P H A R M A -PACKAGING

## PRODUCT PORTFOLIO NIPRO PHARMAPACKAGING





## NIPRO Pharmapackaging

Nipro PharmaPackaging is specialized in developing and manufacturing advanced pharma packaging products and complete packaging solutions for early development drugs or enhancement of packaging solutions of existing drugs.

With a worldwide manufacturing footprint of 19 plants, multiple sales offices and internal lab services, Nipro PharmaPackaging offers an exceptional service platform. Through its personnel, products and services, Nipro PharmaPackaging enables you to provide a safer and healthier administration to your customers.

Nipro PharmaPackaging is part of the Japanese Nipro Corporation, established in 1954. With over 20000 employees worldwide, as a leading global healthcare company, Nipro serves the "Pharmaceuticals", "Medical devices" and "Pharma packaging" industry.

## **FUELED BY INNOVATION**

By embracing progress and change, Nipro is aware that continuous innovation is necessary to supply state-of-the-art product solutions and technologies. Our large, corporate R&D platform, being active in the fields of Medical Devices, Pharmaceuticals and Pharma packaging is driving this innovation by researching and developing outof-the box solutions.

You will encounter an innovative product portfolio with the aim of meeting and anticipating the industry and users' needs.

## **FUELED BY QUALITY**

Acknowledging the imperative requirement of the pharma packaging industry for excellent quality, Nipro has implemented a strict quality system that ensures that our products and processes meet and exceed prevailing standards. Depending on your quality needs, our production processes are customizable to manufacture according to established market standards or the highest quality requirements for biotech drugs.

Our rigorous quality approach is extended to our personnel and services ensuring you receive competent and result driven support.

## **FUELED BY PARTNERSHIP**

From your initial idea to the final product realization – from early development thru entire lifecycle of your drug, you will be supported by a company with more than 60 years of experience. By putting our accumulated market and product knowledge into your service, pursuing to supplying you with convincing packaging solutions for your specific drug, Nipro PharmaPackaging continuously strives to gain and maintain the position of a preferred business partner.

# INNOVATIVE PACKAGING SOLUTIONS

Increasing competition, stricter regulatory requirements and growing end-user expectations push the demand of pharma companies for innovative primary packaging solutions. As a result successful solutions have to fulfill manufactures' and end-users' needs alike.

We utilize our long standing experience in drawing glass tubing, converting primary packaging, performing glass analysis, and manufacturing components & accessories with the aim of offering you innovative standard or customized packaging solutions. They will ensure compatibility with a specific drug, enable an reliable and easy integration into filling lines with minimal rejects, allow an easy incorporate into (auto)-injection devices and contribute to comfortable and safe administrations. Our comprehensive portfolio of products and services provides you with the possibility to source complete pharma packaging solutions at a single point, enabling you to master today's demanding pharma packaging environment.







ASS AMPOULES

### PRIMARY PACKAGING



## **PREFILLABLE GLASS SYRINGES**

Nipro PharmaPackaging offers a wide range of bulk and sterile prefillable syringes that answer to the various needs of customers marketing medications in various therapeutic areas.

#### BENEFIT

Our syringes contribute to an optimized performance on filling-lines, high compatibility between drug and packaging and a reliable incorporation into injection devices. Our prefillable syringes can be customized in various ways to meet your individual demands.

#### STERILE PACKAGING SOLUTIONS - D2F® (DIRECT-TO-FILL)

Our D2F prefillable syringes are delivered pre-packed in a sterile packaging, which can be transferred directly into the filling-line.

The protective packaging was designed with the intent to prevent glass-to-glass contact during transport and the filling process. As a result scratches and impact related defects are substantially reduced and less cosmetic rejects are encountered during the filling process.

All D2F tubs and outer boxes have been provided with an ETO indicator on their labels. An efficient and clear way to visually confirm that units have been exposed to ETO sterilization.



