

On the Basis of Secondary Materials to the Study of the Important Properties of Polymer Waste

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Abstract:

Worth mentioning, republic of running through the introduction of innovative technologies in industrial facilities based scientific conservation of the environment and the system paid great attention to the implementation of measures. Strategic action for the further development of the republic of uzbekistan "at deep processing of local raw material resources on the basis of further accelerate the production of finished products with high added value, qualitatively change the types of new technologies and products" aimed at the important tasks have been identified.

Keywords: secondary polymer, bending strength limit, non-plasticized, phthalate plasticizer, modification.

The stretch of the term to the operation of the product polymer is not only chemicals, but also ecological problems. On the one hand, plastic and polymer products prolong the storage time of the product to increase the amount of the operation also requires to improve its quality. On the other hand, polymer and environmental protection has become one of the main issues of eliminating waste disposed of remain. Only environmental but also economic point of disposal or burning while sending them neither is not according to the purpose. At the present time there are several different methods of polymer wastes of loss. Re-primary production from the processing of the processing is repeated. Secondary while processing a multi-stage process, the separation of polymer waste, cleaning and involves the repeated use of them. Tertiary or chemical (raw-real) from the total mass of particular polymer processing waste products of lower molecular faction reaches separate them to

re-take the next is ready to work. Also, the restoration of the polymer chains of chemical processes and chemical modification is to make them in another direction.

Today, the economic cost of polymer processing chemical waste very little is used in practice. The loss of polymer waste another way of them burning, and energy. The big drawback of this method is an invaluable component in the combustion process of burning is gone [1; 22-p. 2; 331-332-p. 3; 320-p. 4; 345-347-p.]. Thus, it does not lose the texture of polymer waste, raw materials, saving them the reduction in the period of service useless mechanical processing methods (primary and secondary) processing [142; 22-85-p.].

Go out and experience-the test of the consistency of characteristics of polymeric materials on the basis of secondary waste (σ_p -stretched consistency in the limit σ_v - bending strength limit) when we investigate in the following table will get the results.

One and multi - layer sheet in the form of the samples stretched and bent in the important mechanical characteristics average value are listed in the table 1.

Table 1. Secondary pe, pp and pvc sheet in the form of mechanical characteristic of the material obtained from the average value of egilishdagi stretched and

The type of material is	In stretching σ_p MPa		In bending, σ_v MPa	
	The measurement range	the average value	the measurement range	the average value
- layer	46.89—80.20	60.10	75.44—132.00	104.38
two-layer	53.96—74.40	63.15	78.38—163.34	112.66
multi-layer	54.10—67.10	63.66	98.10—140.00	121.22

Loading of the machine mixer slot speed was carried out at 5 mm/min. Mechanical characteristics material in sheet form as the base of a stratified depending on the difference of the samples obtained from clippings will take. Depending on the results of the research can you say the same thing, stretched on solid samples, the average of 0.3% declined by an average of egilishdagi consistency while 1.2% increase. To be stretched due to deviation of the biggest at the time from 12% at the moment was increased and down while 13%.

Secondary pe, pp and pvc materials technology to improve for the reason of their consistency was improved and therefore the average value for a different type of material will increase.

As a research material world modifications are listed in the following table 2:

Table 2. Secondary pe, pp and pvc obtained from the samples in the form of sheet, stretchedand bent in mechanical consistency limits' relative value

The type of material	stretched consistency in limit %	Bending limit consistency, %
a stratified	82,6	74,0
two-layer	87,9	73,0
two-layer	82,9	82,6
two-layer	88,2	106,5
two-layer	89,1	98,7
two-layer	98,8	126,9
two-layer	90,2	94,4
a stratified	102,6	145,0
multi-layer	100,5	115,5
two-layer	103,7	102,0

Secondary pe, pp and PVC taken on the basis of the material of deformation 0,08 stretched in speed from 100 mm/min in a range will investigate the effects on mechanical properties. A mechanical indicator of the amount of absolute and relative value've composition. Thus, many polymeric materials for consistency and the usual InV (V-deformasiyalanish speed) connection between is observed linearly.

If the speed of displacement increases 10 times durability approximately 0,04 mpa increases.

Secondary pe, pp and PVC materials on the basis of physical-mechanical properties is significantly associated to the nature of used by plasticizer. Comparing with pvc material Plastifikasiya not hard to see when the material is sufficiently softened plastifikasiya the process, his absolute residual displacement increases. Made of pvc material, in comparison with each other and with their unplasticized phthalate plasticizer water absorbtion, that extends from one another, stretched in relative and steadfastness is dramatically different. Therefore, phthalate plasticizer, including dioctyl phthalate (DOP) on the basis of the pvc material is very good for physical-mechanical indicator will show.

The analysis of the research results are the same thing, pvc processing secondary materials is the most effective dop plasticizer, its amount (mass share) 10-13% compared to the highest plasticizer indicators other than adding to the show. You need to also remember that the secondary material when used as a building material pvc material obtained on the basis of the amount of dop's to 2.5% is recommended to be increased because material's water absorbtion and its stiffness can be reduced.

As I can conclude, the secondary polymer materials and pvc polyolefin can be worthwhile to get from them some indicators (consistency, elasticity module, stiffness) does not differ from the primary material, even superior to them. Also, this also economically beneficial.

Literature

1. Чупрова Л.В., Муллина Э.Р., Мишурина О.А., Ершова О.В. Исследование возможности получения композиционных материалов на основе вторичных полимеров // Современные проблемы науки и образования. - 2014. - № 4.
2. Рахимов М.А., Рахимова Г.М., Иманов Е.М. Проблемы утилизации полимерных отходов // фундаментальные исследования. /- 2014. - № 8-2. С.331–332.
3. Шахова В.Н., Воробьева А.А., Виткалова И.А., Торлова А.С., Пикалов Е.С. Современные технологии переработки полимерных отходов и проблемы их использования // Современные наукоемкие технологии. – 2016. – № 11-2. – С. 320-325.
4. Шерышев М.А. Производство изделий из полимерных листов и пленок /– СПб.: НОТ, 2011. – 556 с
5. Клинков А.С., Беляев П.С., Скуратов В.К., Соколов М.В., Однолько В.Г. Утилизация и вторичная переработка тары и упаковки из полимерных материалов. Допущено УМО по образованию в области полиграфии и книжного дела для студентов высших учебных заведений, обучающихся по специальности 261201.65 "Технология и дизайн упаковочного производства". Тамбов Издательство ТГТУ 2010. С-105