MATERIAL REPORT

REPORT NUMBER:
DATE: 02/24/97

TITLE: Comparison of Parker Compound V1238-95 to a competitive compound for explosive decompression resistance and to V0858-95 for extrusion resistance.

PURPOSE: To provide comparative data.

CONCLUSION: Compound V1238-95 exhibits superior ED resistance to the competitive compound and is a suitable replacement for V0858-95 for extrusion resistantance.

Recommended temperature limits: -15^0F to 400^0F

Recommended For
Explosive decompression and extrusion resistance
Petroleum, mineral, and vegetable oils
Silicone fluids
Aromatic hydrocarbons (benzene, toluene)
Chlorinated hydrocarbons
High vacuum
Ozone, weather, and aging resistance

Not Recommended For
Hot water and steam
Auto and aircraft brake fluids
Amines
Ketones
Low molecular weight esters and ethers

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Compound Data Sheet
Parker O-Ring Division United States

REPORT DATA

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Explosive Decompression Test Conditions	V1238-95 2-227 O-Rings	Competitor 2-227 O-Rings
Basic Physical Properties		
Hardness, Shore A	94	
Tensile Strength, psi	2610	
Elongation, %	70	
50% Modulus, psi	1710	
Compression set (70 HRS @ 392^{0}F), %	23.5	
75^{0}F, 1000 ml CO_2, 820 psig, 120 HRS		
Hardness Change, Shore M, pts	-3	-10
Volume Change, %	+24	+29
Weight Change, %	+9	+4
Tensile Strength Change, %	-57	-45
Elongation Change, %	-12	+21
50% Modulus Change, %	-53	-58
20 Second decay (820 to 0 psig)	Excellent, low swell,	Good, medium swell,
Visual appearance	no damage	no damage
250^{0}F, 1000 ml CO_2, 1000 psig, 72 HRS		
Hardness Change, Shore M, pts	-2	-3
Volume Change, %	+3	+2
Weight Change, %	+2	+1
Tensile Strength Change, %	-36	-29
Elongation Change, %	-13	-76
50% Modulus Change, %	-34	-30
20 Second decay (820 to 0 psig)	Excellent, low swell,	Fair, O-Ring had
Visual appearance	no damage	two splits
75^{0}F, 1000 ml CO_2, 1000 psig, 72 HRS		
Hardness Change, Shore M, pts	-3	-4
Volume Change, %	+3	+2
Weight Change, %	+2	+1
Tensile Strength Change, %	-59	-16
Elongation Change, %	-32	+13
50% Modulus Change, %	-41	-33
20 Second decay (820 to 0 psig)	Good, low swell,	Fair, O-Ring had
Visual appearance	no damage	two splits
Extrusion Test Conditions	**V1238-95 2-227 O-Rings**	**V0858-95 2-227 O-rings**
Basic Physical Properties		
Hardness, Shore A	94	
Tensile Strength, psi	2402	
Elongation, %	75	
50% Modulus, psi	1632	
Compression Set (70 HRS @ 392^{0}F)	20.6%	17.0%

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PI Extrusion Test, 302^{0}F, 0.0626" gap		
Failure pressure, psi	510	308
Visual appearance or degradation	Light extrusion	Severe extrusion

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