#### BULK

#### INNER PACKAGING

Syringe  $\rightarrow$  Plastic tray (Rondo)  $\rightarrow$  PE bag (Multiple trays per bag)

#### TRANSPORT PACKAGING

PE bags  $\rightarrow$  PE box

#### STERILE

#### INNER PACKAGING

Syringe  $\rightarrow$  Plastic nest  $\rightarrow$  Plastic tub  $\rightarrow$  Tyvek Insert  $\rightarrow$  Tyvek Lid  $\rightarrow$  Breather bag

#### OUTER PACKAGING

#### Tubs $\rightarrow$ PP or cardboard

Tubs are stacked upside down (3 units wide x 5 layers high). Layers are separated by PP or cardboards.

#### MANUFACTURING PROCESS

Fully automated camera inspection (360°) at various stages ensures narrow dimensional and cosmetic tolerances, fulfilling and exceeding prevailing customer expectations. The different stations of bulk production, needle bonding and sterile production are highly optimized, resulting in a stable and efficient production process.

Gentle transportation of the syringe barrels prevents glass-to-glass(-to-metal) contact. All processes are performed in controlled environments or ISO class clean rooms that are regulated by ISO and GMP standards.

#### COMPLIANCE & QUALITY

Nipro's quality management system is ISO 9001 and ISO 15378 certified, safeguarding that all processes and products are complying to prevailing standards. Syringes are registered under the Drug Master File III.

Furthermore Nipro is investing time and resources to increase the energy efficiency of our plants and reducing our environmental footprint. This initiative has resulted in the certification according to ISO 50001 and ISO 14001. Final products are only distributed to our customers after having passed severe quality checks.

#### RANGE

#### SYRINGE SIZE

VOLUME (ml)	OUTSIDE Ø (mm)	INSIDE Ø (mm)	WIT	H STAKED NEEDLE		LUER SLIP CONE		LUER LOCK
0.5	6.85	4.65	•		•	1 1 1	•	
1.0 long	8.15	6.35	•	ā A	•	Π̈́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́	•	
1.0	10.85	8.65	•		•		•	
2.25	10.85	8.65	•		•		•	
3.0	10.85	8.65		II	•		•	

Other sizes upon request

#### SYRINGE BARREL

	STAKED NEEDLE		BEVEL	FLANGES	SHOULDERS	PRINTING	SPECIALS
Outside Ø	Inside Ø	Free length	Туре	Туре	Туре		
23 G (0.60 mm)	0.40 mm	1" (25.4 mm)					
25 G (0.50 mm)	0.30 mm	5⁄%" (16.0 mm)	3-bevel,	Round,			
27 G (0.40 mm)*	0.20 mm	½" (12.7 mm)			Round,	Graduation,	D
27 G (0.40 mm)	0.26 mm	½" (12.7 mm)	V-bevel,	Round small,	Flat	Dose mark	Double chamber
29 G (0.33 mm)*	0.13 mm	½" (12.7 mm)	Spoon point,	Cut			
29 G (0.33 mm)	0.19 mm	½" (12.7 mm)					

\* Thin type: Thin Wall (TW); Other sizes upon request

#### SYRINGE COMPONENTS

CLOS	URES	PLUNGER STOPPER	PLUNGER ROD	LUER LOCK ADAPTER	SAFETY DEVICE	NASAL SPRAY TIP
PFS with staked needle	Soft needle shield, Rigid needles shield					
PFS with luer slip cone	Tip cap, Ribbed tip cap	Standard, Coated	Transparent, Color	Standard	Passive	Standard
PFS with luer lock	LLA + Tip cap , LLA + Tamper evident system					
0						2

### PRIMARY PACKAGING



## **GLASS VIALS**

Nipro PharmaPackaging offers a wide range of standard vials and has a long history in customizing vials to our customer's requirements.

### BENEFITS

Our vials possess precise shape consistency, strong resistance against thermal shocks and fulfill tight cosmetic and dimensional tolerances.

### D2F® (DIRECT-TO-FILL) STERILE PACKAGING SOLUTIONS

D2F packaging is designed to be integrated easily into filling-lines. Customized solutions are available upon demand.

The protective packaging was designed with the intent to prevent glass-to-glass contact during transport and the filling process. As a result scratches and impact related defects are substantially reduced and less cosmetic rejects are encountered during the filling process.

