

**Synergy between Circular Economy and Total expertise in polymers:
Total creates products that outperform virgin materials**

Total launches HDPE Circular Compound range containing superior post-consumer recyclates for household and industrial liquid applications

Total Refining & Chemicals
rue de l'Industrie,52
Nijverheidsstraat,52
BE-1040 Brussels
www.totalrefiningchemicals.com
Tel: +32 2 288 91 11
Fax: +32 2 288 33 69

Media contacts
Ava PEREZ
Tel.: +32 (0) 2 288 33 52
ava.perez@total.com

Fayrouz YATAGHANE
Tel: + 33 (0) 1 41 35 70 04
fayrouz.yataghane@total.com



Brussels, August 8, 2016 - Total is pleased to introduce a new range of high-density polyethylene (HDPE) Circular Compounds with high levels of recycled content to its packaging segment customers. With performance equal to or exceeding that of virgin resins, this new product range valorizes Total's superior process and catalyst technology and actively contributes to the Circular Economy.

Jean Viallefont, Vice President Polymers Europe, stated: *"Total is currently extending the applications of the recycled compounds concept by developing additional new grades, since we believe it will be essential to place the European virgin plastics industry in a new yet essential role as 'circularity enhancer'."*

The range consists of HDPE polymer products, in natural color, that cover all the manufacturing needs for blow-molded bottles and heavy-duty containers for household and industrial liquids with a guarantee of 25% or 50% minimum of Post Consumer Recyclate (PCR). Total's initial production capacity of HDPE Circular Compounds amounts to 20 kT, coming fully on stream during the course of 2017.

The composition and manufacturing process of these Circular Compounds is especially designed to minimize their environmental footprint, while ensuring outstanding performance and processing properties, guaranteed by Total just as with any virgin resin. Their recycled content originates from post-consumer household waste collected in Western European countries and is recycled by selected partners chosen by Total for their outstanding product quality and recycling process capabilities. In its Antwerp plant, Total applies a last deep decontamination step, which transforms the PCR into an absolute fragrance-free resin.

Finally, the PCR is compounded in Total's plant with highly technological HDPE virgin products, specifically designed and produced as intermediate resins in order to overcompensate for any lack of performance and consistency of the PCR. The resulting compounds are meant to be fully equivalent to any virgin resin sold in the same application, but in reality they largely outperform them in all key aspects for their application.

For the Circular Economy and for plastics in general, the innovative concept of high performance Circular Compounds allows the recycling industry and the virgin resin industry to open up new markets for high-quality recycled polymers. As a contribution in this area, Total's objective is to enable downstream industries to rely on recycled materials and to achieve this, we are currently developing additional new grades for a wide variety of applications.

About Total Refining & Chemicals

The Refining & Chemicals division of Total, a leading international oil and gas company, combines refining and petrochemical activities with specialty chemicals and employs almost 45,000 people worldwide. The division is Europe's leading refining company and second largest petrochemical manufacturer. It boasts 14 refineries, 26 petrochemical and over 110 specialty plants around the world. It produces and provides its customers with a wide range of petroleum products, chemical-based products and polymers, which are aimed at a wide range of industrial and commercial markets.



Total Polymers Antwerp (Photo: © Michel Clinckemaille, PR021)

Total Refining & Chemicals

rue de l'Industrie,52
Nijverheidsstraat,52
BE-1040 Brussels

www.totalrefiningchemicals.com

Tel: +32 2 288 91 11

Fax: +32 2 288 33 69

Press Contacts

Ava PEREZ

Tel.: +32 (0) 2 288 33 52

ava.perez@total.com

Fayrouz YATAGHANE

Tel: + 33 (0) 1 41 35 70 04

fayrouz.yataghane@total.com



Jean Viallefont, Vice President Polymers Europe (Photo: Total, PR021)

This press release and associated photographs can be downloaded from www.totalrefiningchemicals.com and www.PressReleaseFinder.com.