Adhesive Promoting Company

ALTO CAST
& SPLINT

Your value will be created by ALTOCHEM.

We have made a valuable history with our goods and minds. We hope to create more powerful history with you.
INTRO

ALTOCHEM is established in 2002 started as a chemical product manufacturing company supplying industrial adhesives including for medical use. Especially, not only manufacturing synthetic orthopedic casting tape & splint, but also we have been supplying all the raw materials, production lines and techniques to other manufacturers as a total service. With consistent and passionate R&D investment we have been keeping our product’s quality superb, which brought us high reputations from all customers. This made us set a firm footing as a top company in its field and we will lead a new way.

HISTORY

2014–2017
- Promising Export Company Award
- Inno–biz company Award
- Promising Small&Medium enterprise Award by Kyeonggi–Do

2012–2013
- Patent for High Heat Resistant Polymer Resin
- Goverment Procurement for the Korean Military Hospital

2010
- Patent for Casting Tape
- Patent for Cast Machine

2009
- FDA certified
- CE certified
- ISO 9001 certified
- ISO 13485 certified

2008
- Research institute certified
- Manufacture Medical Devices certified
- KGMP certified

2007
- Venture company certified
- 1,000,000 USD Export Award

2005
- Own facilities completion

2002
- Establish
BUSINESS AREA

Chemical / Electronic

01 | Water born Binder & Hardner
02 | Coating resin for special purpose gloves
03 | Electronic PSA (Pressure Sensitive Adhesive)
04 | Electronic heat emission material
05 | Vacuum casting resin (PU / Epoxy)
06 | Electronic binder
07 | Electronic Metal Paste & Ink

Medical

01 | Medical adhesives
02 | Synthetic orthopedic casting tape & splint
03 | Casting tape & Splint production machine
04 | Yarn (fiberglass)
05 | Fabric (fiberglass, polyester, non-woven)
06 | Resin & Additives
07 | Production techniques
08 | Dehumidification facilities
09 | ALTO CMC Thumb Brace™
Adhesive Promoting Company

ALTOCAST™

Synthetic orthopaedic casting tape

Historical Memory

20 years technical experiences / 25 Countries exporting recorde
Korea military hospital supplier for 5 years in a row
Overseas local site installation for manufacturing machine

Fiberglass or Polyester Substrate

ALTOCAST™ is a synthetic orthopaedic casting tape made of knitted fiberglass or polyester substrate impregnated with water-activating polyurethane resin. The fabric is extensible in all directions, which makes it very comfortable in use.

Exposure to any moisture will cause the tape to become rigid.
The setting time is approximately 4 minutes and it takes 20 minutes for full weight bearing.

Smooth Finish

High quality knitted substrate and special resin formula provide smooth surface and strong layer adhesion.

Superb and Distinguished Color

Excellent Moulding

Superior multi-direction stretch gives excellent moulding on curved area.

www.altochem.com
## Features

- Lightweight
- Strong
- Air Permeable
- Moisture Resistant
- X-ray Transparent
- Excellent Moulding
- Superb Adhesion
- Smooth Unwinding
- Simply to use
- Full range

## Products Model Name

<table>
<thead>
<tr>
<th>A</th>
<th>C</th>
<th>2</th>
<th>3</th>
<th>6</th>
<th>H</th>
<th>F</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color ex) W : White, G : Green, B : Blue, ....</td>
<td>F : Fiber Glass, P : Polyester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H : Hard, S : Soft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (3.6m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width (2~6inch) ex) 2, 3, 4, 5, 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C : Cast / S : Splint</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A : ALTOCHEM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Table: ALTOCAST™

<table>
<thead>
<tr>
<th>Size</th>
<th>Package</th>
<th>Type</th>
<th>Substrate</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>2in x 4yds (5.0cm x 3.6m)</td>
<td>1 Roll/ Pouch</td>
<td>Hard</td>
<td>Fiberglass or Polyester</td>
<td>Red</td>
</tr>
<tr>
<td>3in x 4yds (7.5cm x 3.6m)</td>
<td>10 Rolls/ Inbox</td>
<td>Soft</td>
<td></td>
<td>Black</td>
</tr>
<tr>
<td>4in x 4yds (10.0cm x 3.6m)</td>
<td>100 Rolls/ Outbox</td>
<td></td>
<td></td>
<td>Blue</td>
</tr>
<tr>
<td>5in x 4yds (12.5cm x 3.6m)</td>
<td></td>
<td></td>
<td></td>
<td>Light Blue</td>
</tr>
<tr>
<td>6in x 4yds (15.0cm x 3.6m)</td>
<td></td>
<td></td>
<td></td>
<td>Green</td>
</tr>
</tbody>
</table>

ALTOCHEM CO., LTD.

