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T.Y.CHU & CO., LTD



SGD S.A., France

Heinlein Plastik-Technik, Germany

Chin-Tai Pharmaceutical Plastic Ltd.









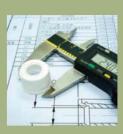














TYC CREDENTIALS Meet the Packaging Challenges

T.Y.CHU & CO., LTD

While you are expert at your specialties, we are good in helping people to meet their packaging challenges. Having been in the packaging business for 30 years, we have helped many customers in cosmetics, perfumery, aromatic, personal care, homecare and pharmaceutical products, while each has unique packaging requirements and concerns. Packaging is the first thing people came into

contact with a product, it projects the product image, and it must be functional, sustainable and resistant to chemical and physical stress integral in the manufacturing, transportation and distribution processes. Product integrity must be preserved throughout the declared shelf life. In addition, there are regulatory concerns, chemical and product compatibility concerns, and most important of all, cost implications.

Over the years, we have gathered a wealth of knowledge in packaging. We understand how each kind of material works to serve your ends: glass, polymers, elastomer, metal and their enhancement techniques. We offer the optimal packaging solution that helps to differentiate your product from your competitors'.

Our development team can specify your packaging requirements in concise and simple language, in drawings, 2D/3D renderings, prototypes, pilot sampling in stages that are meant to be interactive with your involvement.

We work with the world's most leading manufacturers of specialized packaging in Europe and USA, whom we are authorized agents and distributors. These world-class suppliers are certified by the respective international legal and validation bodies, offering the state-ofthe-art packaging goods that are market proven. We carry a high level of stock, samples, and certificates available for your convenience.

With our specialties in packaging, we offer you the peace of mind that you seek so you can focus on your specialties. Please call or write us about the packaging challenges you face and let us be part of your intelligent

Agents & Distributors for

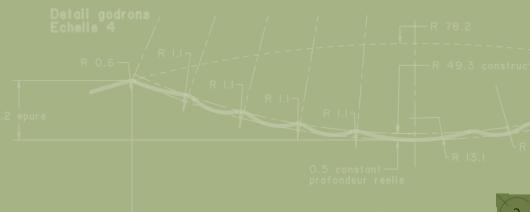
SGD S.A., France

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Glass Bottles

Dropper Amber Range:

- Amber Type III glass, unified neck in DIN18 to minimize stock keeping
- Light shield quality conforms to USP and EP for UV
- Standardize neck (DIN18) to ensure proper sealing
- Precise dimensions & weight
- Wide choice of sizes: 5ml, 10ml, 15ml, 20ml, 30ml, 50ml, 100ml
- High level of stock items

> Product\ Glass\ Dropper Bottles

Dropper Blue Range:

- Blue shade Type III glass
- Bottles are with standard PH18 neck
- Choice of sizes: 15ml, 50ml, 100ml & 200ml - Limited stock is available
- > Product\ Glass\ **Dropper Bottles**

Base Oil Bottle Range:

- Amber Type III glass, unified PP28 neck
- Light shield quality conforms to USP and EP for UV
- Ultra light weight but with good mechanical resistance
- Precise neck dimensions to ensure good sealing
- Wide choice of stock available: 30ml, 60ml, 100ml, 125ml, 200ml, 250ml, 300ml & 500ml.
- > Product\ Glass\ Liquid Bottles

PACKAGING CHALLENGES FOR AROMATIC **PRODUCTS**

Aromatic products come in different phases & forms; oil base, aqueous, emulsion, cream. They are of plant origin; some are highly volatile, chemically unstable and light sensitive. When it is used, it is used in small amount and precise dosage and dispensed at various speeds. They are sometimes applied as droplets, spread, spray, diffusion.

