



# International Products CORPORATION

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## Plastic Compatibility of 2% ENZYME CLEANERS At Room Temperature

CONCLUSION: A 2% solution of each of our enzyme cleaners was found to be compatible with the plastics listed below when immersed for a total of ten days at room temperature.

*Customers are encouraged to conduct their own tests before using our enzyme cleaners.*

PLASTIC	PROPERTY	1 Day, %Δ			10 Days, %Δ		
		ZYMIT PRO®	ZYMIT® LOW-FOAM	Tap Water	ZYMIT PRO®	ZYMIT® LOW-FOAM	Tap Water
ABS	%Δ Mass	+0.3	+0.3	+0.2	+0.4	+0.4	+0.4
	%Δ Hardness	<b>+1.3</b>	<b>-0.4</b>	<b>-0.6</b>	<b>+1.1</b>	<b>+0.6</b>	<b>-1.5</b>
	%Δ Swell	+0.5	-0.3	-0.1	+0.5	-0.2	-1.1
Polymethyl Methacrylate	%Δ Mass	+0.1	+0.2	+0.1	+0.2	+0.8	+0.5
	%Δ Hardness	<b>+0.4</b>	<b>0.0</b>	<b>-0.7</b>	<b>+0.4</b>	<b>0.0</b>	<b>-2.5</b>
	%Δ Swell	+0.2	0.0	0.0	+0.1	+0.2	-0.4
Acetal	%Δ Mass	+0.1	+0.1	+0.1	+0.4	+0.4	+0.4
	%Δ Hardness	<b>+0.2</b>	<b>-0.4</b>	<b>+0.6</b>	<b>0.0</b>	<b>-0.8</b>	<b>-2.1</b>
	%Δ Swell	+0.2	-0.1	0.0	+0.1	0.0	+0.1
HDPE	%Δ Mass	0.0	0.0	0.0	0.0	0.0	0.0
	%Δ Hardness	<b>+0.3</b>	<b>-1.1</b>	<b>+3.4</b>	<b>0.0</b>	<b>-0.8</b>	<b>-0.8</b>
	%Δ Swell	0.0	-0.1	+0.1	-0.1	+0.2	+0.5
PETG	%Δ Mass	+0.1	+0.1	+0.1	+0.3	+0.3	+0.2
	%Δ Hardness	<b>+1.3</b>	<b>+0.4</b>	<b>-0.4</b>	<b>-1.9</b>	<b>-1.7</b>	<b>-3.1</b>
	%Δ Swell	0.0	-0.2	+0.1	-0.1	-0.2	+0.1
Polycarbonate	%Δ Mass	+0.1	+0.1	+0.1	+0.2	+0.2	+0.1
	%Δ Hardness	<b>0.0</b>	<b>0.0</b>	<b>-0.8</b>	<b>-0.8</b>	<b>0.0</b>	<b>-0.6</b>
	%Δ Swell	+0.1	+0.1	-0.1	0.0	+0.1	0.0
Polyetherimide	%Δ Mass	+0.3	+0.2	+0.2	+0.8	+0.6	+0.5
	%Δ Hardness	<b>+0.4</b>	<b>-0.6</b>	<b>-0.9</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.9</b>
	%Δ Swell	+0.3	0.0	-0.1	+0.1	+0.1	-1.5
Polypropylene	%Δ Mass	0.0	0.0	0.0	0.0	0.0	0.0
	%Δ Hardness	<b>+0.9</b>	<b>0.0</b>	<b>+4.1</b>	<b>+0.7</b>	<b>+0.5</b>	<b>+2.0</b>
	%Δ Swell	-0.1	+0.2	-0.6	0.0	0.0	-0.7
PPO	%Δ Mass	+0.2	0.0	0.0	+0.1	+0.1	+0.1
	%Δ Hardness	<b>+0.6</b>	<b>-0.2</b>	<b>+0.2</b>	<b>+0.2</b>	<b>0.0</b>	<b>+0.4</b>
	%Δ Swell	-0.1	0.0	+0.4	-0.1	0.0	0.0
PVC	%Δ Mass	+0.1	0.0	0.0	+0.1	+0.1	+0.1
	%Δ Hardness	<b>+1.2</b>	<b>-0.2</b>	<b>-0.8</b>	<b>+0.4</b>	<b>-0.4</b>	<b>-0.6</b>
	%Δ Swell	0.0	0.0	-0.4	0.0	0.0	-0.4
Polytetra- fluoroethylene	%Δ Mass	0.0	0.0	0.0	0.0	0.0	+0.1
	%Δ Hardness	<b>+5.6</b>	<b>-0.4</b>	<b>+7.9</b>	<b>+1.0</b>	<b>+2.9</b>	<b>+1.8</b>
	%Δ Swell	0.0	-0.1	0.5	-0.2	-0.1	-0.4
Polyamide 6	%Δ Mass	+0.8	+0.7	+0.6	+2.5	+3.2	+2.2
	%Δ Hardness	<b>-1.6</b>	<b>-2.8</b>	<b>-1.7</b>	<b>-11.8</b>	<b>-11.9</b>	<b>-11.5</b>
	%Δ Swell	+0.5	+0.4	+0.3	+1.4	+1.4	+1.2

### KEY

ABS - Acrylonitrile butadiene styrene  
HDPE - High Density Polyethylene  
PETG - Polyethylene terephthalate glycol-modified  
PPO - Polyphenylene Oxide – Styrene  
PVC - Polyvinyl chloride

METHOD – Modified version of ASTM D543-95, Practice A; Room Temp.  
Mass: Analytical Balance, 0.0001 grams; CoV – 4.0E-6%  
Hardness: Shore D Durometer, 1 – 100 HD; CoV – 0.32%  
Swell: Mitutoyo Micrometer, 0.001 mm, CoV – 0.11%