6, HWASAN-RO 101BEON-GIL, IDONG-MYEON, CHEOIN-GU, YONGIN-SI, GYEONGGI-DO, KOREA
Tel : +82(0)31 336 9348 / Fax +82(0)31 336 9349 / Email : altoall@altochem.com
ALTO U-PAD
Under Cast Padding

* Soft touch on skin / * Minimize allergic reaction due to no chemical treatment

Features

01 | Provides excellent water repellency and air circulation
02 | Elasticity and high thickness relieve the impact.
03 | Protection of the skin under casting tape from the growth of bacteria and odor
04 | Easy treatment - There is no need to use a cotton bandage, so there is no hassle.
05 | Suitable for use with all casting tapes, synthetic, and plaster
06 | Available in a variety of widths / Applied to all parts of the body

Lower Price
Higher Density
Indications For Use

1. Cut to the desired length.
2. Fold under padding in two layers.
3. Apply a folded underpadding to the treatment area.
4. Fold the edges of both ends as shown in the picture.
5. Wind casting tape on under padding.

Precaution

1. It should be applied according to the instructions of a doctor or specialist.
2. Do not use contaminated under padding.
3. Store the product at room temperature with low humidity.
4. In case of problems, consult with a doctor or specialist.

Storage

1. Store the product at room temperature with low humidity.
2. The shelf life is three years.

Product Sizes & Packaging

- **2 inch (Code no: AUP2100)** / Size: 5.0cm x 1000cm (2 inch x 11 yds) / Packaging: 1 Roll/box
- **3 inch (Code no: AUP3100)** / Size: 7.5cm x 1000cm (3 inch x 11 yds) / Packaging: 1 Roll/box
- **4 inch (Code no: AUP4100)** / Size: 10.0cm x 1000cm (4 inch x 11 yds) / Packaging: 1 Roll/box
- **5 inch (Code no: AUP5100)** / Size: 12.5cm x 1000cm (5 inch x 11 yds) / Packaging: 1 Roll/box
- **6 inch (Code no: AUP6100)** / Size: 15.0cm x 1000cm (6 inch x 11 yds) / Packaging: 1 Roll/box
Adhesive Promoting Company

ALTOSPLINT™

Synthetic orthopaedic Splint

Historical Memory

- 20 years technical experiences
- 25 Countries exporting record
- Korea military hospital supplier
- 5 years in a row Overseas local site installation for manufacturing machine

Fiberglass/Non-woven substrate

ALTOSPLINT™ is a synthetic orthopaedic product intended for the emergency and temporary use. Its outside pads are non-woven fabric and the inside is 7-8 layers of fiberglass or a single layer of non-woven substrate impregnated with water-activating polyurethane resin. Exposure to any moisture will cause the splint to become rigid. The setting time is approximately 4 minutes and it takes 20 minutes for full weight bearing.

Hydrophobic non-woven pad
Resin coated supporting layers
7-8 layers fiberglass or one layer of non woven fabric.
Features

1. ALTOSPLINT does not require gloves for application.
2. ALTOSPLINT has superb x-ray permeability, which allows taking x-ray with the splint.
3. ALTOSPLINT makes it easier to shape the contours of the human body especially bony prominences such as joints, elbows, ankles and heels.
4. ALTOSPLINT’s skin-contact-pad (unprinted side) is hydrophobic and non skin-contact-pad (printed side) is thin layer that allows to spray water on the printed side by a sprayer instead of dipping in water, which is easy to use and does not make patients feel unpleasant because of wet skincontact-pad.
5. ALTOSPLINT Roll type is economical since you can cut the roll as long as you require.
6. ALTOSPLINT Pre-cut type is simple to use since it has various lengths.

Free Needle-sprouting phenomenon

When cutting, fiberglass sprouts up and becomes painful needles but our unique heat treatment leaves no hazard.

<table>
<thead>
<tr>
<th>size</th>
<th>package</th>
<th>type</th>
<th>substrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2in x 5yds (5.0cm x 4.5m)</td>
<td>1 Roll / in box</td>
<td>Roll</td>
<td>Fiberglass or Non-woven fabric</td>
</tr>
<tr>
<td>3in x 5yds (7.5cm x 4.5m)</td>
<td>1 Roll / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4in x 5yds (10.0cm x 4.5m)</td>
<td>1 Roll / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5in x 5yds (12.5cm x 4.5m)</td>
<td>1 Roll / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6in x 5yds (15.0cm x 4.5m)</td>
<td>1 Roll / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2in x 10in (5.0cm x 25cm)</td>
<td>10 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3in x 12in (7.5cm x 30cm)</td>
<td>10 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3in x 35in (7.5cm x 88cm)</td>
<td>5 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4in x 15in (10.0cm x 38cm)</td>
<td>10 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4in x 30in (10.0cm x 75cm)</td>
<td>5 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5in x 30in (12.5cm x 75cm)</td>
<td>5 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5in x 45in (12.5cm x 114cm)</td>
<td>5 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6in x 30in (15.0cm x 75cm)</td>
<td>5 EA / in box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6in x 45in (15.0cm x 114cm)</td>
<td>5 EA / in box</td>
<td></td>
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</tr>
</tbody>
</table>
Adhesive Promoting Company

