
























































MATERIAL PROPERTIES			WORKABILITY	NON-WORKABLE	WORKABLE					
				DEGREE 0 fixed-shaped, atomic objects	DEGREE 1 wires, tubes, rods, etc.	DEGREE 2 patches, sheets, plates, etc.	DEGREE 3 bars, blocks, lumps, etc.			
MECHANICAL	DENSITY			nuts		threaded rod		metal sheet		clay
	FEEL	SOFTNESS		soft button		thread	<i>Embedding fabric</i> <i>Rivera et al. [12]</i>			sponge
		ROUGHNESS		wood screw		threaded rod		sand paper		scourer
	STRENGTH	TENSILE		nail		fishing line		metal sheet		lumber
		COMPRES- SION		nuts		bike spoke		metal sheet		lumber
		FLEXUAL		screw		threaded rod		acrylic sheet		lumber
	DEFORMABILITY	ELASTICITY		spring		rubber band		rubber sheet		foam
		FLEXIBILITY		press-fit rivets		florists' wire	<i>Hotflex</i> <i>Groegeer et al. [3]</i>			foam
		PLASTICITY		gorillapod		paper clip		metal sheet		clay
	DURABILITY	WEAR RESISTANCE		screwdriver bits		chicken wire		rubber sheet		shoe sole
	MALLEABILITY	MACHINA- BILITY	N/A by definition			foam rod		MDF		wax
	CONTACT	FRICTION		ball bearings		steel rod		rubber sheet		sponge
ACOUSTIC				marble	<i>Accoustruments</i> <i>Laput et al. [6]</i>		aluminum can		foam earplugs	
ELECTRICAL			<i>Embedded electronics</i> <i>e.g., Voxel8</i>		<i>PipeDream</i> <i>Savage et al. [13]</i>	<i>Capricate</i> <i>Schmitz et al. [14]</i>		<i>Capricate</i> <i>Schmitz et al. [14]</i>		
OPTICAL				marble	<i>Printed optics</i> <i>Willis et al. [25]</i>		plastic bottle		matte gel	
THERMAL				coin		copper wire		silicon oven mitt		insulation foam