The special LQ (Large Quantity) packaging design allows an easy removal of the front wall of the tray. The easier loading of the vials into the filling-lines accelerates the process strongly.

#### STERILE

#### INNER PACKAGING

Vial  $\rightarrow$  Plastic nest  $\rightarrow$  Plastic tub  $\rightarrow$  Tyvek Insert  $\rightarrow$  Tyvek Lid  $\rightarrow$  Breather bag

#### OUTER PACKAGING

#### Tubs $\rightarrow$ PP or cardboard

Tubs are stacked upside down (3 units wide x 5 layers high). Layers are separated by PP or cardboards.

#### **STERILE - LQ**

#### INNER PACKAGING

Vial  $\rightarrow$  LQ tray  $\rightarrow$  Breather bag

#### OUTER PACKAGING

LQ tray  $\rightarrow$  PP or cardboard

16 trays are staked (9 different staking schemes). Layers are separated by PP or cardboards.



#### MANUFACTURING PROCESSS

Nipro's manufacturing lines are equipped with the latest technologies ensuring narrow dimensional and cosmetic tolerances of the pre-fillable vials. Gentle transportation of the vials prevents glass-to-glass contact. All processes are performed in controlled environments or ISO classed clean rooms that are regulated by ISO and GMP standards.

#### COMPLIANCE & QUALITY

Nipro's quality management system is ISO 9001 and ISO 15378 certified, safeguarding that all processes and products are complying to prevailing standards. Vials are registered under the Drug Master File III.

Furthermore Nipro is investing time and resources to increase the energy efficiency of our plants and reducing our environmental footprint. This initiative has resulted in the certification according to ISO 14001. Final products are only distributed to our customers after having passed severe quality checks.

#### RANGE **CRIMP NECK**

	INJECTION/ ISO VIALS				INFUSION			
VOLUME (ml)	OUTSIDE Ø (mm)	NECK Ø (mm)	PACKAGING	VOLUME (ml)	OUTSIDE Ø (mm)	NECK Ø (mm)	PACKAGING	
2 R	16	13	Bulk	50	40	20	Bulk	
4 R	16	13	Bulk	75	47	28	Bulk	
6 R	22	20	Bulk, D2F	75	47	20	Bulk	
8 R	22	20	Bulk, D2F	75	47	32	Bulk	
10 R	24	20	Bulk, D2F	75	40	20	Bulk	
15 R	24	20	Bulk	100	47	20	Bulk	
20 R	30	20	Bulk	100	47	28	Bulk	
25 R	30	20	Bulk	100	47	32	Bulk	
30 R	30	20	Bulk	-	-	-	-	

#### SCREW NECK

	V	ALS		INFUSION			
VOLUME (ml)	OUTSIDE Ø (mm)	NECK Ø (mm)	PACKAGING	VOLUME (ml)	OUTSIDE Ø (mm)	NECK Ø (mm)	PACKAGING
5	18	14 (x2.5)	Bulk	50	40	22, 28, 32	Bulk
7.5	22	18 (x3.0)	Bulk, D2F	60	40	22, 28, 32	Bulk
10	24	18 (x3.0)	Bulk, D2F	70	40	22, 28, 32	Bulk
15	24	18 (x3.0)	Bulk	75	40	22, 28, 32	Bulk
20	30	22 (x3.0)	Bulk	75	47	22, 28, 32	Bulk
25	30	22 (x3.0)	Bulk	80	47	22, 28, 32	Bulk
30	30	22 (x3.0)	Bulk	90	47	22, 28, 32	Bulk
-	-	-	-	100	47	22, 28, 32	Bulk
-	-	-	-	125	47	28,32	Bulk



Upon customer request specialties such as blowback (Type I or II), surface treatment or VIALEX will be considered in the product design and manufacturing process.

Nipro offers a broad range of special & customized products, such as:

- Unit dose
- High recovery
- V-bottom
- and double chamber vials.



