Recommended GM Steel Repairability Matrix

Grade	GM	١	Neldir	ng Method	Cold	Use of	Temp. Range	Maximum
	Specifications	MIG	RSW	MIG Braze ¹	repair	Heat for repair		Heat
Mild Steel	GM6409M (all) GMW2M (all)	Yes	Yes	Yes	Yes ²	Yes	Up to 1200 °F (650 °C)	90 sec. x 2
Laminate steel		NO	Yes	NO	Yes ²	NO		
Bake Hardened	GM6093M (all) GMW3032M(all)	Yes	Yes	Yes	Yes ²	Yes	Up to 1200 °F (650 °C)	90 sec. x 2
Solid Solution- Strengthened		Yes	Yes	Yes	Yes ²	Yes	Up to 1200 °F (650 °C)	90 sec. x 2
High Strength, Low Alloy	GM6208M (all), GM6218M(all), GM3032M(HR CR grades)	Yes	Yes	Yes	Yes ²	Yes	Up to 1200F (650 °C)	90 sec. x 2
Dual Phase ≤779 MPA min. UTS	GMW3032M (HR DP and CR DP grades) GMW3399M (HR DP, CR DP and HR HE grades with TS≤779MPa)	Yes	Yes	Yes	Yes ²	No	N/A	N/A
Dual Phase ≥780 MPA min. UTS³	GMW3399M(all other HR DP, CR DP and HR HE Grades)	Yes ³	Yes	Yes ³	No	No	N/A	N/A
UHSS ³ Martensitic ³ Boron (PHS/Hot- Stamped) ³	GM6123M (all) GMW3399M (all MS & MP grades) GMW14400	Yes ³	Yes	Yes ³	No	No	N/A	N/A

¹ Must use 8mm x16mm slotted holes

² Cold repairs can be performed if damage excludes kinks.

³ These steels may NOT be used as a backer for stitch welding. NOTE. Deviation from this chart is ONLY allowed if

there has been a crash analysis completed by the Design Engineer and a Service procedure has been written. NOTE number values are tensile strength

Note: GM does not endorse repair of door impact beams.

Dual phase Steels up to DP 780 may be sectioned with an approved service procedure.

Descriptions of GM Steel

Grade	Alloy Content	Heat Treatment	Typical Applications	Comments
Mild Steel, Bake Hardened, Solid	Low	Fully	Body Panels (Closures, floor	
Solution Strengthened		Annealed/Dead	pan, dash panel, etc.)	
_		Soft		
High Strength Low Alloy	Low	Fully	Rails, Structural Members	Strengthened with fine
		Annealed/Dead		particles and small
		Soft		grain size
Dual Phase	Medium	Fully	Rails, Structural Members	15-50% of structure is
	(Manganese,	Annealed/Partially		"hard" martensite
	Silicon,	Hardened		
	Molybdenum,			
	Chromium)			
Ultra High Strength Steel	Low	Fully Hardened	Rocker reinforcements, door	100% of structure is
(Martensitic, Boron)			beams, bumper beams	"hard" martensite
TRIP (Transformation Induced	High	Fully	TBD	Complex
Plasticity) Steel	(Manganese,	Annealed/Partially		microstructure for high
-	Phosphorus,	Hardened		strength and ductility
	Silicon,			
	Aluminum)			