

SURGIWEAR®
EN ISO 13485:2012 COMPANY



**Products for
Bone Grafting**

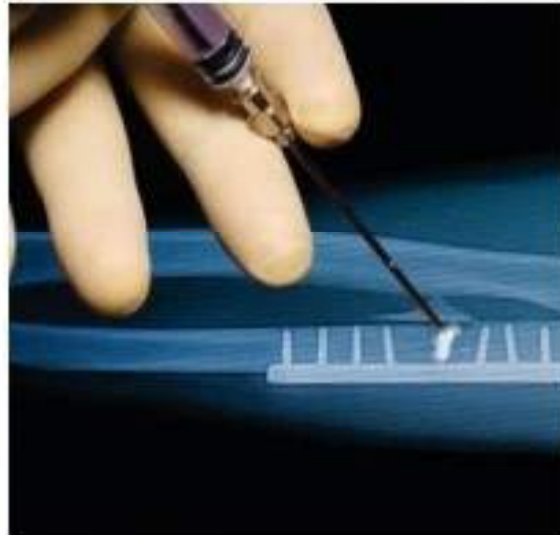


G-Bone Synthetic HA Powder SHAP

Prevent non union of fractured bone



Load the paste into the syringe from open wide end of barrel.



Inject under C-arm visualization between and around ends of bone. Depending upon the fracture you may have to use 10-50 gms of powder.

SURGIWEAR®

G-Graft Natural hydroxyapatite with natural collagen.



procedure, as well as patients response, reaction or degree of intolerance to any foreign object implanted into the body.

Some complications specific to G-Graft are following

- * Collapse of block: There must be secondary arrangements to prevent damage due to collapse of block
- * Fracture of G-Graft
- * Lack of integration

The medical literature is full of hazards and complications associated with use of Calcium Hydroxyapatite. Some of the major hazards are infection, extrusion of grafted material, serous discharge, serous collection, hemorrhage, skin erosion and migration.

Granules 10cc pack

| | |
|----------------------------------|------|
| 0.5-0.9 mm average particle size | GGG1 |
| 0.9-1.9 mm average particle size | GGG2 |
| 1.8-5.0 mm average particle size | GGG3 |

Granules 1cc pack

| | |
|----------------------------------|-------|
| 0.5-0.9 mm average particle size | GGG11 |
| 0.9-1.9 mm average particle size | GGG21 |
| 1.8-5.0 mm average particle size | GGG31 |

Chips 10cc pack

| | |
|----------------------------|------|
| 5x 15 mm average chip size | GGC1 |
|----------------------------|------|

Blocks Average Block size and qty

| | |
|----------------------|-------|
| 30 x 15 x 6 mm 1no. | GGB6 |
| 30 x 15 x 7 mm 1no. | GGB7 |
| 30 x 15 x 8 mm 1no. | GGB8 |
| 30 x 15 x 9 mm 1no. | GGB9 |
| 30 x 15 x 10 mm 1no. | GGB10 |
| 30 x 15 x 12 mm 1no. | GGB12 |
| 30 x 15 x 14 mm 1no. | GGB14 |
| 30 x 15 x 16 mm 1no. | GGB16 |
| 30 x 15 x 18 mm 1no. | GGB18 |
| 30 x 15 x 20 mm 1no. | GGB20 |

Dowel Average Dowel size and qty. One

| | |
|----------------------|-------|
| Dia 8, length 10 mm | GGD8 |
| Dia 10, length 12 mm | GGD10 |
| Dia 12, length 19 mm | GGD12 |
| Dia 13, length 19 mm | GGD13 |
| Dia 14, length 19 mm | GGD14 |
| Dia 15, length 19 mm | GGD15 |
| Dia 12, length 5 mm | GGBP1 |





G-Bone Cement Calcium Phosphate Cement



The non ceramic Hydroxyapatite bone material has two components . The powder is made of tri calcium phosphate and tetra calcium phosphate. The fluid has different sodium and calcium salts. The two parts are mixed and putty like material is obtained. It can be used to fill the defects

After mixing it is usable for 3-5 minutes. Adding some drops of water can prolong usability but it may disturb ultimate strength. The hardening process continue and ultimate hardening may take 12-24 hours.

