



Siraya Tech

Technical Data Sheet

Siraya Tech Rebound Flexible Elastic Resin

Black



Product Introduction

Rebound 55A Black

Key Features

- **Fast-Rebounding & Flexible** – Designed for quick shape recovery and impact absorption.
- **55A Shore Hardness** – Softer than Tenacious Flex, with excellent elasticity.
- **Broad Compatibility** – Works with most 405nm LCD and DLP 3D printers.
- **Professional Black Finish** – Ideal for both prototyping and functional parts.

Application:

- Protective gear prototypes (pads, cushions)
- Shock-absorbing components and dampeners
- Flexible consumer products (phone cases, grips)
- Industrial seals, gaskets, and soft-touch surfaces
- Sports equipment prototypes (grips, impact zones)

Shore Hardness(A) 55

Tensile Stress at Break (%) 5

Elongation at Break (%) 95

Young's Modulus (MPa) 170

0 50 100 150 200



Property Data

Mechanical Properties	Measure	Method
Tensile Stress at Yield (Mpa)	6	ASTM D638
Tensile Stress at Break (%)	5	ASTM D638
Young's Modulus (MPa)	95	ASTM D638
Elongation at Break (%)	170	ASTM D638
Shore Hardness (A)	55	ASTM D2240
Solid Density g/cm3	1.2	ASTM 792
Water Absorption (24hr) %	2	ASTM D570
Viscosity CPS @ 25°C (77°F)	8000	ASTM D7867
Liquid Density g/mL	1.11	ASTM D1475

Product Specifications	Detail
Name	Magna Durable
Color	55A Black
SKU	ST0050
Net weight (KG)	1
Capacity (ml)	900.09
Package Dimensions	22*10*10 cm

Work Flow

Rebound 55A Black has a very high viscosity. Careful preparation is essential for success.

Before Printing	
Resin Handling (Important!)	This resin contains no pigments that settle. Shaking is unnecessary and will only introduce air bubbles, which can negatively impact print quality.
Printer Compatibility	Compatible with most LCD and DLP printers (405nm) with a panel size less than 12 inches
Large Printers (>12 inches)	- Due to the very high viscosity, printers larger than 12 inches may face challenges. - Please consult Siraya Tech support before attempting prints on larger format machines.
High Viscosity Settings	- Pay close attention to Lift Speed and Wait-After-Retraction (Light-Off Delay) settings in your slicer. - Slower lift speeds and longer delays can allow the thick resin time to flow back under the build plate between layers.
Build Platform and Vat Preparation	- Ensure the build platform is perfectly level and meticulously clean. - Lightly sanding the build platform surface with fine-grit sandpaper can significantly improve first-layer adhesion. - Clean the resin vat thoroughly, ensuring no cured resin debris is present.

Printer	Profile Download Link
Anycubic	<u>Setting Profile</u>
Elegoo	
Phrozen	
More...	

Work Flow

Profile Import Steps	Link
Chitubox V1	View Now
Chitubox V2	View Now
Lychee	View Now

Temperature Control	
Optimal Temp Range	• Print in an environment between 25°C and 35°C (77°F - 95°F) .
Minimum Temperature	• The absolute minimum printing temperature is 20°C (68°F). Printing below this may lead to failures.
Pre-warming Resin	• Heat up the resin by using a hair dryer to warm up the resin in the vat before printing. • We recommend a thin layer of resin for starting the print (follow the next step below).

Recommended Printing Process (CRITICAL STEPS!) Due to the extremely high viscosity, follow these steps carefully	
• Initial Pour	• Pour only a small amount of resin into the vat – just enough to cover the estimated area of the first few layers. • Pour slowly to minimize bubbles.
• Spread Resin	• Use a silicone spatula to gently spread the small amount of resin evenly across the FEP film in the expected printing area.
• Settle Time	• Allow the resin to settle for 5-10 minutes before starting the print to let any bubbles rise and dissipate.

Work Flow

Recommended Printing Process (CRITICAL STEPS!)
Due to the extremely high viscosity, follow these steps carefully

• Start Print & Monitor	• Begin the print. Watch the build plate's initial descent.
• Handle Sensor Warnings	• On printers with leveling sensors, the plate might stop before full descent due to resin resistance, triggering a warning (e.g., "Platform uneven" or "Not Enough Resin"). • If this occurs, bypass the warning and proceed with the print. The printer should still function correctly.
• Add More Resin Gradually	• Once the first layer begins printing successfully and the build plate is down, slowly add more resin into the vat, pouring near a corner away from the print area. • Add only enough resin needed for the print height.
• Monitor Initial Layers	• Closely watch the first 5-10 layers to confirm successful adhesion to the build platform.

Clean and Dry

Steps	Description
Draining	• After printing, let the part drain thoroughly over the vat for at least 10 minutes.
Two-Stage Wash (Recommended)	• Prepare 95% or higher concentrated Ethanol or IPA.
Bath 1	• Wash the part for 10 minutes in a container of used/dirtier solvent (a standard wash station without ultrasonic is suitable). • This removes the bulk of the resin.

Work Flow

Steps	Description
Bath 2	Transfer the part to an ultrasonic cleaner containing fresh, clean solvent and wash for another 10 minutes.
Temperature	- Ensure the cleaning solvent is not too cold, as this reduces effectiveness. - Use IPA or Ethanol at room temp. Never heat flammable solvents.
Dry Immediately	- Immediately after removing the part from the final cleaning bath, use compressed air or a hairdryer on a cool setting to blow off all residual solvent. - This prepares the part for the essential heat treatment step.

Heat Treatment (UNIQUE & ESSENTIAL STEP)

This step is crucial for evaporating absorbed solvent and achieving final properties. Do this BEFORE Post-Curing.

Steps	Description
Heat	- Place the cleaned and surface-dried part in a drying device (like a food dehydrator or a convection oven with good temperature control) - Set to 50°C (122°F).
Duration	- Heat the part for a minimum of 60 minutes. 90 minutes is recommended for optimal solvent evaporation.
Visual Cue	As the solvent evaporates during heating, you should observe the part's color transition from a slightly translucent black to a deeper, more opaque black.
Check Surface	- After cooling, check the surface. - If it still feels sticky, repeat the Cleaning and Heat Treatment processes.

Work Flow

Post-Curing

Ensure the part is completely clean, dry, and has undergone the Heat Treatment step before post-curing.

Steps	Description
UV Source	• Use a 395-405nm UV light source for curing
Curing Time	• Cure for approximately 10-15 minutes. • ARotating the part every 5 minutes to ensure even exposure on all surfaces.

Storage

1	Store Renound 55A resin in its original opaque bottle.
2	Place in a cool, dark, dry place, away from direct sunlight and heat sources. Recommended storage temperature is typically 15-25°C.
3	Keep the bottle tightly sealed when not in use.
4	Use within the recommended shelf life for best results.

Safety Precautions

PPE	Always wear nitrile gloves, safety glasses, and a suitable respirator when handling uncured resin.
Ventilation	Work in a well-ventilated area.
Skin Contact	Avoid skin contact. If contact occurs, wash immediately and thoroughly with soap and water.
Disposal	Dispose of uncured resin, contaminated solvent, and disposable materials according to local environmental regulations.