

TABLE 6: WATT DENSITY GUIDELINE

Substance	Max Operating Temperature	Max Watt Density	Substance	Max Operating Temperature	Max Watt Density		
Acid Solutions:			Formaldehyde	180	10		
	Acetic	180	40	Freon Gas	300	5	
	Boric	257	40	Fuel Oils:			
	Carbonic	180	40		Grade 1 & 2	200	23
	Chromic	180	40		Grade 4 & 5	200	13
	Citric	180	23		Grade 6	160	8
	Fatty Acids	150	20	Gasoline		300	23
	Lactic	122	10	Gelatin:			
	Malic	122	10		Liquid	150	23
	Nitric	167	20		Solid	150	5
	Phenol	180	40	Glycerine		500	10
	Phosphoric	180	23	Glycerol		212	23
	Propionic	180	40	Grease			
	Tannic	167	23		Liquid	***	23
	Tartaric	180	40		Solid	***	5
Acetaldehyde	180	10	Heat Transfer Oil:			500	23
Acetone	130	10			600	15	
Air	***	***	Hydrazine		212	16	
Alcyl Alcohol	200	10	Hydrogen		***	***	
Alkaline Solutions	212	40	Hydrogen Sulfide		***	***	
Aluminum Acetate	122	10	Linseed Oil		150	50	
Aluminum Potassium Sulfate	212	40	Lubrication Oil:				
Ammonia Gas	***	***		SAE 10	250	23	
Ammonium Acetate	167	23		SAE 20	250	23	
Amyl Acetate	240	23		SAE 30	250	23	
Amyl Alcohol	212	20		SAE 40	250	13	
Aniline	350	23		SAE 50	250	13	
Asphalt	500	10	Magnesium Chloride		212	40	
Barium Hydroxide	212	40	Manganese Sulfate		212	40	
Benzene, liquid	150	10	Methanol Gas		***	***	
Butyl Acetate	225	10	Methylchloride		180	20	
Calcium Bisulfate	400	20	Mineral Oil:				
Calcium Chloride	200	8			200	23	
Carbon Monoxide	***	23			400	16	
Carbon Tetrachloride	160	23	Molasses		100	5	
Caustic Soda:			Naptha		212	10	
	2% Solution	210	48	Oil Draw Bath	600	23	
	10% Solution	210	25	Paraffin or Wax	150	16	
	75% Solution	180	25	Perchloroethylene	200	23	
Citrus Juice	185	23	Potassium Chlorate		212	40	
Degreasing Solution	275	23	Potassium Chloride		212	40	
Dextrose	212	20	Potassium Hydroxide		160	23	
Dowtherm A:			Soap, Liquid		212	20	
	1 fps + flowing	750	23	Sodium Acetate	212	40	
	non-flowing	750	10	Sodium Cyanide	140	40	
Dowtherm E	400	12	Sodium Hydride		720	28	
Dyes and Pigments	212	23	Sodium Phosphate		212	40	
Electroplating Baths:			Steam, flowing:			300	10
	Cadmium	180	40		500	5	
	Copper	180	40		700	5	
	Dilute Cyanide	180	40	Sulfur, Molten		600	10
	Potassium Cyanide	180	40	Toluene		212	23
	Rochelle Cyanide	180	40	Trichlorethylene		150	23
	Sodium Cyanide	180	40	Turpentine		300	20
Ethylene Glycol	300	30	Vegetable Oil & Shortening		400	30	
			Water (process)		212	60	