

Brief comparison between MRC1200 GRP System and Phenolic System

Item	Property	MRC GRP	PHENOLIC	
1	Resistance to Chemicals	A	A	GRP formulation we use to make the MRC1200 with mean it performs very well in terms of chemical resistance. 6mm phenolic sheets would usually perform equally as well. 4mm thinner phenolic sheets may have some issues if they crack.
2	Resistance to mechanical damage	A	C	MRC1200 is stronger and more resilient than the Phenolic sheet which tends to be more brittle. 6mm sheet is very tough but when it breaks it cannot be repaired. The whole panel must be changed. On this basis we rate the GRP higher. Thinner panels will break more easily. Unlike other systems the panels are fixed directly to the concrete floor and not sitting on a floor track. This makes it a more robust and stable wall.
3	Thermal and acoustic performance (without insulation)	A	B	Metallic systems and thin phenolic systems (4mm) require insulation. The disadvantage of insulation is attributed to the risk of shedding and retaining moisture creating an environment which could promote microbial growth and in metallic systems causing corrosion in addition to Microbial growth. A further of advantage of not having panels with insulation is the ability to utilize the space within the panel for services and for air return.
4	Fire and building regulation	A	C	MRC1200 has class O certificate for fire propagation and flame spread. Thinner phenolic may fail to achieve even class 1.
5	Continuous cove (wall-wall) (and wall to ceiling)	A	C	Because of the manufacturing technique (moulding) MRC1200 offers one piece and continuous cove, whereas all other systems available on the market you would have to fix a post applied cove to the corners. This detail is less clean and introduces additional joints. More importantly the critical seal in the corner is not visible for inspection.
6	Flush finish and surface smoothness	A	C	Because of the manufacturing technique MRC1200 can be made to fit around windows, service panels, mirrors etc to give a completely flushfinish. Whilst the same visual effect can be achieved in other systems more fixings and joints are involved behind the scene making the risk of encountering leakage paths developing over time likely.

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7	Invisible repair	A	N/A	MRC1200 is the only cleanroom product on the market with this feature. This is useful not only if the panel is damaged but also if anytime throughout the cleanroom life services are relocated leaving behind holes which can be fully filled and repaired invisibly. This is the major reason why MRC1200 cleanroom even after many years of heavy service remain looking like new.
8	Low level air return	A	C	This is easily achieved within the MRC1200. Other systems would either rely on a surface fixed pods or another wall line. Both of these options are more expensive, less elegant and require more undesirable fixings and joints. Smoothness on the other hand is the same in both our systems. Some phenolic systems available on the market have a slightly textured finish. This is not good.
9	Door Frame	A	B	The MRC GRP system does not require a door frame. The wall panel itself has an integrated door portal into which the door is fixed. All the other systems available on the market require additional door frame. GRP doors are better than laminated doors because the leaves are full sealed and seamless.
10	Service integration	A	C	MRC1200 is better because it has a flush service panel at every 1200 mm centers or more. These service panels allow changes during installation and throughout the life of the cleanroom easily.
11	Speed of installation and flexibility	A	B	MRC GRP system offer the planner more option in terms of sequencing the work. The panels are also design to minimize interface with other trades. Features such as the Low-level air return, service panels, the ability to receive invisible repair all make the MRC1200 very forgiving and easy to work with.
12	Validation	A	B	Because the MRC1200 require fewer joints and fixings, and because of factory produced features that are tried and tested site validation is simpler. Validating previously proven details is easier than validating one off bespoke solutions.
13	Longevity	A	C	30 year old MRC1200 GRP facilities are still going strong. Panels recovered from old facilities can be restored to original condition by small amount of invisible repair and be used again. Other systems will last no where near as well as our panels.
14	Environment	A	B	Life cycle assessment puts the molded GRP more environmentally friendly than other fabricated system. This is further enhanced by the panel longevity and its ability to be recycled and used again.