### PRIMARY PACKAGING



## **GLASS CARTRIDGES**

Nipro PharmaPackaging cartridges are produced meeting the highest quality requirements of the pharmaceutical industry. Cartridges are an ideal choice of packaging to be combined with injection devices (e.g. dental cartridge syringes, diabetes "insulin" pens).

#### BENEFITS

Our cartridges have a precise shape consistency, strong resistance against thermal shocks and fulfill tight cosmetic and dimensional tolerances.

### MANUFACTURING PROCESS

Dimensional and visual controls are carried out 100% in-line, using automated vision control systems. Operational.

In addition to the automated vision control, manual in process controls (IPC) are performed frequently during production. Those controls are based on statistical randomize sampling and are described in internal procedures. They further ensure dimensional and quality physical and chemical compliance to specifications.

### COMPLIANCE & QUALITY

All glass tubing used in the converting process comply with USP, JP, EP. Converting processes are subjected to relevant quality standards (ISO 9001, ISO 14001, ISO 15378, ISO 50001, OHSAS 18001) and cartridges are registered under the Drug Master File III.

#### RANGE **dental**

VOLUME (ml)	OUTSIDE Ø (mm)	PRINTING	SPECIALS
1.8	8.15		
1.8	8.80		De Handard
3.0	11.40	Ceramic	Double chamber
3.0	11.60		





As a long standing player with an annual sales quantity of several billions of high quality ampoules we have acquired the experience to offer an unparalleled service in product development and converting.

### **BENEFITS**

Customers benefit from a flexible product realization allowing them to select from a wide range of product types, specify required AQL levels (dimensional & cosmetic) and choose the most suitable packaging.

### MANUFACTURING PROCESS

Dimensional inspections are carried out 100% in-line, using automated camera control systems.

FORM C

DOUBLE TIP

In addition to the automated vision control, manual in process controls (IPC) are performed frequently during production. Those controls are based on statistical randomize sampling and are described in internal procedures. They further ensure dimensional and quality physical and chemical compliance to specifications.

### COMPLIANCE & QUALITY

All glass tubing used in the converting process comply with USP, JP, EP. Converting processes are subjected to relevant guality standards (ISO 9001, ISO 14001, ISO 15378, ISO 50001, OHSAS 18001) and final glass containers comply to ISO 9187-1. ISO 9187-2 and ISO 2859-1. Furthermore ampoules are registered under the Drug Master File III (FDA/HPFB).

#### RANGE





VOLUME (ml)	OUTSIDE Ø (mm)
1	10.75
2	10.75
3	12.75
5	14.75
10	17.75
20	22.50
25	22.50

Y	1
	2
Ä	3
	5
	1
-	2
FORM D	

VOLUME (ml)	OUTSIDE Ø (mm)
1	10.75
2	10.75
3	12.75
5	14.75
10	17.75
20	22.50

VOLUME (ml) OUTSIDE Ø (mm) 10.75 2 10.75 3 12.75 14.75 17.75 22.50

FINE TIP

BREAKING SYSTEM : Color Break Ring (CBR), Open Point Cut (OPC), Scoring Ring (SCR) **PRINTING :** Max. 2 colors CODE RINGS : Max. 3, up to 3 colors **TEXT** : up to 2 colors **SPECIAL :** Surface treatment



### PRIMARY PACKAGING



## **GLASS TEST TUBES**

The outstanding NSV51 borosilicate glass tubing of Nipro PharmaPackaging is converted into various test tubes. With long standing experience in producing test tubes we possess the knowledge to be a reliable and serviceminded business partner.

#### BENEFITS

Our test tubes possess high resistance to heat and corrosive chemicals. Customers benefit from long shelf-life and reliable performance during laboratory analysis.

### COMPLIANCE & QUALITY

Converting sites (ISO 9001, ISO 14001, OHSAS 18001, ISO 15378 certified) are constantly monitored and improved to meet stringent quality standards.

#### RANGE

Nipro is manufacturing test tubes with round or flat bottom, optionally a screw thread can be foreseen.

Nipro is offering a sizable portfolio of test tubes. Upon customer request we are able to develop and manufacture test tubes according specific requirements.

