

MARVEE WLL RATING
1.5 IN AND 4 IN MAX LOAD SPACE GVS-6H



**MARVEE
WORKING LOAD LIMIT
DETERMINATION Grivory GVS-6H
Temp range 40 Deg C to -40 Deg C**

September-20-07

Resources :
1) Lab test results Plastics Technology Laboratories Inc. Project Number P20072603
2) EMS CHEMIE, Chart Tensile Stress vs Strain for Grivory GVS-6H +40C - Dry & **Conditioned**.
3) EMS CHEMIE, Tensile Stress specification 23C GV-6H & GVS-6H

MARVEE WLL @ 1.5 IN (3.8 CM) BUNDLE SPACE MAX.

Source	Tensile strength at break		Maximum Load on Marvee at Break		Marvee Working Load Limit assigned		Safety Factor
	MPa	PSI	Kg	lbs	Kg	Lbs	
1 Condition at 23 deg C (73.4 deg F)							
From Item 1 above at 23 deg C 1.5" space GVS-6H			8844	19500			3
From Item 3 above @ 23 deg C	240	34732			2948	6500	
PTLI lab results determined the Break Load corresponding to the Break Stress determined by EMS Chemie lab tests on Grivory GVS-6H composite based on the Marvee Design.							
2 Condition at -40 deg C (-40 deg F)							
From Item 2 above @ -40 deg C @ 1.5" load space	289	41823	10649	23481	3401.361	7500	3.13
Since the Break Load is directly proportional to the Break Stress determined by EMS Chemie we can project the expected Break load, by ratio with the Lab load.							
3 Condition at 40 deg C (104 deg F)							
From Items 2 above @ +40 C @ 1.5" Load Space	226	32706	8328	18363	2539.7	5600	3.28
Since the Break Load is directly proportional to the Break Stress determined by EMS Chemie we can project the expected Break load, by ratio with the Lab load. Thus this condition is the one that establishes the WORKING LOAD LIMIT for Marvee							

Conclusion: Condition 3 will be used to establish the working Load Limit of Marvee at 5400 lbs. (2449 kg.) @ 1.5" Load Space MA)

MARVEE WLL @ 4.0 IN (10.16 CM) BUNDLE SPACE MAX.

Source	Tensile strength at break		Maximum Load on Marvee at Break		Marvee Working Load Limit assigned		Safety Factor
	MPa	PSI	Kg	lbs	Kg	Lbs	
1 Condition at 23 deg C (73.4 deg F)							
From Item 1 above at 23 deg C 4.0" space GVS-6H			6077	13400			3.0
From Item 3 above @ 23 deg C	240	34732			2026	4467	
PTLI lab results determined the Break Load corresponding to the Break Stress determined by EMS Chemie lab tests on							
2 Condition at -40 deg C (-40 deg F)							
From Item 2 above @ -40 deg C @ 4.0" load space	289	41823	7318	16136	2404	5300	3.04
Since the Break Load is directly proportional to the Break Stress determined by EMS Chemie we can project the expected Break							
3 Condition at 40 deg C (104 deg F)							
From Items 2 above @ +40 C @ 4.0" Load Space	226	32706	5723	12618	1814	4000	3.15
Since the Break Load is directly proportional to the Break Stress determined by EMS Chemie we can project the expected Break							

Conclusion: Condition 3 will be used to establish the working Load Limit of Marvee at 4400 lbs. (1995 kg.) @ 4.0" Load Space MA)

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