It can also be mixed with antibiotics for slow release of antibiotic at the site.

Supplied sterile. The kit contains powder sachet, liquid ampule, spatula, syringe and mixing dish.

G-Bone CPC

2 gm packing

5 gm packing

GBCEM1

GBCEM2



G-Bone for Dental Socket - SHAG31



Instruction for use for SHAG31



First of all cut the blocks to the shape & size of alveolus



Place the cut piece into the alveolus.



After placement into the alveolus, it will absorb blood & will become soft. Pack it into the cavity. Suture the mucosa.



GIVE BACK SMILE TO
YOUR PATIENTS WITH
SURGIWEAR HA



G-Bone for Dental Socket - SHAG31



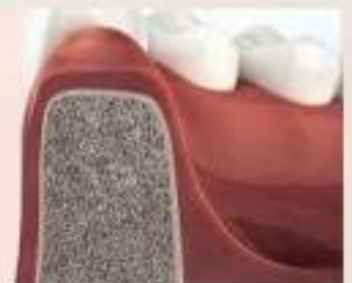
After tooth extraction a bony socket or alveolus is left. This socket is filled with blood clot. The clot later gets converted into bone.

However during conversion into bone the shape of alveolus is not retained. It collapses and resorbed. The cheek side gets absorbed more reshaping the ridge. This collapsed dental ridge is not very suitable for dental implants or denture.

To preserve shape of alveolus, after extraction it must be filled with G-Bone synthetic or other bone grafting products from SURGIWEAR. During regeneration process of alveolus it prevents collapse and facilitate fast bone healing.

SURGIWEAR's G-Bone Synthetic SHAG31 is soft like sponge, after wetting. It can be filled into alveolus without fear of spilling. Being soft it takes the shape of alveolus.

In below x-ray, one root was filled with SHAG31. After 3 months new bone has formed.





G-Bone Synthetic Hydroxyapatite

Synthetic Hydroxyapatite

Surgiwear's Hydroxyapatite products are world renowned and have successful user experience of more than 16 years.

Synthetic Hydroxyapatite is a pure nanocrystalline HA. Nano crystals mimic biological HA, present in our human body.

Here healing is faster than other macrocrystal HA available from other sources.. It consists of nano crystal agglomerates.

It has excellent osteo-conductive properties.



Granules 10cc Pack

0.1-0.4 mm average particle size

SHAG1

0.4-0.9 mm average particle size

SHAG2

Granules 1cc Pack

0.1-0.4 mm average particle size

SHAG11

0.4-0.9 mm average particle size

SHAG21

Blocks Average Block size and quantity

1 x 0.5 x 0.5 cm 20 nos

SHAB1

1 x 1 x 2 cm 5 nos.

SHAB2

Dowel

These dowels are made of nano crystalline HA with absorbable fibers. These are very strong due to fibers.

Average Dowel size

Dia 12 length 14 mm

SHAD1

Dia 14 length 16 mm

SHAD2

Dia 16 length 18 mm

SHAD3

Dia 18 length 20 mm

SHAD4

Dia 20 length 22 mm

SHAD5



Injectable HA nano crystalline powder

This powder is to be mixed with sterile distilled water to make an injectable paste. It can be injected through a thick needle (14 gauge) to the site. useful for non-union of bone.

Synthetic HA Powder SHAP

Soft Synthetic HA

This unique HA granule becomes soft like sponge on wetting with saline or water. It can be molded like putty. It can be easily used to fill cavities.