TEST TUBE	SPECIFICATIONS
Round bottom	Customization
Flat bottom	Customization





## **DUAL CHAMBER BAGS**

The dual chamber bags are an innovative primary packaging solution. The dual chamber bags combine the storage of a powdered drug and a diluent in one primary packaging. By simply exerting higher pressure on the diluent chamber, the seal between the two chambers is forced open, and the content of both chambers can be mixed with each other.

#### BENEFITS

Dual chamber bags enable simplified mixing of a powder drug and a diluent. The packaging design guarantees a closed system mixing procedure and prevents dosage and volume errors.

After reconstitution, the bag can be connected directly to an IV line for infusion. The compact design allows easy bedside preparation and administration.

No oxygen nor humidity are permeable through the packaging.

#### MANUFACTURING PROCESS

Dual chamber bags are part of our contract filling option in our pharma facilities in Japan and Vietnam. Both sites have been audited and approved by the Japanese PMDA and meet GMP.

#### COMPLIANCE & QUALITY

Our manufacturing sites are constantly monitored and improved to meet stringent quality standards to satisfy the quality requirements of Japanese and worldwide customers.

- B-, CD- and COP-types Tested according to USP 36 (<661> Plastic Containers) & JP16
- Diluent chamber Tested according to USP 36 (<661> Plastic Containers) & JP16
- Pharmaceutical and Medical Device Agency (PMDA Japan) approved & audited
- GMP certified

#### RANGE

LIQUID VOLUME (ml)	POWDER VOLUME (g)	BAG (B-TYPE)	BAG (CD-TYPE)	BAG COP-TYPE
50 to 100	Max 5	Multiple layers Most inner layer: LDPE	Multiple layers Most inner layer: LDPE	Multiple layers Most inner layer: COP



### COMPONENTS



Nipro, with more than 30 years of experience, is a leading pharmaceutical rubber closure manufacturer of injectable rubber components in Japan. Plants in Japan comply with local and international standards as ISO 9001 and GMP controlled processes. Given Nipro's evident commitment to provide high quality products and convincing services, Nipro is valued by its medical and pharmaceutical customers.

#### BENEFITS

Extensive studies show optimal extractable levels. Heavy metals are not present in levels that can cause toxicity/reaction with drugs. Furthermore the absence of latex, nitrosamines, phthalates, BSE/TSE and MBT can be confirmed.

The excellent sterilization properties ensure that the endogenous particulate release is not increased during autoclave processing. Additionally an excellent resistance to gamma irradiation and heat aging (ASTM) can be observed.

Our advanced rubber formulations provide low fragmentation due to an exact blend of ingredients. They prevent particulates caused by stopper-to-stopper abrasion and display adhesion free, non-sticky characteristics because of siliconisation/washing.

#### PACKAGING

Nipro offers an extended range of packaging solutions (RFU, RFS and Bulk). Our RFU components are washed, siliconized, rinsed (WFI), in-house gamma sterilized and packed in special clean bags allowing a direct transfer into your filling process. This approach further reduces the risks of contamination and provides you with the means to optimize your filling line efficacy.

### COMPLIANCE & QUALITY

Our manufacturing process has been designed with the target to manufacture products that meet and exceed prevailing market standards and customer requirements. Our production sites comply with the latest standards ISO 9001, ISO 15378 and GMP guidelines. Our in-house gamma sterilization is ISO 9001 certified. Additionally our products and processes are DMF registered. Nipro rubber closures comply with all major pharmacopoeia requirements (USP, EP, JP and IP).

#### RANGE



SERUM STOPPER FOR VIALS



Un



LYOPHILIZATION STOPPERS FOR VIALS





## **FOR PRE-FILLABLE SYRINGES**

Nipro is offering an extended range of components for our pre-fillable syringe range. You can customize your pre-fillable syringe by choosing from different types of closures & plunger stoppers, select the material & color of you plunger rod, apply a special tip to transform it into a nasal spray or enhance with a safety device.

### BENEFITS

A truly customized product to answer to your and your customer's needs.