Caps and Dropper Inserts

Caps & Dropper Insert

- Choice of plain screw caps, caps with tamper evident rings, caps with dropper inserts for DIN18 neck of glass containers. Vertical or rim droppers in fast, medium & slow dropping speed



- Special function: Anti-return caps, smooth caps Easy to apply manually or mechanically
- Available in B/W color, special color at MOO 50.000 pcs

> Product\ Accessory\ Dropper Insert

Caps with Glass Pipettes

- Choice of plain screw caps or caps with tamper evident rings. Ring color can be customized at MOQ 30,000
- Choice of elastomer teat: silicon, NBR, TPE for various product compatibility
- Suction volume: 0.4ml, 0.7ml
- > Product\ Accessory\ **Dropper Pipette**

Fine Mist Sprayer

Fine Mist Sprayer

- Fine mist pumps to atomize liquid of various viscosity to give desirable spray character
- Spray output: 0.14ml ~ 0.3ml Screw caps available in
- 18/410, 20/410, 22/415 &
- Ideal for body splash, face wash, fragrant spray
- > Product\ Sprayer\ Fine Mist Pump



PERFLIMERY PACKAGING



Glass Bottles

Perfume Bottles in Blocks

- We offer a wide range of elegant stock mould glass items of French origin
- The block items are crystal clear, with crisp sharp edges, heavy bottom & evenly distributed glass gives perfect inside contour
- Available in 30ml, 50ml and 100ml, neck FEA15
- Minimum order is one pallet
- > Product\ Glass\ Perfumery

Perfume Bottles with Curvatures

- The curvature items impart elegance, softness, delicacy & femininity fit to the designer's eyes.
- The items provide even working surfaces for printing & foil stamping.
- Available in 30ml, 50ml and 100ml, neck FFA15
- Minimum order is one pallet
- > Product\ Glass\ **Perfumery**

Perfume Bottles Angular

- The angular items create visual tension enhanced by the crisp sharp edges and sparkling clarity. The soft touch version suggests subdue masculinity and conformity.
- Available in 30ml. 50ml and 100ml, neck FEA15
- Minimum order is one pallet
- > Product\ Glass\ Perfumery

PACKAGING CHALLENGES FOR PERFUMERY **PRODUCTS**

The primary objective of perfumery packaging is to give the desired visual image which reflects the character of the perfume. For projects on tight budget, we offer glass pieces in stock mould of highly adaptable geometry that allows high degree of personalization by minor decorations. We offer you

sprayers that go with the perfume profile and "speak" the same language. There are countless accessories of various kinds to complete the visual message.

Fragrant Pumps

Fragrant Pumps - Prestige Line

- The way a perfume sprays can be soft, sexy, silky, misty, sharp, clean or decisive.
- For up-market perfumery, we offer sprayers in very low profile (hiding of the spray engine), soft spray, output 0.07ml - 0.1ml, invisible diptubes, different sizes of

actuators, closures in various shade of metal shealths or plastic heads.

Fragrant Pumps - Masstige Line

- For more cost-effectiveness solution, we offer the compact and functional pumps
- available in a wide range of output 0.07ml ~ 0.14ml, and in different head and closure sizes and shades in metal shealths and plastic heads.
- > Product\ Sprayer\ Fragrant



Sampler

Sampler

- Available in 2 models: Slim & Compact
- Consist of plastic heads and containers.
- Output 0.05ml, 0.07ml, Capacity: 2ml & 5ml.
- Customization by color change, printing and foil stamping.
- > Product\ Sprayer\ Fragrant





APPLICATIONS

• Face Cream • Eve Cream / Gel • Lotion • Serum / Foundation • Face mist

PACKAGING CHALLENGES FOR SKINCARE PRODUCTS

Many latest developments in skincare are biotech products, which are sensitive to metal, oxygen & light. They may mix at the point of use or use in minute amount. The product will be dispensed in accurate, hygienic and convenient manner. Branding is the top note for cosmetic marketing, the product that offers unique visual impact and expansive packaging range for family/ product line has the most competitive edges.



Cream Jars & Bottles:



- Glass gives weight and substance, where no other material can match. Glass is the most chemically stable, heat & humidity resistant, ideal packaging for sensitive products.
- We stock a wide range of glass jars for eye and face products: 5ml. 15ml, 30ml, 50ml, 60ml. Bigger volume up to 200ml is available on order
- Glass jars can be closed by loose lids, or hermetically sealed by foil or laminate
- Personalization attained by various printing techniques, lacquering, frosting, foil stamping, labels & sleeves.

