

Tristel's Chlorine Dioxide Material Compatibility

Extensive material compatibility testing has been carried out on Tristel's chlorine dioxide solutions against various types of medical devices and component materials. This includes, but is not limited to the materials found below. The level of chlorine dioxide used in the studies range from 100 to over 1000 parts per million, considering various formulations and exposure techniques applied such as wiping, immersion and also destructive testing.

This document should be used as a guide for overall compatibility only and may not be relevant to a specific Tristel product when used with a specific medical device or surface. It is recommended to perform material compatibility testing to determine compatibility with a specific medical device or surface, as component materials can vary.

		COMPATIBILITY RATING			
		EXCELLENT	GOOD	FAIR	POOR
METALS	Aluminium				X
	Aluminium (anodized)		X		
	Brass				X
	Brass (chrome plated)	X			
	Copper				X
	Mild Steel				X
	Nickel		X		
	NiMo(Cr) alloy / Hastelloy	X			
	Silver				X
	Stainless Steel 1.4305 (AISI 303)		X		
	Stainless Steel 1.4301 (AISI 304)	X			
	Stainless Steel 1.4307 (AISI 304L)	X			
	Stainless Steel 1.4401 (AISI 316)	X			
	Stainless Steel 1.4438 (AISI 317L)	X			
	Titanium	X			
	Tungsten		X		
	Zinc (chromium plated, die-casted)	X			
PLASTICS	Acrylonitrile butadiene styrene (ABS)		X		
	Fluoro rubber / elastomere (FKM/FPM)	X			
	Methyl acrylonitrile butadiene styrene (M-ABS)		X		
	Polyamide	X			
	Polybutylene terephthalate (PBT)	X			
	Polycarbonate (PC)	X			
	Polyether ether ketone (PEEK)		X		
	Polyetherimide (PEI)	X			
	Polyethylene (PE) – low/high density	X			
	Polyethylene terephthalate (PET)	X			
	Polyimide	X			
	Polymethylmethacrylate (PMMA)	X			
	Polymethylpentene (PMP / TPX)		X		
	Polyolefin	X			
	Polyoxymethylene (POM, Polyacetal)	X			
	Polyparaxylene	X			
	Polyphenylene ether (PPE)	X			

	MATERIAL	EXCELLENT	GOOD	FAIR	POOR
PLASTICS	Polyphenylsulfone (PPSU)			X	
	Polypropylene (PP)		X		
	Polystyrene (PS)			X	
	Polytetrafluoroethylene (PTFE)	X			
	Polyurethane (PU)			X	
	Polyvinyl chloride (PVC)		X		
	Polyvinylidene fluoride (PVDF)	X			
	Styrene ethylene butylene styrene copolymer (TPE-SEBS)	X			
	Thermoplastic elastomer (TPE-A)	X			
	Thermoplastic Polyurethane (TPU / TPE-U)	X			
OTHER	Acrylic resin	X			
	Epoxy resin		X		
	Glass	X			
	Silicone Adhesive	X			
	Silicone Rubber	X			

Key

Excellent: No visible/tactile changes

Good: Slight cosmetic changes such as mild discolouration

Fair: Medium changes such as a strong discolouration

Poor: Degradation past the cosmetic state; early signs of pitting, stickiness, brittleness or corrosion/oxidation



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