#### PACKAGING

Nipro offers various packaging solutions in order to fulfill individual requirements.

### **COMPLIANCE & QUALITY**

All our components, either being already incorporated in a final packaging solution or being supplied separately, need to comply to the same strict quality specifications. Nipro's quality management system is ISO 9001 and ISO 15378 certified, safeguarding that all processes and products are complying to prevailing standards.

#### RANGE **CLOSURES**



Suppliers : Stelmi, West, Datwyler, Vetter-OVS



Luer lock adapter Supplier : Nipro

**SAFETY DEVICES\*** 



Suppliers : Stelmi, West, Datwyler, Nipro

Plunger rod Supplier : Nipro

#### NASAL SPRAY TIP



- Compatible with 1 ml & 2.25 ml syringes.
- Available in bulk or tray
- Optional ergonomic extended finger flange

\*Nemera Safe'n'Sound



Compatible with all luer lock syringes.

- evident system

### ACCESSORIES



## **NASAL SPRAY**

The nasal spray system, with VORTEX technology, enables simple nasal administrations of drugs packaged in vials. The patented spraying nozzle with VORTEX technology creates a wider spray further inside the nose.

### **BENEFITS**

The nasal spray ensures administration of exact half a dose in each nasal cavity. The Vortex technology enables a better coating of the nasal cavity leading to an improved absorption of a drug or vaccine.

#### PACKAGING

Product comes packaged with vial adaptor, sterile and ready to use.

### **COMPLIANCE & QUALITY**

Our manufacturing sites are constantly monitored and improved to meet stringent quality standards to satisfy the quality requirements of our worldwide customers.

#### RANGE

#### Compatible vials sizes with vial adapter :

Adapter can be customized to fit different vial sizes.

#### Dose volume :

Volume can be customized.





## **RECONSTITUTION DEVICES**

Nipro provides devices tailored to reconstitution methods for various pharmaceutical drugs, such as antibiotics and anti-cancer drugs.

### BENEFITS

Our devices optimize your preparation of drugs (liquid & lyophilized) and solutions. They eliminate the need for complicated procedures enabling fast and easy reconstitution with a reduced risk of contamination and exposure. Additionally needle less devices increase user-safety.

#### PACKAGING

Nipro offers multiple packaging solutions in order to fulfill individual requirements.

### COMPLIANCE & QUALITY

The manufacturing process is continuously controlled from incoming inspection up to the final shipment of the product, thereby realizing high quality.

#### RANGE

#### VIAL-TO-VIAL



#### **SPECIFICATIONS :**

Needle types (e.g., metal and plastic) can be selected based on flow rates and applications. Needles can be designed based on drug vial diameters.

#### VIAL-TO-SYRINGE



#### **SPECIFICATIONS** :

Filters or differential pressure release structures can be added depending on drug properties. Designs can be based on drug vial diameters.

#### VIAL-TO-VIAL-TO-SYRINGE



#### **SPECIFICATIONS** :

Filters or differential pressure release structures can be added depending on drug properties.

Designs can be based on drug vial diameters.

### ACCESSORIES



## **HYPODERMIC NEEDLES**

Established as one of the world's largest needle manufacturers, Nipro has on one hand the resources to manufacture and supply large volumes upon demand and on the other hand to ensure a continuous supply. Nipro's focus on quality is acknowledged in the industry.

#### BENEFITS

The three beveled needle with an ultra-sharp lancet point minimizes damage to the vessel and supports a nearly pain free injection. The ultra-thin wall allows an easy and fast administration of viscose fluids. An evenly siliconized cannula prevents knocking effects during puncture.

The hard case packaging enables an easy integration in an automated packaging process. The tamper evident label provides an easy detection if a product is still sterile.

#### PACKAGING

PACKAGING LEVELS	NEEDLES LENGTH < 2" (50 mm)	NEEDLES LENGTH > 2" (50 mm)
Single pack	1 (blister or hard pack) piece	1 (blister or hard pack) piece
Unit box	100 pieces	100 pieces
Inner box	2000 (20 x 100) pieces	N/A
Shipping carton	10000 (5 x 2000) pieces	3000 (30 x 100) pieces

### COMPLIANCE & QUALITY

All hypodermic safety needles are made of medical grade materials and are latex and PVC free. Products are for single use, have a shelf life of 5 years and are ETO sterilized.