- The caps we offer are designed for particular

jars. Not only to provide the perfect match on

the outlook, also the mechanical compatibility,

- Other closing and applying accessories are

> Product\ Glass\ Cosmetic

Caps & Lids

ensure proper sealing.

available on request.

> Product\ Accessory\ Caps



Plastic Bottles

PET bottle range:

Among other advantages of PET bottles: superb clarity, gas impermeable, chemical resistant, PET bottles made by injection stretch-blow molding has better hardness, good tensile strength and lighter in weight.



- Bottles in all the basic shapes and sizes: from 20ml - 180ml with standard necks: 20/410 & 24/410
- Stock are ready in white & standard blue on order basis. Flexible to change color, to add decoration & accessories.





Dispensers

Pure Path™

- Lotion pump designed with metal-free fluid path for sensitive formulas

- Pumps available in different head styles. For cosmetic pumps, output: 0.17ml ~ 0.25ml, for face & hand lotion pumps, output 0.35ml ~
- Available in different closure sizes: 18/400, 20/410 & 24/410 and in metal shealth.
- > Product\ Sprayer\



Pure-path dispensing system: output 0.17ml ~0.25ml, bottles 15ml, 30ml & 50ml; provide different head styles, closure sizes: 18/400 &

Rolling Bellow Technology™ dispensing system: output 0.4ml, 1.0ml & 1.5ml with a choice of bottle sizes from 15ml to 150ml

All airless systems can be used to dispense high viscosity product.

> Product\ Sprayer\ Airless

Airless Dispenser

Airless system displaces

the lost volume by piston

mechanism, requires no

venting of air, thus reduce

the use of preservatives.

Incorporate with different mesh sizes & surfactant, the foamer produces high quality foam from thick rich creamy foam to bubbly & runny ones.

Foamer output: 0.8ml, closure size:

> Product\ Sprayer\ Foamer

Top Dispenser

- This seal and re-seal top position pump is ideal for dispensing cleaner, antiseptic or polish remover. User can dispense the product by pushing down the disk-top with a swab. cotton ball. After one stroke, the seal close automatically.
- Output: 0.7ml, closure size: 24/410
- > Product\ Sprayer\ Dispenser Regular

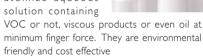






Fine Mist Sprayer

- No use of propellent, the pre-compression pumps effectively atomize aqueous solution containing



- You can customize a spray character: a wet spray, a dry spray, wide coverage or narrow spray, soft spray by choosing the proper orifice and pump engine.
- Sprayers of different design accommodate different spraying positions: face, body, neck, ankles, armpits, vagina. Extender protrudes to reach the scalp.
- Output of 0.14ml, 0.16ml, 0.21ml
- Wide range of closures: 18/410, 20/410, 22/415, 24/410

> Product\ Sprayer\ Fine Mist Pump

Mini Trigger

- Mini-trigger is re-engineered fine mist sprayer, ergonomically fit for spraying face mist, body splash, making spraying easy and fun.
- Output 0.16ml and 0.3ml, free spinning closures: 20/410, 24/410
- Integrated button lock to ensure the spray stays in lock position when desired.
- > Product\ Sprayer\ Mini Trigger



Dropper Pipette

- Dropper Pipette for DIN18 neck: choice of plain screw cap or cap with tamper evident ring. Ring color can be customized at MOQ 30,000 pcs
- Dropper Pipette for 20/410 neck, slim looking and anodized aluminium cover caters for cosmetic application.
- Silicon teat to ensure optimal chemical and tear resistant. Choice of other elastomers can be discussed upon request.

