Arqlite™

Arqlite's proprietary process is capable of processing multilayered and mixed plastics into a homogenized composite pellet designed to be used for injection molding and extrusion of rigid plastic products.

Arqlite's goal is to help the industry cut down costs and achieve higher sustainability standards by incorporating hard-to-recycle plastics deviated from the environment.

Our repro pellets contain a proprietary mix of LDPE, PP and PET and can be used mixed with pure PP, PE and PET resins.

Applications
Injection molding and extrusion of rigid plastic parts
To be used combined with pure resins

Standard options
1-2mm pellets
Color may vary from grey to green

PLASTICS ANALYTICAL LABORATORY

Certificate No. 3090.01

Physical Properties	**Arqlite** Homogenized Repro	PP control unit	20% **Arqlite** 80% PP	HDPE control unit	20% **Arqlite** 80% HDPE	Standard Used
Specific Gravity	0.967	0.90	0.92	0.950	0.950	ASTM D792
Izod Impact	2.28 ftlb/in	0.70 ftlb/in	0.92 ftlb/in	1.0 ftlb/in	0.74 ftlb/in	ASTM D256
Tensile Strength	2365 psi	5136 psi	4381 psi	3902 psi	2684 psi	ASTM D638
Elongation	120%	11.0%	13.5%	150%	55%	-
Tensile Modulus	136,684	274,881	258,522	174,000	165,598	ASTM D638
Flex Strength	2,574 psi	6482 psi	5273 psi	3527 psi	2442 psi	ASTM D790
Flex Modulus	62,186	186,686	143,682	72,534	56,778	ASTM D790
Melt Flow	2.12g10/m	11.6g/10m	8.3g/10m	20.5g/10m	10.2g/10m	ASTM D1238
DSC	PP 123.78C / PE 159.92C / PET 254.23C					

Results - Declaration of Environmental Indicators Derived from LCA

Certified to NSF / ANSI 61

The results presented in the following tables are for 1 m^3 of synthetic granulate.

LCA Results From LCIA

Abbreviation	Parameter	Unit	Raw Material Supply (A1)	Transport (A2)	Manufacturing (A3)	Total (A1-A3)	Module D	Total
	CML 2001-Jan 2016							
ADP-elements	Abiotic depletion potential for non-fossil resources	kg Sb eq	2.42E-05	1.17E-06	5.82E-05	8.36E-05	-5.75E-06	7.79E-05
ADP-fossil	Abiotic depletion potential for fossil resources	MJ, net calorific value	1.24E+03	9.86E+01	5.57E+02	1.19E+03	-1.17E+03	2.44E+01
AP	Acidification potential of soil and water	kg SO_2 eq	6.59E-02	1.51E-02	9.52E-02	1.76E-01	-1.69E-01	7.47E-03
EP	Eutrophication potential	kg Phosphate eq	8.42E-03	4.02E-03	1.90E-02	3.14E-02	-9.76E-02	-6.61E-02
GWP	Global warming potential	kg CO_2 eq	3.79E+01	6.97E+00	9.31E+01	1.38E+02	-7.67E+01	6.13E+01
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq	1.87E-14	8.80E-16	4.19E-12	4.21E-12	-1.93E-13	4.02E-12
POCP	Photochemical ozone creation potential	kg Ethane eq	9.99E-03	-5.02E-03	1.02E-02	1.51E-02	-1.77E-02	-2.52E-03
	TRACI 2.1							
AP	Acidification potential of soil and water	kg N eq	7.31E-02	2.03E-02	2.17E-01	3.10E-01	-1.94E-01	1.17E-01
EP	Eutrophication potential	kg SO_2 eq	4.00E-03	2.39E-03	1.37E-02	2.01E-02	-4.51E-02	-2.50E-02
GWP	Global warming potential	kg CO_2 eq	3.79E+01	6.97E+00	9.30E+01	1.38E+02	-7.66E+01	6.12E+01
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq	1.87E-14	8.80E-16	4.19E-12	4.21E-12	-1.93E-13	4.02E-12
Resources	Depletion of non-renewable fossil fuels	MJ, surplus energy	1.77E+02	1.32E+01	1.64E+02	3.55E+02	-1.60E+02	1.95E+02
POCP	Photochemical ozone creation potential	kg O_3 eq	1.53E+00	4.55E-01	2.84E+00	4.82E+00	-4.19E+00	6.34E-01

Table 7: Life Cycle Impact Assessment Environmental Indicators for 1 m^3 of Synthetic Granulate