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Comparison of Core and Top Layer Technologies used in Mattresses#

Parameter	Characteristic	C^3I Gel	Memory Foam*	Latex	Coir	Spring
Firmness	Should be able to bear body weight in right proportions	Reflexon Elastomeric Technology aids firms with extreme cushioning & supreme shock absorber	Firm to Supple & Suppleness increases with body heat providing cradling support	Spring back technology with limited cushioning leads to more firmness trend	Hard Surface for spinal support and sometimes felt uncomfortable for normal use	Based on Spring Coil Gauge (1.93mm) – firm if less than 1.63mm, does not able to act as long range shock absorber
Temperature Sensitivity	Fluctuations in body temperature(s) leads to sleeplessness	All temperature constant cushioning, ideal for both tropics and peaks	Consistent in ambient room temperature	Not significantly sensitive to Body Heat	Not significantly sensitive to Body Heat	If topped with foam, doesn't support long range temperature variation
Comfort Factor	Cushioning Impact for deep sleep	Maximum Cushioning	Excellent Cushioning – Comfort	Higher	Least Comfort	Top Layer defines comfort spring defines bouncing impact
Body Pressure Distribution Factor (≤32 mmHg)	Prevent occurrence of pressure sores & reduction in tossing & turning causing disturbances in sleep	100% No pressure sore - Reflexon Elastomeric Technology	80% reduction in pressure points (Minimum Reported – less than 13mmHg @200lbs)	More than 60% support in pressure relief due to natural spring back mechanism (only in natural latex)	Coir tends to gets compressed when body rests on it. Over a period of time, it does not regain back its original shape leading to sagging of the mattresses	Allow up to 1.5 inches of normal body impression, limits to no pressure relieving or recovering. Non uniform pressure distribution and as each spring pushes back with the same force, pressure points are inevitable
Maintenance	Ideally less effort to be in daily use	Don't need to be rotated, folding and bending	Do not have to be flipped or rotated	Less Maintenance	High Maintenance especially for cleansing limitations	Should be rotated once in 03 months to even the wear. Folding and bending restricted.

		doesn't affect C3I Gel				
Sanitizable	Ideally should not support bacterial growth.	Does not support bacterial growth and easily sanitizable	Anti-microbial coating lasts to some period, cannot be re-sanitized	Non extended sanitization	Non-sanitizable	Depends on other filling material, non-washable.
Replacement Period	Shelf life determine per day sleeping cost & durability	C^3I Gel – 15 - 25 years while combined High Density Foam : 05 years	8-10 years of Durability	Lasting 15+ years	Based on blended technology (5-7 yrs)	5-10 years, springs quality determines life &lose 16% of their support in first year
Resilience & Bounce Factor	Supportive inner layer with bouncing top layer	Extremely bouncing factor due to associated elastomeric impact	Bouncing impact is minimum while impression factor is high	Natural bouncing impact with innerspring resilience used in combination	Resilience extremely higher but no bouncing impact	Inner spring system is used as inner core for providing resilience and bouncing support to top layer
Proper Blood Circulation	Health Characteristic for sleeping effectively.	Significantly higher	Significantly Higher	Moderate	Moderate –to-Low	Poor Circulation
Hypo-allergenic	Health Aid	Yes	Yes, but depend upon quality of variety	No	No	No
Anti-microbial Properties	Essential to provide extra care	Yes	Yes, coating required	No	No	No
Natural Factor	Eco-friendliness Technologies aid health benefits	Organic & Environmental Friendly	Synthetic	Fillers environmentally friendly materials; natural and organic wools and cottons	Natural coir material mixed with synthetic fillers	Not Environmental Friendly as material is filled with wide range including synthetic foams and chemically treated synthetic

						fabrics
Types	Commercial Types Available	Only MEDIGEL Brand Products	Wide varieties – quality comfort directly proportional to cost; Visco-elastic	Natural latex; Blended latex; 100% synthetic latex	Based on composition filler with coir	Open Spring; Inner Springs; Pocket Springs; Spring within a Spring System
Support for Back and Spinal Alignment	Essential for Health Care for prevention of spinal problems	Yes	Yes	Yes (to an extent if natural latex used)	Yes	No
Effective, if blended	Combination Mattresses aid special benefits	Both (Gel Overlays & Gel Blend with High Density PU Foam)	Blended with spring or different foams and generally used as top layer	Top Layer of Natural Latex with inner synthetic layers or blended with other fillers	Generally used with rubberized top or blended with other foam technologies	Used as inner core layer as oldest technology blended with numerous top layers
Utility Function	Multipurpose or Specific Use	Multipurpose (Ortho Support Comfort &Contour care)	Comfort care top layer	Firm Support Usage (Ortho Support)	Firm Support Usage for complete ortho support	Good for everyday use however limited health benefits with no ortho support
Bed Sore Prevention	Major Problem of Bed ridden and old people	100%	Around 60%	Around 40%	Not useful	Not useful
Cost Factor	Cost alone don't determines quality, it includes multifarious factorial determinants	MEDIGEL-Single Brand Quality; Extremely cost effective with wide variety product range	Expensive & Quality Factor Linked	Natural Latex-Most Expensive Blended Latex-Varied	Cost-effective with no variety, specific usage	Cost is linked quality of spring and other technology blends

* Rest of Foams are less softer and recovering period is less than Memory Foam thus used as intermediate / bottom layers with respect to targeted life span and usage attributed to its density.

The information is collated and processed by experts from various literary data and not against any brand or technology, it user's choice for their perspective function of mattresses they are looking for.