

Technical Data Sheet

Revision Date: 2017-04-22

NO.WHPU_0001

Name: WHT-1164IC

Version: 6.0

Type

Polyester-based grade, extrusion and injection molding grade.

Features

Excellent mechanical properties, high abrasion resistance, good wear resistance, short cycle times.

Applications

Shoe heels, injection-molded engineering components, wire & cable, etc.

Typical Properties

Items	Test Method	Units	Values	
Specific Gravity	ASTM D792	g/cm ³	1.21	
Shore Hardness	ASTM D2240	Shore D	64	
Tensile Strength at 100% Elongation	ASTM D412	MPa	24	
Tensile Strength at 300% Elongation	ASTM D412	MPa	35	
Tensile Strength	ASTM D412	MPa	45	
Ultimate Elongation	ASTM D412	%	420	
Tear Strength	ASTM D624	N/mm	225	
DIN Abrasion	ISO 4649	mm ³	30	
Compression Set	22 h; 70 °C	ASTM D395	%	68
	24 h; 23 °C	ASTM D395	%	25
Tg by DSC	ASTM D3418	°C	-9	
Vicat Softening Temperature	ASTM D1525	°C	120	

*All these physical properties are based on injection molded samples, which are conditioned at 23 °C/50% for 24h. Above values are typical values and should not be used as specifications.

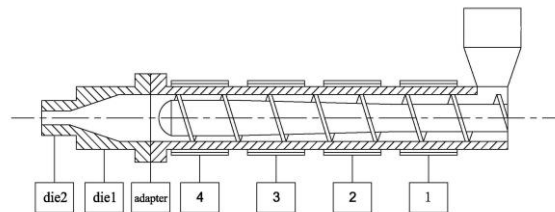
Processing Recommendations

Based on our experience, the features of recommended screw are the following:

1. L/D ratio should be between 28 and 32.
2. The appropriate compression ratio is from 2:1 to 3:1.
3. The screw extruder should have four sections which have continued constant pitch. The distance between screw and barrel should be 0.1 to 0.2 mm. Depending on the size and type of the screw and die, the breaker plates used should have holes of 1.5 to 5 mm.
4. Main power is at least 1.5 times higher than that for PVC and other common plastics.
5. TPU is shear sensitive, for this reason, the speed of extruder should be low in case of degradation during processing.

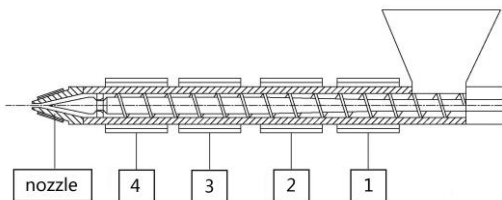
Typical Processing Conditions

Wanthane® WHT-1164IC can be both extruded and injection-molded. Typical processing conditions are listed in the following tables and figures. You can contact our [technical service](#) for further inquiries about products or troubleshooting.



Type: screw: 40mm, L/D: 32, compression ratio 3:1

	Zone1	Zone2	Zone3	Zone4	Adaptor	Die1	Die2
°C	195	200	205	210	215	210	205



	Zone1	Zone2	Zone3	Zone4	Nozzle	Mold
°C	205	210	215	220	215	30

Drying

Wanthane® materials are supplied pre-dried in moisture guarded bags. Dry Wanthane® will rapidly absorb moisture when exposed to atmosphere. For recyclable products, Wanthane® WHT-1164IC must be dried before processing. It is recommended to dry the material at 90-100°C for 3-4h in a circulating air or dehumidified air dryer. The moisture content must be lower than 0.02% before and during processing.

Packaging

Wanthane® WHT-1164IC is packaged in the form of uncolored transparent pellets in PE-lined bags of 25 Kg net weight (1000 Kg/pallet).

Storage

Wanthane® should be inspected to assure containers are not broken during transportation. Containers should be stored in a cool and dry environment, and should be brought to room temperature before opening in order to prevent condensation. Once being used, containers with residual materials should be sealed. It is necessary to cover the feed hopper of the processing machine.

Health and Safety

Wanthane® materials have no hazardous reactions observed. The waste can be discarded to public garbage cans. When contacting or processing this product, it is recommended that all personnel wear eye/face protection and suitable protective clothing. Any further safety information about this product is available in our [technical service](#) center.

For more information about safety and environment, please refer to our MSDS or contact our customer service center.

Version Information:

Date of first issue: June 6, 2013

Date of 1st revise: Feb 6, 2015 Reason for revision: The need of product classification.

Date of 2nd revise: May 5, 2015 Reason for revision: A change of company address.

Date of 3rd revise: Aug.18, 2015 Reason for revision: Unified the template of TDS.

Date of 4th revise: May 31, 2016 Reason for revision: Change of product standard.

Date of 5th revise: Apr. 22, 2017 Reason for revision: Change of company LOGO.

For further information please contact us:

Address: Wanhua Chemical Group Co., Ltd.

No.59,Chongqing Rd,YEDA,Yantai,264006,China

Customer service: Tel: +86 (535) 3388825 Fax: +86 (535) 6857160

Web-site: <http://www.whchem.com>

The information provided here is for reference only. It is the user's responsibility to test the material and its suitability for a process. We have no control over what another party does with the material and we cannot take any responsibility for another party's action. Nor will we be responsible for any indirect damages while using our products. The user is welcome to contact our customer and [technical service](#) center with questions on our products.