Soft Granules 10 cc pack

0.8-1.8 mm average particle size

SHAG3

1.8-3 mm average particle size

SHAG4

Soft Granules 1cc pack

1 cc packaging has 4 small packaging for dental use. One 1/4 packaging is more than sufficient for one dental socket filling after extraction. By virtue of being soft like sponge it will be held in place & will not wash out.

0.8-1.8 mm average particle size

SHAG31



Soft Carve-able blocks

These blocks when wet with saline or water can be carved using sharp blade.

1 x 1.5 x 2 cm 3 nos

SHAB3

2 x 3 x 3 cm 1 no.

SHAB6



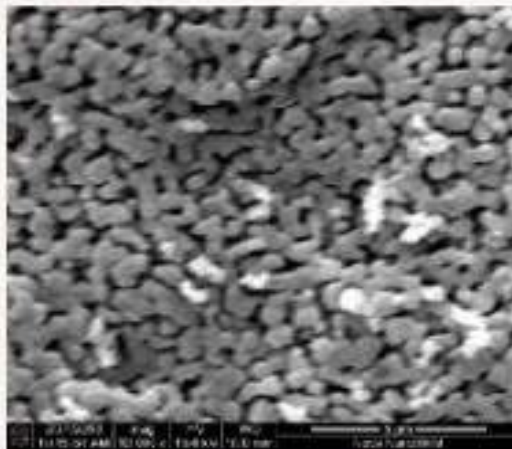
G-Bone Modified Hydroxyapatite

Modified Hydroxyapatite

Surglwear's Hydroxyapatite products are world renowned and have successful user experience of more than 16 years.

Modified hydroxyapatite is a combination of HA 40% (hydroxyapatite) & β -TCP (beta-tricalcium phosphate) is 60%. It consists of nano crystal agglomerates.

It has excellent osteo-conductive properties bordering to the level of osteo-inductive property. With this material bone healing is very fast.



Microstructure of as-synthesized Modified HA block



Granules 10cc Pack

0.1-0.4 mm average Particle Size

MHAG1

0.4-0.9 mm average Particle Size

MHAG2

0.8-1.8 mm average Particle Size

MHAG3

1.8-3 mm average Particle Size

MHAG4

Granules 1cc Pack

0.1-0.4 mm average Particle Size

MHAG11

0.4-0.9 mm average Particle Size

MHAG21

0.8-1.8 mm average Particle Size

MHAG31

Blocks Average Block size & quantity

1 x 0.5 x 0.5 cm 20 nos.

MHAB1

1 x 1 x 2 cm 5 nos.

MHAB2

1 x 1.5 x 2 cm 3 nos.

MHAB3

2 x 2.5 x 0.3 cm 1 no.

MHAB4

2 x 2.5 x 0.5 cm 1 no.

MHAB5

Supplied ready to use
Gamma-ray sterilized in double
peel open packaging.



G-Graft Natural hydroxyapatite with natural collagen.

INTRODUCTION

Conventional bone grafting is done with autologous bone graft from iliac crest, which is still the gold standard. However, it involves another operative procedure, longer operating time and more trauma to the patient. The donor site becomes painful after healing.

Surgiwear has developed xenograft in the name of G-Graft. It is natural Hydroxyapatite with natural collagen and with naturally occurring trabecular pattern. It is very useful for bone repair and replenishment. It can be used in weight bearing areas.

One should remember that results of use of G-Graft may be inferior to autologous bone.

DESCRIPTION

G-Graft is made of natural low crystalline Hydroxyapatite with collagen. It is available in form of granules, dowels and blocks. The shape can be changed by using Gigli saw and bone nibblers.

The information, given here, is not exhaustive and is for guidance only. The surgeon is best advised to use the method, which his own practice and discretion dictate to be best for the patient.

INDICATIONS

G-Graft is indicated in almost all the places where a bone graft is required. Following are some of the indicative uses specialty wise.