ALTO System

For synthetic orthopaedic casting tape & splint

Historical Memory
20 Years technical experiences / 25 Countries exporting recorded
Korea military hospital supplier for 5 years in a row
Overseas local site installation for manufacturing machine

The most advanced technologies
ALTO system for the production of casting Tape & Splint is operated by a touch panel, which is over 90% automated so less manpower is required and it is easy to control an uniform quality.

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# Basic information

**Production capacity**
- Casting tape machine – max 2,400 roll/day (8hrs)
- Splint machine – max. 1,000 m/day (10 hours)

**Machine dimension (Width x Length x Height)**
- Casting tape machine – 3.5m x 1.4m x 1.8m
- Splint Machine – 18.0m x 1.5m x 2.7m

**Utility consumption**
- Electricity: 50 kw except air conditioning facilities
- Air Pressure: 7~8 kgf/cm²

**Required Site**
- Raw material storage: About 200m²
- Production Area: About 200m²
- Products Storage: About 100m²
- * Additional spaces for office, laboratory, etc. should be considered.

## System components

<table>
<thead>
<tr>
<th>Component</th>
<th>Required manpower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casting tape machine</td>
<td>For the operation of casting tape machine</td>
</tr>
<tr>
<td>Splint Machine</td>
<td>- Machine operation and control ~ 1 person</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>- Pouch sealing ~ 1 person</td>
</tr>
<tr>
<td>Dehumidifying System</td>
<td>- Raw material handling and packing ~ 1 person</td>
</tr>
<tr>
<td>Raw material Drying/Heating System</td>
<td></td>
</tr>
<tr>
<td>Heating oven for resin</td>
<td></td>
</tr>
<tr>
<td>Polyurethane resin mixer &amp; supplier</td>
<td></td>
</tr>
<tr>
<td>Sealing &amp; printing system</td>
<td></td>
</tr>
<tr>
<td>Bobbin cutting system</td>
<td></td>
</tr>
<tr>
<td>Weighing instrument</td>
<td></td>
</tr>
<tr>
<td>Laboratory equipment</td>
<td></td>
</tr>
</tbody>
</table>

**Splint Machine**
Adhesive Promoting Company

ALTO Solution

For synthetic orthopaedic casting tape & splint

- **Raw materials with the proven qualities**

ALTOCHEM has been supplying the raw materials for the production of synthetic orthopaedic casting tape and splint to the majority of the manufacturers since 2002. Especially ALTO PU Resin and Fiberglass Tape are the most important key elements to the products quality that we have received high reputations from all users.

- **Fiberglass/ Polyester Tape**

ALTO fiberglass / polyester tape has excellent tensile strength and stretches very well in all directions that allows casting tape and splint high performance in moulding the contours of the human body especially bony prominences such as joints, ankles and heels.

ALTO fiberglass Tape has no needle-sprouting problem. When cutting, fiberglass sprouts up and becomes painful needles but our unique heat treatment leaves no hazard.

- **Polyurethane Resin**

ALTO PU Resin contains special oil instead of surfactant for lubrication. So it is not foamy and not sticky while applying, and its surface is very smooth after hardening.

ALTO PU Resin is designed to be hydrophilic that makes the water reaches deep into the resin. So it has super high compression strength and adhesion between the tape layers.

ALTO PU Resin is being used high quality stabilizer so that it has outstanding storage stability and does not have unpleasant chemical smell and does not produce dioxin by incineration.

- **Technical Service**

ALTOCHEM provides our client with full technical service such as Mass production, PU Resin mixing system, Dehumidification system, QC management, Maintenance.

- **Etc-Raw materials & Part for ALTO Cast & Splint**

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Chemical & Electronic Products

ALTOCHEM has been manufacturing vacuum molding resin for over 10 years, focusing to develop Heat Emission film, PSA resin also. Finally we have succeeded in develop Heat Emission Film and Paste. We have completed developing Metal paste and adhesive for electronic part as new item and selling for electronic products.

Vacuum Casting Resin

3D Product ➔ Silicone Mold ➔ Vacuum Casting Products

Raw Materials for Electronic & Special Resin

ALTOCHEM’s electronic materials products have excellent electrical and mechanical properties. Our products are using for flexible PCB, LED, Power Module, EMI shielding.

Other Products : ALTO CMC Thumb Brace™

The ALTO CMC Thumb Brace stabilizes the basal joint of the thumb (CMC-1) and places the thumb’s metacarpal (metacarpal 1) in a functional position.

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