

The table below shows an excerpt of possible material combinations for laser transmission welding. The material combinations are graded for weldability indicated by color. Many laser weldable combinations listed here cannot be welded by other traditional plastic welding methods.



## Materials combinations

		Transparent welding partner																																					
		EVA	PE-LLD	PE-LD	PE-HD	PP	COC	COP	ABS	ASA	SAN	PMMA*	PC	PC/ABS	PS	SB	PET	PBT	PVC	PUR	POM	PA 6	PA 66	PA 11	PA 12	PPS	LCP	PES	PEI	PI	PSU	MABS	TPE	PEEK					
Absorbing welding partner	EVA	●																																					
	PE-LLD		●																																				
	PE-LD			●								●			●			●				●	●	●												●			
	PE-HD				●							●										●	●	●															
	PP					●						●										●	●	●											●				
	COC						●																																
	COP							●																															
	ABS								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	ASA								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	SAN								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PMMA*			●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PC								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PC/ABS								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PS			●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	SB															●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PET			●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PBT								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	PVC								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	PUR																				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	POM			●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	PA 6			●	●	●										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PA 66				●	●								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PA 11																								●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PA 12																		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	PPS										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	LCP																										●	●	●	●	●	●	●	●	●	●	●	●	●
	PES								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PEI																											●	●	●	●	●	●	●	●	●	●	●	●	
PI																													●	●	●	●	●	●	●	●	●	●	
PSU								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
MABS								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
TPE					●								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
PEEK			●								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		

- Excellent weldability when a laser transmission is present
- Good weldability when a laser transmission is present
- Weldability is possible but should be checked with trial runs

\*PMMA: Caution with plate material: cast PMMAs are not weldable.