- Neurosurgery: Lumber & cervical fusion, vertebral reconstruction, cranial reconstruction and other types of reconstructions.
- Orthopedic Surgery: Lumber & cervical fusion, vertebral reconstruction, cranial reconstruction and other types of reconstructions, Cavity filling, osteotomy reconstructions, non union fracture and filling the gaps in cases of bone loss due to trauma.
- Plastic Surgery: Maxillofacial reconstructions, bony augmentation, hand surgery & cavity filling.
- Dental Surgery: Maxillofacial reconstruction surgery, periodontics, orthodontics and other areas requiring a bone graft.
- Other Specialties: Where a bone graft is required.

CONTRAINDICATIONS

Presence of infection whether local or general, prohibits all kind of implantation procedures. Open wounds will not respond well with bone grafting surgeries.

Poor general health and metabolic deficiencies will not produce desired results.

Above mentioned contraindications are general. The surgeon must evaluate the individual patient for the risks involved.

WARNINGS

Collapse of G-Graft is a possibility.

Do not re sterilize G-Graft.

Only blocks with weight bearing line should be used for weight bearing areas.

The slot line on the block should be parallel with weight bearing axis of the body.

METHOD OF USE

G-Graft implantation is an implantation procedure. It carries a greater risk of infection because of large surface area. It is advisable to take all precautions necessary for an implantation procedure. Some of the points are given below:

- a. It should be first procedure in the morning.
- b. There should be minimum number of people inside the theatre (4persons). No scrub nurse
- c. There should be minimum movement inside OT.
- d. Procedure should be as fast as possible 20-50 minutes.
- e. Use disposable mops only (it is a must)
- f. Use disposable drapes.
- g. Use incise drapes on incision sites.
- h. Only 2-4 procedures in a day.
- i. The grafting material should be opened only just before implantation.
- j. Minimum handling of graft material.
- k. Use skin staplers for skin closure.

After opening the site of implantation, obtain good hemostasis of the area. Scrap the walls of the cavity/defect. Remove all soft tissue from the cavity or defect. Harvest some bone and bone marrow from the same site by scraping and shallow drilling in the cavity. Incorporation of patients own bone and bone marrow provides BMP's for bone healing and improves results. Larger cavity size needs larger percentage of patients own bone. Fill gap with G-graft blocks or granules.

Cover the gap with soft tissue. Gelatine foam sponge may be used to cover the granules and to prevent spilling of granules. Calcium phosphate cement (G-Bone CP Cement) may also be used to secure the granules and top the cavity.

