

NU Personal Care Products

Sustainable Manufacturing

NU Products are made using a combination of different sustainable materials. Our main biodegradable additive comes from recovered oyster shells from the marine environment; we clear the beaches of this pollution and turn what was once a problem, into very usable material. We start by collecting and grinding the waste oyster shells into ultra-fine powder and into a process of calcination heating of the marine organic calcium to a high temperature hot enough to remove all volatile substances. We then add our special biodegradable formula to the powder then purify it. The final eco formula is then extruded to create our marine Calcium Master batch, which is then added to minimum level of Polymer to create various biodegradable products. We are working towards a reduced amount of polymer in our products; We are already making products with zero polymer.

End of Life

NÜ believes the best end of life solution is to recycle all used materials. While Nü biodegradable materials contains a minimum amount of polymer it is mixed with our GMX biodegradable additive compound, which actively breaks down the Polymer completely within two years, leaving no harmful residue. Free from poison, lead, cadmium plasticizer, and will not release dioxin when burnt. The bio agent contains chitosan and other natural additives which will trigger the reaction of many bacteria to consume the plastics and accelerate the process of biodegradation. Nü continues to actively research and develop new ways to protect our planet.

- End of life in natural soil

Nü Eco biodegradable products break down within two years if discarded into our environment. The materials have been tested and certified to ASTM D5338, SGS, EN 13432 and FDA approved. NU has also carried out field tests with conclusive evidence of full degradation within two years. [\(See attached field test\)](#)

- End of life in recycling stream

Our biodegradable products can be collected into the current plastic recycling streams, and then be made into recycled resin for a complete circular economy.

- End of life in landfill

If Nü biodegradable products were to end up in a landfill site, they would naturally breakdown in a very short time into harmless substances CO₂, H₂O, CaO and CaCO₃ which positively aids soil fertility and balance the soil acidity. [\(see attached TDS of GMX\)](#)

- End of life in Incineration plant

If Nü Biodegradable products were to be disposed of using an incinerator, then a harmless non-toxic gas would be produced. (See blow flaming experiment result)

Sample No.	Sample Size (mm) (L*W*T)	HCL	HF	Toxic Gas		HCN	CO
				SO2	NOx		
Sample 1	75.0x75.0x0.12	0	0	0	0.7	<0.5	30
Sample 2	75.0x75.0x0.12	0	0	0	0.7	<0.5	30
Sample 3	75.0x75.0x0.12	0	0	0	1.3	<0.5	30
Average	*****	0	0	0	0.9	<0.5	30

Table Above*

1) This report shows the amount of toxic gas generated during four minutes of toxic gas test in the flaming experiment.

2) ABD 0031 (2005) Issue = F Detection tube (ppm)

HF < 100 : HCL <150 : HCN <150 : SO2 <100 : NOx <100 : CO <1000