#### RANGE

COLOR	G x inch*	mm x mm**
White	16 x 1"	1.6 x 25
White	16 x 1 ½"	1.6 x 40
Pink	18 x 1 ½"	1.2 x 40
Pink	18 x 2"	1.2 x 50
lvory	19 x 1"	1.1 x 25
lvory	19 x 1 ¼"	1.1 x 30
lvory	19 x 1 ½"	1.1 x 40
lvory	19 x 2"	1.1 x 50
Yellow	20 x 1"	0.9 x 25
Yellow	20 x 1 ½"	0.9 x 40
Yellow	20 x 2"	0.9 x 50

COLOR	G x inch*	mm x mm**	
Yellow	20 x 2 ¾"	0.9 x 70	
Green	21 x 5⁄8″	0.8 x 16	
Green	21 x 1"	0.8 x 25	
Green	21 x 1 ½"	0.8 x 40	
Green	21 x 2"	0.8 x 50	
Green	21 x 2 ¾"	0.8 x 70	
Black	22 x 1 ¼"	0.7 x 30	
Black	22 x 1 ½"	0.7 x 40	
Black	22 x 2"	0.7 x 50	
Blue	23 x 5⁄8"	0.6 x 16	
Blue	23 x 1"	0.6 x 25	

COLOR	G x inch*	mm x mm**
Blue	23 x 1 ¼"	0.6 x 30
Violet	24 x 1"	0.55 x 25
Orange	25 x 5⁄8″	0.5 x 16
Orange	25 x 1"	0.5 x 25
Brown	26 x ½"	0.45 x 13
Brown	26 x 1/8"	0.45 x 22
Grey	27 x ½"	0.4 x 13
Grey	27 x ¾"	0.4 x 19
Grey	27 x 1 ¼"	0.4 x 30
Red	29 x ½"	0.3 x 13

\* Needle O.D. in "Gauge" x needle length in "inch" \*\* Needle O.D. in "mm" x needle length in "mm"







## **HYPODERMIC PLASTIC SYRINGES**

By constantly innovating and by putting safety and quality first, Nipro is offering a high quality and comprehensive product range, fulfilling industry and end-user requirements alike.

### BENEFITS

The smooth plunger movement in combination with the large finger grips support an easy and comfortable injection. The clear barrel enables a precise confirmation of the volume remaining within the syringe and the carefully molded gasket prevents leakage contributing to a safer administration.

### PACKAGING

PACKAGING LEVELS	VOLUMES : 2, 3, 5, 10 ml	VOLUME : 20 ml	VOLUME : 30 ml	VOLUME : 50 ml	
Single pack		1 piece (blister packaging)			
Unit box	100 pieces	50 pieces	30 pieces	30 pieces	
Shipping carton	1000 pieces	500 pieces	360 pieces	360 pieces	

### COMPLIANCE & QUALITY

All hypodermic syringes are made of medical grade materials and are latex and PVC free. Products are for single use, have a shelf life of 5 years and are ETO sterilized.

#### RANGE

TIP: Luer slip, Luer lock, Catheter tip VOLUME: 2 ml, 3 ml, 5 ml, 10 ml, 20 ml, 30 ml, 50 ml.



### RAW MATERIAL



## **GLASS TUBING**



## **NIPRO PREMIUM GLASS TUBING**

A large majority of pharmaceutical companies rely on primary packaging made out of tubular glass to protect their drugs. The quality of the glass tubing is one of the key elements that will define the quality of the final primary packaging.

### CUSTOMIZE YOUR GLASS TUBING QUALITY

We offer you the possibility to choose the specifications of the tubing glass that will be used to produce your primary packaging. This approach allows you to have an optimal match between your packaging requirements and the tubing glass.