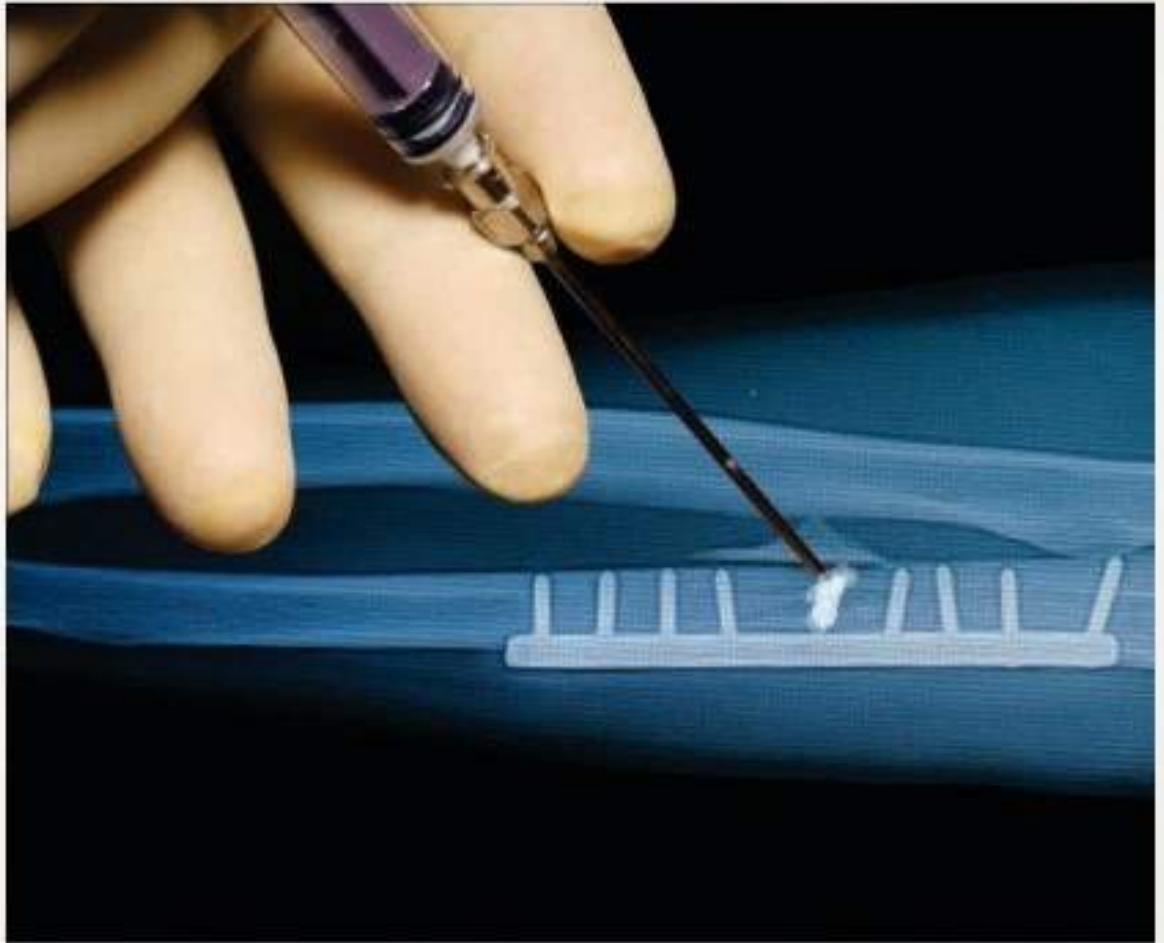
COMPLICATIONS

Complications which may result from the use of this product include the risks associated with the medication and methods utilized in the surgical



G-Bone Synthetic HA Powder SHAP

Prevent non union of fractured bone



In 15-20% cases the bone ends of fractured bone do not unite and non union/ delayed union occurs.

It is equally common in all types of cases. Whether it is closed reduction, open reduction with screw plates or nailing. There are variety of causes such as clot formation, interposition of soft tissue between ends of bone.

SURGIWEAR brings you HA powder to be injected between and around ends of broken bones.

In all cases of open or closed reduction. This will improve the environment around the fracture and increase chances of healing by providing an environment of Calcium & Phosphate ions the building blocks of bone. It will increase activity of Osteoclasts and osteoblasts in the vicinity of fractured bone ends.

Closed injection of HA powder can be repeated after 7-20 days depending upon X-ray visualisation of bone healing activity / callus. If callus is not visible after three weeks. Repeat injection of HA Powder is recommended.

The quality of SURGIWEAR HA powder is that it will not diffuse around and will remain coalesced as injected for prolonged period.

You may expect a significant reduction in non union cases.



