Product Description

EzCiclo RF100 is a solid recycled epoxy hardener derived from waste plastics, featuring a high recycled content. Composite materials produced with EzCiclo RF100 can be degraded by using the CleaVER system. EzCiclo RF100 enhances the potential for material reuse and recycling, bringing significant added value to the entire production process.

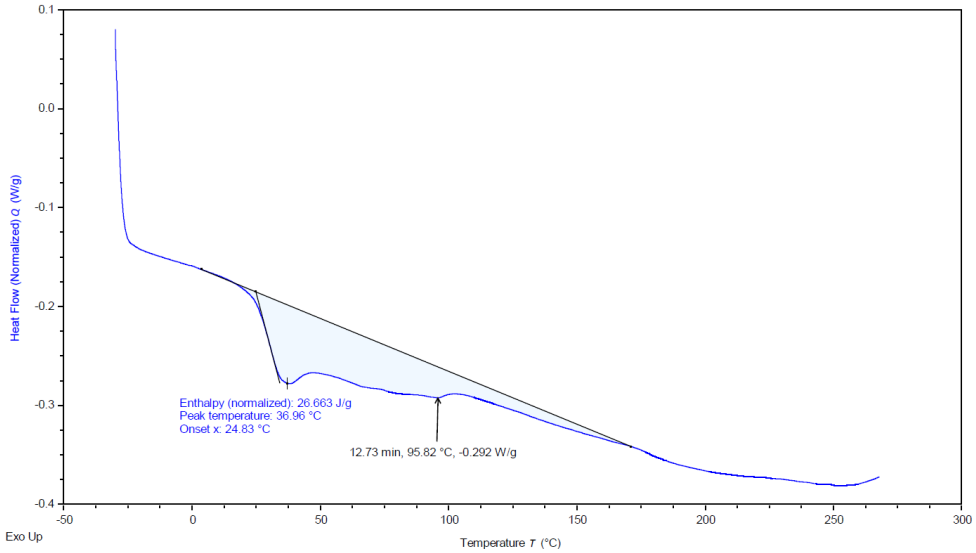
Neat resin properties

Appearance	Light yellow or reddish brown/Solid
Reaction Equivalent Weight (g/eq)	135-155
Number-average Molecular Weight (Mn)	900~1100
Melting point (℃)	30~60
Recycled Content (%)	>75
Shelf Life (months)	12 (below 30 ℃)

The picture of EzCiclo RF100

Swancor Regener Co., Ltd.
No. 11, Gongye S. 6th Rd., Nantou City, Nantou County 540028, Taiwan
Tel: +886 49 225 5420 Fax: +886 49 225 1534
Regener@swancor.com
www.swancor.com

DSC Thermogram of EzCiclo RF100



Epoxy thermosets' Properties

RF100 could be cured with commercial epoxy resins using 2-ethyl-4-methylimidazole (2E4MZ) as an accelerator. The glass transition temperature (Tg) of thermosets were measured by a DSC instrument and recorded during the second run analysis.

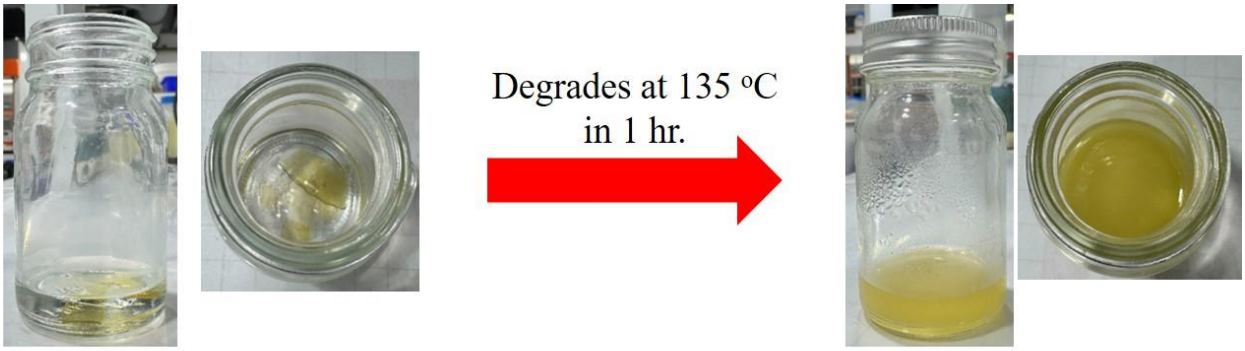
Epoxy resin	Glass transition temperature, Tg (°C)*
NPEL-128	117.7
NPEF-170	109.7
NPPN-638S	148.8
Tetraglycidyl 4,4'-diaminodiphenylmethane (TGDDM)	174.6
CNE195	182.2

Swancor Regener Co., Ltd.
No. 11, Gongye S. 6th Rd., Nantou City, Nantou County 540028, Taiwan
Tel: +886 49 225 5420 Fax: +886 49 225 1534
Regener@swancor.com
www.swancor.com

NPES-904	102.8

*The analysis was carried out from 0 to 250 ºC at a rate of 10 ºC/min.

Degradation of thermoset:



The RF100-derivative thermoset was immersed in CleaVER.

Completely degradable by CleaVER.

Notice of Use

- RF100 can be cured with any commercial epoxy resin, the recommended usage amount is equivalent to the epoxy resin. Adding more will not result in a faster reaction, but in incomplete curing with limited performance, that cannot be corrected in any way.
- The recommended usage amount of an accelerator is 0.4~1 wt% of epoxy resins.
- RF100 should be melt-mixed with epoxy resins at 50~100 ºC before adding accelerators.
- The suggested curing temperature is above 140 ºC.

Storage condition

Please store in a dry place.

Package

Standard packing is 20 Kg steel drum.

Swancor Regener Co., Ltd.
No. 11, Gongye S. 6th Rd., Nantou City, Nantou County 540028, Taiwan
Tel: +886 49 225 5420 Fax: +886 49 225 1534
Regener@swancor.com
www.swancor.com