#### LARGE GLOBAL NETWORK

Nipro PharmaPackaging, with a global capacity of more than 90000 metric tons is one of the largest glass tubing manufacturers in the world. Our plant network comprises five drawing sites spread over three continents, offering a global approach with local solutions. A wide range of premium quality clear and amber glass tubing is manufactured applying Vello and Danner drawing processes.

#### STATE-OF-THE-ART MANUFACTURING PROCESS

Dimensional and cosmetic inspections are carried out 100% in-line, using automated vision control systems. Moreover, manual inspection comes as a back-up, in order to ensure that all quality parameters are met.

Statistical Process Control (SPC) methodology provides control of our process at the point of manufacturing. The SPC systems at our production sites allow real-time, data driven decisions to the processes, thereby reducing variability and scrap.

Our sites work with shared systems to ensure consistency in product, processes, and technology across our tube draw operations. Irrespectively of the plant, you will receive the same premium quality glass tubing all over the world.

#### CONTINUOUS IMPROVEMENT

At our factories, continuous improvement is a priority. It enables us to answer to our customer needs by providing tubing glass fulfilling market requirements, today and tomorrow.

## **QUALITY REFLECTED IN GLASS**

Nipro PharmaPackaging is manufacturing glass tubing as well as primary packaging. Understanding the quality requirements of the final primary packaging enables us to manufacture the matching glass tubing quality.

Our quality system controls all processes from the batch house, where raw materials are received and mixed, through the melting and forming processes, to the tube finishing, packing and warehouse storing.



Nipro PharmaPackaging tube drawings sites are certified according to ISO 9001, ISO 15378, ISO 14001 and OHSAS 18001.

The premium quality of our glass tubing is reflected by an exceptional hydrolytic resistance and narrow dimensional & cosmetic tolerances. It serves as an excellent material for forming high quality primary packaging.

#### PRODUCT RANGE



\*Optional with cerium



LAB SERVICES

## **ANALYTICS FOR PHARMA PACKAGING**

## EXPERTISE IN PHARMACEUTICAL PACKAGING ANALYSIS

Nipro Laboratory Services offers analytical laboratory services for pharmaceutical packaging.

As being part of a vertically integrated company, Nipro Laboratory Services is responsible for the analytics guiding the development and production processes of our pharmaceutical primary packaging.

In supporting the entire process, Nipro Laboratory Services has acquired an exceptional expertise in analysis related to pharmaceutical primary packaging.

You will work with a service partner with comprehensive understanding of the analytical data/information, state of the art analytical equipment and wide-ranging solutions to industry problems.



## **VALUE PROPOSITION**

#### • ADVANCED EQUIPMENT

We operate a distinct assortment of advanced analytical equipment dedicated to testing and characterization of pharma packaging.

#### **EXCEPTIONAL EXPERTISE**

Over 100+ years of technical and scientific expertise in pharmaceutical packaging equips us with an exceptional knowhow in chemical, mechanical, physical and thermal properties of packaging material, as well as the related analytics.

#### > ENHANCED QUALITY

We support pharma companies in finding :

- suitable packaging solutions for new drugs
- improvements in the packaging quality of existing drugs
- in order to increase the drug-packaging compatibility to enable safer administrations.

NIPRO LABORATORY SERVICES – ENHANCED PACKAGING QUALITY FOR SAFER ADMINISTRATIONS!



## NIPRO LABORATORY SERVICES OFFERS AN EXPANSIVE SET OF CAPABILITIES

#### COMMITTED TO COMPLIANCE AND QUALITY

In order to provide reliable and meaningful results all systems and procedures are based on applicable cGMP's.

## YOUR PREFERRED PARTNER FOR PHARMACEUTICAL PACKAGING ANALYSIS

With flexible solutions, results driven analysis and customer oriented service, Nipro Laboratory Services continuously strives to gain and maintain the position of your preferred business partner.



NIPRO PHARMAPACKAGING INTERNATIONAL HEADQUARTERS Weihoek 3H, 1930 Zaventem, Belgium www.nipro-pharmapackaging.com | info@nipro-pharmapackaging.com

