SOFT MODULAR INDOOR PLAY ZONE

Toddler & Children Indoor Soft Play Specifications

DWG NO: SM-PLAY-2026
Standards: EN 1176-10 / EN 71-3 / CAL 117

1. SYSTEM SCOPE & CONCEPT OVERVIEW

This technical document outlines the material quality standards, foam core densities, non-toxic vinyl outer skins, modular interlocking systems, hygienic maintenance protocols, and safety compliance for indoor soft modular play zones.

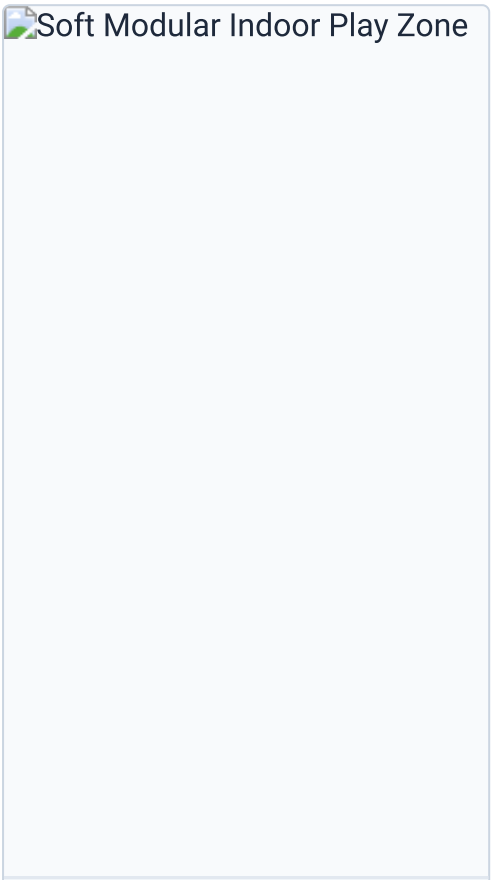


Figure 1: Indoor Soft Modular Play Arena with Foam Obstacles & Padded Flooring.

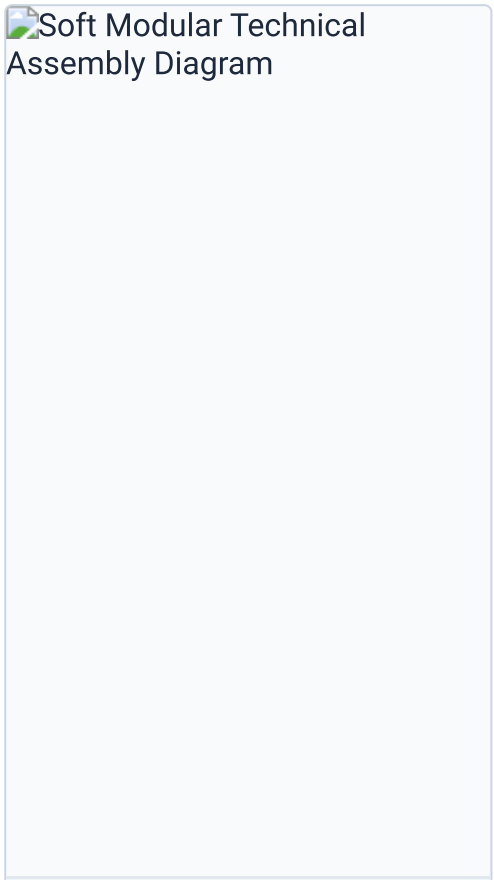


Figure 2: Technical Drawing (DWG SM-PLAY-2026) – Foam Core Seams & Interlocking Webbing.

2. TECHNICAL COMPONENT SPECIFICATIONS

Module / Feature	Material & Technical Specifications	Safety & Performance Ratings
High-Density Foam Core	Rebonded Polyurethane Foam (Density: 90–120 kg/m³) or High-Resilience Expanded EPE blocks.	Firm compression rating (ILD: 70–85 lbs); shape-retaining under repetitive dynamic play loads.
Vinyl Covering Skin	Phthalate-free 650 g/m² PVC vinyl with anti-tear polyester inner mesh reinforcement.	Tensile strength > 2400 N/5cm; flame-retardant (CAL 117 / BS 5852 Crib 5); REACH compliant.
Seam Construction	Double-stitched concealed seams using high-tenacity bonded nylon thread (Tex 90).	Underturned zip flap covers to eliminate scratching and child access to internal foam.
Modular Interlocks	50mm industrial-grade Velcro hook-and-loop strips and heavy-duty nylon buckled straps.	High shear bond strength (> 12 N/cm²); prevents gap formation between adjacent play pads.
Ball Pit & Soft Steps	75mm PE non-toxic hollow balls (CE certified) with 50mm high-density impact floor mats.	Heavy metal free (EN 71-3); certified impact absorption for critical fall heights up to 1.0m.

3. SAFETY COMPLIANCE & OPERATIONAL STANDARDS

FIRE & CHEMICAL SAFETY

- **Fire Standards:** Certified flame retardant to BS 5852 Crib 5 and CAL 117.
- **Chemical Safety:** Lead-free, cadmium-free, zero phthalates, non-allergenic vinyl coating.
- **Sanitation:** Anti-microbial surface treatment resistant to bacterial and fungal growth.

MAINTENANCE & HYGIENE PROTOCOL

- **Cleaning Standard:** Wipe-clean surface resistant to mild disinfectant and chlorine solutions.
- **Daily Inspection:** Check seams, zipper flaps, and Velcro interlock alignment.
- **Foam Audit:** Replace any module showing compression set deformation exceeding 15%.