SKINCARE PACKAGING

- Suction volume: 0.4ml and 0.7ml
- Dropper pipettes are cleanroom assembled.
- > Product\ Accessory\ Dropper Pipette

Squeeze Top

- Product in sterilized packing (rubber stopper & aluminum seal) is not user friendly. Squeeze Top is designed to provide the convenience at the point of use. Consumer can temporarily close the product for next use.
- Squeeze Top for S20 neck: nozzle in TPE provide good seal integrity and on the other end dispense product at a squeeze, dispensing volume 0.4ml, PE screw cap to reclose the package.
- Squeeze Top for DIN18 neck; it has 3 parts: DIN 18 cap in PP, nozzle in TPE and PE caps
- Squeeze Top closures are cleanroom assembled.
- > Product\ Accessory\ Squeeze Top



Small Packaging

U-Save and accessories

- Product that comes in small pack size, dispense in small and precise amount is a packaging challenge. The package must fill the extra weight/ volume. It must avoid wastage, wetting of the product.
- U-Save is one of this solution: they are small vials from Iml ~ I0ml with various neck finish.
- It is made of neutral glass, the most inert material for sensitive product, amber to give effective UV light shield.
- The internal U shape allows the final drops end there to be pumped out or suctioned up. Further siliconization treatment to ensure no wetting of the product at all
- Like any injection vials, when closed by rubber and seal, USave is fit for high temperature sterilization process.
- U-save can be used with Squeeze Top for the ease of application.

> Product\ Glass\ U-Sav





PACKAGING CHALLENGES FOR PHARMACEUTICAL **PRODUCTS**

Regulatory conformity is the primary concern in pharmaceutical industry, as there are GMP, pharmacopeia and ISO standards to observe. Due to stringent safety requirements, the packaging must withstand various demanding pharmaceutical manufacturing processes. Proven in long term compatibility, safety and product integrity, the packaging must also maintain traceability up to 7 years.

classification for Type I, II, III glass, flint & amber. The vials are produced



in Class 100,000 cleanroom, and are used and proven by worldwide laboratories.

- Capacity from 2ml ~ 200ml in S20 neck.

- The vials have DMF with FDA in USA and are SFDA registered in China

> Product\ Glass\ Injection

Infusion vials

Our infusion bottles conform to ISO 8536-l standard and USP, EP for Type I and Type II glass. Produced in Class 100,000 cleanroom.



Capacity from 50ml ~ 1000ml in S32 or 28

- The bottles have DMF with FDA in USA and are SFDA registered in China.

> Product\ Glass\ Infusion

Freeze-dry Vials

- An innovation to fill the gap for large volume lyophilized products.

- With very thin wall and breakage resistant, flat bottom, EasyLyo vials has proven, if not excel, the efficiency as that of tubular vials predominantly used for lyophilisation.

Sizes: 5ml, 10ml, 20ml, 30ml, 50ml, 100ml

> Product\ Glass\ Lyophilisation

APPLICATIONS

Parenteral • Oral application • Prefilled syringes • Lyophilisation • Labels • Eye drop

PHARMACFUTICAL PACKAGING

Tubular for injection

Ampoules & Vials

- Ampoules & vials are made from Schott Fiolax glass tube, a neutral borosilicate glass, in flint or amber.

Ampoules comes in Form B (open) or Form D (closed) with wide range of size: Iml, 2ml, 3ml, 5ml, 10ml, 20ml

- Vials are relatively customized product to fit specific processing requirement. There are also standard 2R ~30R or large size vials up to

> Product\Tubular\ Injection

Prefillable syringes

- Direct-to-Fill (D2F®) sterilized prefillable syringes in standard sterile packing

- There are bonded needle and luer (no needle) versions

Bonded needle: 0.5ml, 1.0ml standard, I.0ml long

- Luer: 2.25ml, 3.0ml, 5 0ml

Glass barrel can be graduated.

D2F® comes with plungers, push rods, needle shields or tip caps as components in sterile and siliconized state

> Product\ Tubular\ Syringe

Cartridges for insulin

- Cartridges are made of Schott Foilax glass tubes, a neutral borosilicate glass, in flint glass

- Cartridges conform to ISO 13926-I except length to be agreed with customers.

- Working with various packaging specialists to complete delivery system device for specialized applications.

