


# Instructions



Manufacturer: **Techno Plastic Products AG**  
 Zollstrasse 155  
 8219 Trasadingen / Schweiz  
[www.tpp.ch](http://www.tpp.ch) / [info@tpp.ch](mailto:info@tpp.ch)

Version 1/2003

<b>GENERAL INFORMATION</b>	These instructions are an integral part of our product range. Please read them through carefully before using any product. Further information can be found in our product catalogue as well as under <a href="http://www.tpp.ch">www.tpp.ch</a> . Please contact your appointed dealer in case of difficulty concerning any product.																
<b>Application</b>	All products are for laboratory use only and may only be used by qualified personnel. The products are not allowed to be used for direct applications on humans. Personal use by unqualified people is forbidden. All products are for single usage only, i. e. not reusable. Exception: Racks can be autoclaved for multiple use.																
<b>Certification</b>	All products are free from pyrogenics (LAL-test: <0.06EU/ml). Pipettes, tissue culture flasks with peel-off lids, and syringe filters:<0.5EU/ml (LAL-Test) All products are free from RNA, DNA, RNases and DNases All products, packaging materials and colorants are free from heavy metals																
<b>Sterility / Packaging</b>	All products are gamma-sterilised. The sterility is maintained indefinitely as long as the packaging remains unopened and free from visible defect. Opening of the packaging at the indicated points and removal of content shall be done in a sterile environment (laminar flow). Opened packets shall be stored under sterile conditions. Factors such as direct sunlight, moisture and large temperature change can impair sterility.																
<b>Temperature Restrictions</b>	The application temperature is physically limited and varies dependent upon the base material. The following general temperature data can deviate dependent upon the specific product.																
	<table border="1"> <thead> <tr> <th></th> <th>PE</th> <th>PP</th> <th>PS</th> </tr> </thead> <tbody> <tr> <td>Permanent exposure (max.T)</td> <td>70 - 80°C</td> <td>100 - 110°C</td> <td>60 - 70°C</td> </tr> <tr> <td>Short exposure 15min (max.T)</td> <td>80 - 100°C</td> <td>120 - 140°C</td> <td>75 - 80°C</td> </tr> <tr> <td>Permanent exposure (min.T)</td> <td>-40°C</td> <td>-190°C</td> <td>-30°C</td> </tr> </tbody> </table>		PE	PP	PS	Permanent exposure (max.T)	70 - 80°C	100 - 110°C	60 - 70°C	Short exposure 15min (max.T)	80 - 100°C	120 - 140°C	75 - 80°C	Permanent exposure (min.T)	-40°C	-190°C	-30°C
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<b>Chemical Resistance</b>	The chemical properties are those of the base materials and may be found under <a href="http://www.tpp.ch">www.tpp.ch</a>																
<b>Storage</b>	The products shall be stored in a dry environment and away from sunlight at between +5 to +40°C.																
<b>Shelf life</b>	Please note the expiry date on the package label. Products shall not be used after this date. Example: EXP 12/2007 - can be used up to December, 2007.																
<b>Fracture risk</b>	Products made from Polystyrene are hard and brittle. They can be damaged even by a fall from moderate height. Products in PP are not so brittle but can change their shape; please use only optically perfect products. The presence of cracks or deformity can inhibit the function of the product and could endanger your safety. The result might be the injury and contamination of people as well as contamination of laboratory equipment.																
																	
<b>Disposal</b>	Contaminated products may only be disposed of according to the specific rules of the given country (usually require sterilisation before disposal). Non-contaminated products can be disposed of as usual household trash.																
<b>Guarantee-Reference</b>	The products are to be used according to the instructions. When correctly used, the manufacturer offers a product guarantee up to the expiry date. Further guarantee claims are specifically excluded. The guarantee claim must be made without delay; otherwise the claim becomes invalid. Opinions, comments and/or promises given or made by a sales representative are in no way binding on the manufacturer. The decision to either reimburse the purchase price or to replace the product lies solely with the manufacturer.																

## CRYO TUBES



### OPERATING INSTRUCTIONS

Cryo tubes may only be filled to 90% of their maximum graduated volume at low temperatures. An expansion of the contents must be allowed for.

Both threads of the tube must be absolutely dry because any dampness could impair tightness.

A cooling rate of 1°C/min. should be maintained during freezing of the cryo tubes.

Immerse the cryo tubes in a water bath (37°C - 40°C) and keep them in motion when defreezing. Remove the tubes as soon as the contents have melted.



### ADVICE

If storing liquid phases, it is strongly recommended that the tube be enclosed in an extra covering such as welded tubing.

We recommend that the tubes be stored always above liquid nitrogen in the gas phase to avoid possible fracture or loss of tightness - the risk is high when the tubes are once more exposed to room temperature. Dangerous biological material could be released rapidly in the event of failure. It is essential to use the regulation protection equipment such as proper clothing, gloves and face mask when removing tubes from a liquid nitrogen vessel.

### TECHNICAL DATA

Materials:	Cap	PP			
	Tube	PP			
	<b>Product No.</b>	<b>89012</b>	<b>89020</b>	<b>89040</b>	<b>89050</b>
Volume:		1.2ml	2.0ml	3.8ml	4.5ml
Dimensions:	Diameter	12mm	12mm	12mm	12mm
	Length	36mm	48mm	75mm	90mm
Practical temperature range:		+ 121°C bis -196°C			