

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°F to 400°F



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

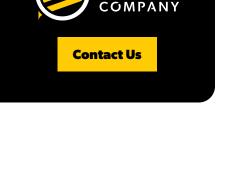
Hot water and steam

Auto and aircraft brake fluids

Amines

Ketones

Low molecular weight esters and ethers





Compound Data SheetParker O-Ring Division United States

REPORT DATA

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Explosive Decompression Test	V1238-95 2-227	Competitor
Conditions	O-Rings	2-227 O-Rings
Basic Physical Properties	<u> </u>	-
Hardness, Shore A	94	
Tensile Strength, psi	2610	
Elongation, %	70	
50% Modulus, psi	1710	
Compression set (70 HRS @ 392°F), %	23.5	
75°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°F, 1000 ml CO ₂ , 1000 psig,	3	
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°F, 1000 ml CO ₂ , 1000 psig, 72 HRS	5	•
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°F)	20.6%	17.0%
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PI Extrusion Test, 302°F, 0.0626" gap		
Failure pressure, psi	510	308
Visual appearance or degradation	Light extrusion	Severe extrusion