Put the powder on plastic petri dish



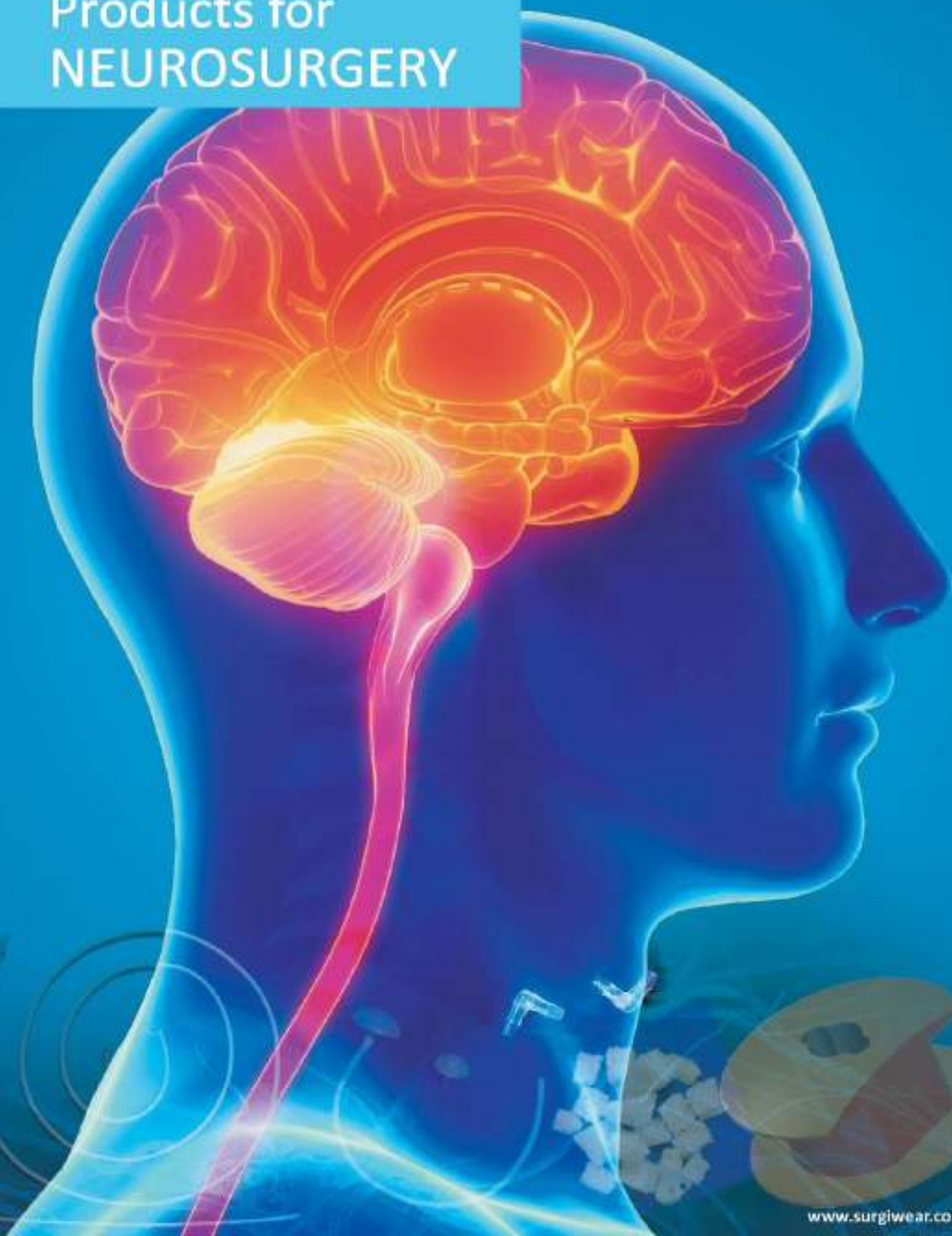
add sterile distilled water & mix with spatula



Make paste to a flowable consistency.

SURGIWEAR®
EN ISO 13485 : 2012 COMPANY

Products for
NEUROSURGERY



Hydrocephalous Shunt Systems

CHHABRA 'SLIT N SPRING' HYDROCEPHALUS SHUNT SYSTEM



Endorsed by WFNS



The model with a larger distal catheter (75 cm) is labelled as VP and the model with smaller distal catheter (30 cm) is labelled as VA. Suffix BR means Shunt with bacterial resistant tubing.