> Product\Tubular\ Cartridge

Glass bottles: Oral Medication

Liquid bottles

- Glass bottles produced by NNPP are with precise neck (PP28), light weight and yet improved mechanical and thermal shock resistance, available in amber and clear.



The bottles are produced in class 100,000 cleanroom, ready-to-fill for oral preparations.

Wide choice of stock available: 30ml, 60ml, 100ml, 125ml, 200ml, 250ml, 300ml & 500ml,

Compatible with aluminum caps, plastic caps including CRC, tamper-evident caps.

> Product\ Glass\ Liquid

Tablet bottles

- Glass bottles for solid drug: tablets, capsules, granulates, are mostly amber bottles with large

Tear-off system: bottle capacity: 30ml, 60ml, 100ml & 125ml, respective necks: 31.5mm &

- Screw-off system: bottle capacity: 75ml, 100ml, 120ml, 150ml, respective necks: 33/400, 38/400, 45/400

Compatible with tearoff closure, CRC or cap with pressure sensitive seal, or conduction seal

Medicinal Oil bottles

Tablet

> Product\ Glass\

- Medicinal oil is rooted deeply in Asian cultures, glass bottle is used for its weight, clarity, impermeable to gas and decorative engraving.

The pin-hole opening offers great challenge to glass makers in bottle forming.

Each medicinal oil bottle is unique, the design and requirements will have to be dealt on project basis.

Secondary packaging such as aluminum cans in multiple color printing is also available.

> Product\ Glass\ Medicinal

Pharmceutical Sprayer

Sprayer for Nasal & Throat

Our nasal sprayer assembled in Class 7 (Class 10,000) area, manufacturing follows cGMP and DIN EN ISO 9001. All material comply FDA and EC directives. DMF is constructed with

Drug by nasal administration route posts stringent requirements to the nasal sprayer for its cleanliness, spray particle sizes, dosage accuracy and consistency, and ergonomic ease.

Output range: 0.09ml, 0.10ml, 0.13ml. 0.14ml

Adaptors: 2 pieces or 3 pieces with various finger pad styles for nasal; and short, medium, long for throat adaptors.

A wide range of closures is available

> Product\ Sprayer\ Nasal

Preservative Free Pump system

State-of-the-Art 100% sterilized nasal sprayer,

Special filter for venting air or no

venting option Shut off valve to

avoid contamination

Output: 0.05ml, 0.1ml, 0.14ml

Closure size: Snap-on or S20

> Product\ Sprayer\ Nasal

Topical spray

- For application with lower hygiene requirement, eg, topical spray, disinfectant spray, anti-fungal spray, a better cost-effective pump is available.

Pre-compression pumps offer a wide choice of pump profiles, outputs, spray angles, aesthetics.

Output: 0.14ml, 0.16ml; closure: 20/410, 22/415, 24/410

> Product\ Sprayer\ Fine Mist Pump









Functional Labels

Label with hanger

- Hanging device is integrated in the label and is simply pulled out to hang the infusion bottles. Easy to use.
- Label is single plastic film or laminates, conform to ISO norm for pull test and proves durable against tear.
- Different hanger label systems are available. combine with printing modes, material, added functions (window, detachables), the possibility of hanger label is limitless.

> Product\ Label\ Hanger





Label with detachables

- Detachable is a peel-off label part from the main label on a vials, syringe, or infusion bottles. When transfer to patient record or the reconstituted drug, the detachable label carries along the identification data from the main label. It is essential tool to avoid medical error. .
- It requires special adhesive technology to stay hold on a small tubular surface like ampoules, vials, syringes. Detachable will permanently adhere to paper until the paper is torn off.

> Product\ Label\ Detachables



Security Labels

- Security devices against theft, illicit opening or counterfeit are very important in pharmaceutical industry.
- We offer customized tamper evidence solution and proof for authenticity
- The solution may be laid in one or multiple of these techniques: hologram, digital water marks, nano-font data encryption, traceless taggants etc.

