bag

→ Rolling door

→ **Boat**

→ Others

TPO Waterproof



Item:Nuclear power reset base
in Lingang Shanghai

Material: WK1213

Quantity: 15000sq. m

**Without plasticizer,QA
more than 25
years,environmental
production,recycle**



PVC Waterproof

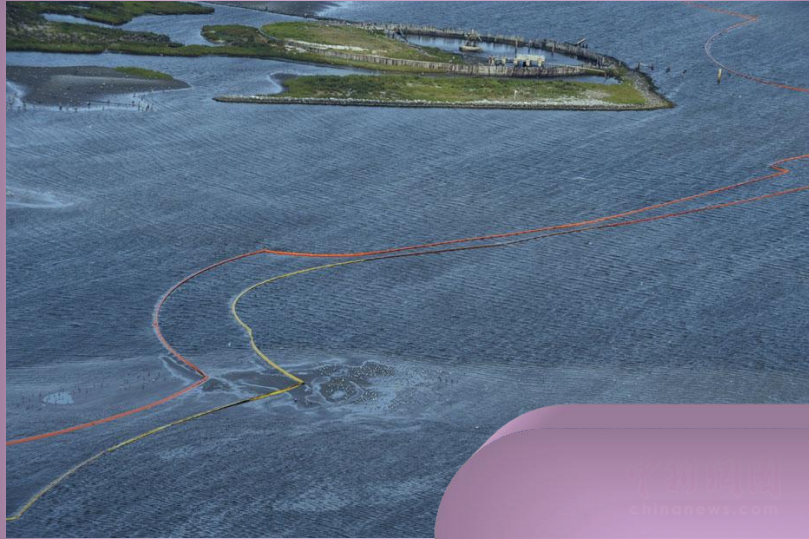
Item: International passenger
liner in Tianjin

Material: WA0913

quantity: 30000sq.m



Oil boom



Special
formula, oil
resistivity

BP assigned
supplier of
the event at
Mexico gulf oil
spill, around
2.4 million
sq. m

Water bag



Item: export to Australia

Material: SB1013

Food grade, non-toxic, high strength, good gas tightness

Rolling Door



**Flexibility
and
folding**

**hangar
door**

Boat



Item:

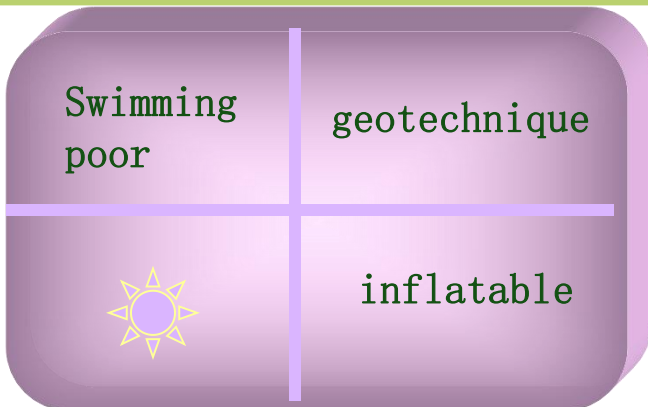
guide boat in expo

Material: SC1213

Tarpaulin



Others



Thank you!