| Description of Type | Code No. | |
|---|----------|---------|
| Ventriculo Peritoneal High Pressure with Regular Reservoir VPHP | SH201 | SH201BR |
| Ventriculo Peritoneal Medium Pressure with Regular Reservoir VPMP | SH202 | SH202BR |
| Ventriculo Peritoneal Low Pressure with Regular Reservoir VPLP | SH203 | SH203BR |
| Ventriculo Peritoneal High Pressure with Regular Reservoir VPHP | SH231 | SH231BR |
| Ventriculo Peritoneal Medium Pressure with Regular Reservoir VPMP | SH232 | SH232BR |
| Ventriculo Peritoneal Low Pressure with Regular Reservoir VPLP | SH233 | SH233BR |
| Ventriculo Artrial High Pressure with Regular Flushing Reservoir VAHP | SH204 | SH204BR |
| Ventriculo Artrial Medium Pressure with Regular Flushing Reservoir VAMP | SH205 | SH205BR |
| Ventriculo Artrial Low Pressure with Regular Flushing Reservoir VALP | SH206 | SH206BR |

The system is supplied complete with a Ventricular catheter 15 cm long, a unitized Shunt assembly with a Distal Catheter and two straight connectors in peel-open packs. The pack is sterilized by EO.

GSL "Dome Valve"

Hydrocephalus Shunt System



Description

Code no

High Pressure

SH601 SH601BR

Medium Pressure

SH602 SH602BR

Low Pressure

SH603 SH603BR

Each system is supplied complete with one unitized GSL "Dome Valve" reservoir with 90 cm radio-opaque distal part, one 15 cm ventricular part and two straight connectors. The system is sterilized by Ethylene Oxide gas and packed in double peel open packaging.

Suffix BR means Shunt with bacterial resistant tubing



Chhabra Lumbar Peritoneal Shunt System

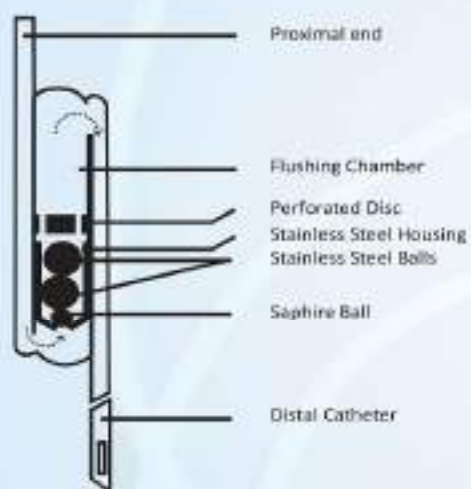
Theco-peritoneal Shunt

Chhabra Lumbar Peritoneal Shunt System Sh301

Each system is supplied complete with one lumbar catheter 40 cm long, One peritoneal catheter 60 cm long, one special lumbar catheter connectors, two suture collar & one 14 gauge thin wall Touhey needle. The system is sterilized by Ethylene Oxide gas and packed in double peel open packaging.

"Z" Flow Hydrocephalous Shunt System

Antisiphon/antigravity system



Distance in cm between vertex and 2nd or 6th intercostal space

Type of system according to number of large balls in the housing

Code No.

| | | | | |
|-----|---|-------------------|-------|---------|
| (a) | for infants and children upto two years | Two-ball system | SH101 | SH101BR |
| (b) | upto 38 cm | Two-ball system | SH101 | SH101BR |
| (c) | 39 to 47 cm | Three-ball system | SH102 | SH102BR |
| (d) | 48 cm onwards | Four-ball system | SH103 | SH103BR |

Each system is supplied complete with one unitized catheter 100 cm long (one end is ventricular catheter & other end is distal catheter), one "Z"Flow Valve reservoir and two straight connectors. The system is sterilized by Ethylene Oxide gas and packed in double peel open packaging.