> Product\ Label\ Security



HOMECARE PACKAGING

APPLICATIONS

• Kitchen Cleaner • Window Cleaner • Air Freshener • Disinfectant • Gardening • Autocare

PACKAGING CHALLENGES FOR HOMECARE PRODUCTS

Household products like cleaners, disinfectants are usually aggressive formulas, the packaging chosen must be able to withstand corrosion, yet able to dispense the product in desirable manner: wet or dry spray, stream, thick or runny foam. Other requires leak proof and water ingression shield. For heavy duty task like garden work or auto care, the packaging come with ergonomic features: 3 fingers trigger, soft-touch pad, power or water-driven sprayers greatly enhance the ease of use.

Trigger Sprayers

Regular Triggers

- Trigger sprayers used for window or kitchen cleaner has superior functional features and proven reliability.
- Various trigger lines offer unique aesthetics and functions
- Easy to pull, low actuation force with lock-in nozzle to prevent leakage.
- Wide range of nozzles, including foam nozzle available
- Output: 0.7ml, 0.9ml,, 1.0ml, 1.3ml
- Optional features help to extend the product edges.

> Product\ Sprayer\ Trigger

High output Triggers

- High output/ high profile trigger sprayers extend the shelf presence, also enhances the ease for
- Compatible with most aggressive solvents, the triggers are widely used in bleaches, petroleum distillates, pesticides and herbicides
- Non-removable closures safeguard in-store tampering.
- Output: I.4ml, I.6ml

> Product\ Sprayer\ Trigger

Power-driven Triggers & Long Hose

- Continuous spray runs on rechargeable batteries render spraying effortless. Nozzle options for spray, stream and foam. Discharge rate: 3ml per second
- Long Hose Sprayer enhances the ease of spraying at all directions without having to lift the weight of the product. Suitable for gardening, autocare applications.

> Product\ Sprayer\ Trigger



Dispenser

Regular Dispensers

- Versatile, compatible with most aqueous, alcohol and high viscosity formulas. Some are in Pure Path™ system, or shield from water ingression to prevent contamination.
- Contemporary stylized head aesthetics in standard or customized color.
- Output: I.Iml, I.5ml, 2ml, 3ml & 4ml Available in 28/400, 33/400, 38/400, 89/400 closures
- > Product\ Sprayer\ Dispenser Regular

Large Dispenser

- Large output up to 30ml per stroke, can be limited to 7.5ml by restriction clip.
- Used for washing detergent, softener, counter top katsup/ mayonnaise. Compatible with a broad range of products
- Valve head option is available to stop product drying at the spout.
- Available in 33/400, 38/400, 43/400, 45/400, 110/400 closures

> Product\ Sprayer\ Dispenser Large



Fine Mist Sprayer

Fine Mist Sprayer

- Envoronment friendly, pre-compression pumps atomize liquid of various viscosities or VOC % without use of propellant.
- Spray output: 0.14ml ~ 3.0ml
- Screw caps available in 18/410, 20/410, 22/415 & 24/410
- Ideal for deorderant, air freshener, disinfectant.

> Product\ Sprayer\ Fine Mist Pump



Foamer:

Foamer

- No propellant used. A patent Foamer system, creates a high quality foam for hair product, facial and hand cleaner, sun protection, baby products, etc.
- Fewer parts than competitors', the foamer contains no metal parts in contact with the product.
- Output: 0.8ml, 1.6ml
- Closure size: 40mm
- > Product\ Sprayer\ Foamer



Eye Drop Bottles

to-fill at customer's line.

stable throughout storage.

> Product\ Plastic\ Eye Dropper

- Size available: 5ml, 7ml, 10ml, 15ml

- Eye drop bottles consist of 3 parts: bottles,

inserts & caps, and delivered in aseptic

condition, with tamper-evident closure, ready-

They are made of different material (LDPE/

HDPE), sterilized independently by radiation or

- All the parts are made with high precision to

ensure hazard free high speed filling and closing

smoothly to the desirable torque and remain

Eye Drop Bottles

Eto fumigation.