ITEM OPPORTUNITY SYNOPSIS		
Scouting Number:	2024-046	
Name of the item to be scouted:	Synthetic Fibers	
State item to be used in:	Texas	
Describe the Item:		
Please describe the item application/the end use of the item.	Synthetic Fibers for raw materials required for hair manufactuing in the United States	
Supplier Information:		
Type of Supplier Being Sought (select from the list below):		
Manufacturer	x	
Contract Manufacturer		
Distributor		
Other (Please Specify)		
Reason for Scouting Submission (select from the list below)		
2nd Supplier		
Price		
Re-Shore		
Past supplier no longer available		
New Product Startup	x	
ВАВА		
Other (Please Specify)		
Summary of Technical Specifications and Performance Requirements:		

Describe the manufacturing processes (elaborate to provide as much detail as possible)	The production process is broken down into several key stages: polymer synthesis, spinning, drawing, texturing, and finishing. Each of these stages is crucial in determining the quality, durability, texture, and overall appearance of the synthetic hair. 1. Polymer Synthesis The first step in the manufacturing process is the synthesis of the polymer material that will be used to create the synthetic fibers. This involves chemical reactions that produce long chains of molecules, known as polymers, which form the basis of synthetic hair. For example, in the production of nylon (a common material for synthetic hair), the polymerization process involves reacting diamine acid with a dicarboxylic acid. The specific type of polymer used will influence the characteristics of the final product, such as its heat resistance, color, and texture. 2. Spinning Once the polymers are synthesized, they are melted and extruded through a spinnere to form strands of fiber. This process, known as spinning, can be conducted in various ways, including wet spinning, dry spinning, and melt spinning, depending on the type of polymer used. Wet spinning involves dissolving the polymer into a solvent and extruding it into a coagulation bath, where it solidifies into fibers. Dry spinning involves evaporating the solvent after extrusion, while melt spinning involves extruding the melted polymer directly into air or another medium where it colos and solidifies. 3. Drawing After spinning, the fibers are drawn, which means they are stretched to align the polymer molecules within the fibers. This process intreases their tensile strength and modifies their texture and luster. Drawing is typically done while the fibers are theated to make them more pilable. The degree to which the fibers are drawn affects their final properties; for example, highly drawn fibers are tarcenger and have a silkier appearance. 4. Texturing Texturing process not only affects the look of the synthetic hair but also its behavior, such as how it moves and reacto styping. Cur
Provide dimensions / size / tolerances / performance specifications of the item	Diameter of Fibers: The thickness of synthetic hair fibers is a critical dimension, usually measured in deniers or micrometers (μ m). Textured hair fibers tend to vary widely, from fine (around 20 micrometers in diameter) to coarse (up to 100 micrometers or more) to mimic different natural hair types. For instance, fibers intended to mimic fine, soft curls may be on the lower end of this range, while those replicating coarser textures may be thicker. Length: Synthetic hair for wigs and weaves can come in lengths ranging from a few inches to 30 inches or more. The chosen length depends on the desired style and the type of wig or weave. It's common to offer a variety of lengths to cater to diverse styling needs. Diameter Tolerance: For synthetic fibers, maintaining a consistent diameter throughout the length of the fiber is crucial for uniformity. Tolerances might be within ±5% of the specified diameter to ensure consistency in texture and volume. Length Tolerance: Length tolerances may vary, with a common range being ±1 inch to ensure that the final product meets styling requirements.

List required materials needed to make the product, including materials of product components, if applicable	Raw Materials for Synthetic Fibers Synthetic Polymers: Polyethylene Terephthalate (PET): Used for its durability and heat resistance. Polyvinyl Chloride (PVC): Offers flexibility and is used for fibers that require softer textures. Acrylic (Polyacrylonitrile): Provides a wool-like feel, suitable for more natural-looking hair textures. Polypropylene: Lightweight and used in certain types of less expensive hair extensions and wigs. Colorants: Pigments and Dyes: Specific to synthetic fibers to achieve a wide range of hair colors with high color fastness. Additives: UV Stabilizers: To prevent color fading from sunlight exposure. Antistatic Agents: To reduce static electricity and make the fibers easier to manage. Flame Retardants: To enhance safety by reducing flammability. Tools and Equipment for Fiber Production Extruders: For melting and extruding polymers through spinnerets to form fibers. Spinnerets: Precision tools with multiple holes for spinning fibers into specific thicknesses. Drawing Machines: For stretching fibers to align the polymer molecules and strengthen the material. Texturizing Machines: To create curls, waves, and other textures in the fibers. Curling Rods and Heat Chambers: For setting textures into fibers. Materials and Tools for Wig Making Wig Caps: Made from materials like lace, nylon, or monofilament for the base of the wig. Needles and Threads: For securing wefts to caps or wefts. Ventilating Needles: Specialized needles for hand-tying hair to lace caps to create natural-looking hairlines. Adhesives and Glues: For securing wefts to caps or solvents heatryles on finished wigs. Shears and Razors: For cutting and shaping wigs to desired styles. Mannequin Heads: For styling and setting hairstyles on finished wigs. Shears and Razors: For cutting and shaping wigs to desired styles. Mannequin Heads: For styling and displaying wigs. Secure and maintaining their shape during shipping. Branding Materials Babes, and care instructions for branding and providing product care information. Quality Contro	
Are there applicable certification requirements?		
Yes		
No	×	
Please explain:		
Are there any applicable regulations that apply to the production of this item?		
Yes		
No	X	
Please explain:		
Are there any other standards / requirements?		
Yes		
No	X	
Please explain:		
Additional Comments:		
Additional technical comments:		
Volume and Pricing:		
Estimated Potential Business Volume (i.e. #units per day, month, year):	Year 1 (Startup Phase): Target Revenue: \$500,000 (0.01% market share as an initial goal) At an average price of \$100/unit, this equates to selling approximately 5,000 units in the first year. Year 3-5 (Growth Phase): Target Revenue: \$5,000,000 (0.1% market share) At an average price of \$100/unit, this equates to selling approximately 50,000 units annually by year 3 to 5.	

Estimated Target Price/Unit Cost Information:	Estimated Pricing Framework Low-End Synthetic Hair Wigs and Weaves: These products, often made with lower-quality materials and simpler manufacturing processes, might target a retail price range of \$10 to \$50 per unit. The cost to manufacture could be significantly lower, depending on the scale and efficiency of production. Mid-Range Synthetic Hair Wigs and Weaves: With better quality materials and more sophisticated textures, these could target a retail price range of \$50 to \$150 per unit. The increased cost reflects the higher quality of materials and more labor-intensive processes. High-End/Premium Synthetic Hair Wigs and Weaves: These products use top-quality synthetic fibers that closely mimic natural hair and may include features like lace fronts, hand-tied sections, and advanced heat resistance. Retail prices can range from \$150 to \$500 or more per unit. The higher prices cover the cost of premium materials, intricate manufacturing processes, and the branding that positions these wigs and weaves as luxury items.
Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	90 Days
Describe packaging requirements (i.e. individually/group	Packaging Materials Boxes and Bags: For packaging finished wigs for sale. Protective Nets and Tissue Paper: For keeping wigs secure and maintaining their shape during
packaging, etc.)	shipping. Branding Materials: Labels, tags, and care instructions for branding and providing product care information.
Where will this item be shipped?	Fort Worth, Texas
Additional Comments:	
Is there other information you would like to include?	