Hydrocephalous Shunt parts & accessories



Chhabra "Slit n Spring" Valve

High Pressure SH211
Medium Pressure SH212
Low Pressure SH213



Chhabra "Slit N Spring" Valve with Large Flushing reservoir

High Pressure SH221
Medium Pressure SH222
Low Pressure SH223



Anti-Siphon / Anti- Gravity Valve Chhabra "Z" Flow Valve

Two Ball System SH111
Three Ball System SH112
Four Ball System SH113



Distal Catheter

90 cm long ID1.3 mm OD 2.5 mm
radio-opaque with four slits SH001 & SH001BR

Uni-Shunt / Uni Catheter

90 cm long proximal end ventricular catheter
& distal peritoneal end with four slits
High Pressure SH401 SH401BR
Medium Pressure SH402 SH402BR
Low Pressure SH403 SH403BR



Ventricular catheter

15 cm long ID 1.3 mm OD 2.5mm SH002 SH002BR
15 cm long ID 1.3 mm OD 2.5mm bent at
Right angle 5cm ventricular end SH002R5
15 cm long ID 1.3 mm OD 2.5mm bent at
Right angle 7cm ventricular end SH002R7
30 cm 1.3mm x 2.5 mm (7.5F) SH002B SH002BBR
30 cm 1.5 mm x 3.5 mm (10.5F) SH002C SH002CBR



Anti Chamber

for injection SH008

Hydrocephalous Shunt parts & accessories



Straight Connector SH003



Right angle connector SH004



Y connector with extra long ventricular catheter SH006



Straight Connector SH005
for LP Shunt



Cerebral catheter reservoir
reservoir chamber for injections with
15 cm long ventricular catheter

Small 12 mm diameter chamber SH011

Large 18 mm diameter chamber SH012



Instruments for shunt implantation

Ventricular catheter passer INS03



Sub cutaneous catheter
passer

Small 35 cm INS01

Large 60 cm INS02



Peritoneal split trocar INS04



Suture collar SH007

External CSF Drainage systems



Ventricular SH024

External CSF Drainage System
Contains one bag, one 30 cm ventricular catheter with stylet, connector, trocar, catheter anchoring collar and connecting tube

Lumbar SH025

External CSF Drainage System
Contains one bag, one 30 cm lumbar catheter with 14G Touhey needle connector, suture collar & connecting tube

External CSF Drainage Bag SH021

Bag with connecting tube



CEFLUI Ventricular SH034

External CSF Drainage System
Contains one double chamber bag, bag anchoring panel, one 30 cm ID 1.5 OD 3.0 mm ventricular catheter with stylet, connector, trocar, catheter anchoring collar and connecting tube

CEFLUI Lumbar SH035

External CSF Drainage System
Contains one double chamber bag, bag anchoring panel, one 30 cm lumbar catheter with 14G Touhey needle, connector, suture collar & connecting tube

CEFLUI External CSF Drainage Bag SH031

Bag with double chamber with connecting tube

G-Patch

Dura Repair patch



G-Patch- Non absorbable

Small 8 x 10 cm

GP01

Medium 10 x 12 cm

GP02

Large 15 x 20 cm

GP03

G-Patch-2- Absorbable

Small 8 x 10 cm

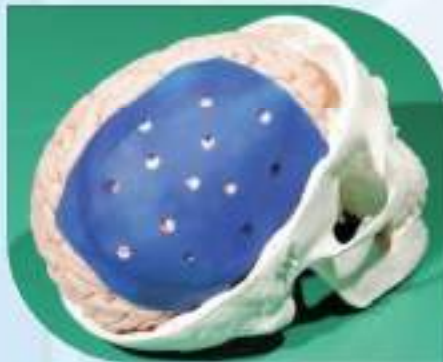
GP01-2

Medium 10 x 12 cm

GP02-2

Large 15 x 20 cm

GP03-2



G-Patch-3

Stretchable silicone sheet- CEREFILM

Used to keep different layers separate after decompressive craniectomy.

Small 8 x 10 cm

GP01-3

Medium 10 x 12 cm

GP02-3