

TERMS AND DEFINITIONS GROUP

Effective Date: May 1, 2003

TERMS	DEFINITION	ENTERED	REFERENCES
ACTIVE SURFACE	A powered surface with the capability to alter its load distributing properties on it's own, independent of external forces.	4/03	
ALTERNATING PRESSURE	An active support surface that provides cyclic changes in interface pressure on the skin as defined by maximum and minimum interface pressures and their duration and frequency.	4/03	
BOTTOMING OUT	<i>Bottoming out</i> is a descriptive expression, determined by a hand check , used to refer to the impact of an increasing load upon a support surface, compressing that support surface so that the load rests upon the underlying surface.	11/02	<ol style="list-style-type: none"> 1. Taler G, Bauman T, Breeding C, et al. <i>Pressure Ulcers Clinical Practice Guideline</i>. Columbia, MD: American Medical Directors Association (1996). (p.6) 2. www.kci1.com/glossary/index.2002 3. "Pressure Ulcers: Guidelines for Prevention and Nursing Management" 2nd Edition by: JoAnn Maklebust & Mary Sieggreen Ch 6 p.84-85 4. "Understanding Support Surfaces" 1999. SenTech Medical Systems <p>Wheelchair Cushion Terminology (No citation noted)</p> <ol style="list-style-type: none"> 6. JAY, R. (1995). Pressure and shear: their effects on support surface choice. <u><i>Ostomy/Wound Management</i></u> 41:8 36-48

ELASTIC FOAM	A lightweight cellular material resulting from the introduction of gas bubbles into a reacting polymer that deforms in proportion to the applied load: greater loads result in greater alterations in the shape of the material.	11/02	<ol style="list-style-type: none"> 1. Brienza DM, Gyer MJ. Understanding support surface technologies. <i>Advances in Skin and Wound Care, Clinical Management: Pressure Ulcers</i>. Vol. 13(5):Sept-Oct. 2000 2. Wheelchair Cushion Terminology Macosko, 1994; PFA 1996
FATIGUE	<i>Fatigue</i> is the reduced capacity to distribute load following repeated use due to cyclic or prolonged exposure to forces.	11/02	<ol style="list-style-type: none"> 1. Wheelchair Cushion Terminology Parker, 1989
FRICTION	<i>Friction</i> is the resistance to motion of two moving objects or surfaces that touch.	11/02	<ol style="list-style-type: none"> 1. Stedman's Medical Dictionary 26th Edition. 2. Webster's New World Dictionary of the American Language, 2nd Edition
FRICTION, COEFFICIENT OF	A constant which is the ratio of the force (F) trying to move one surface over another to the total perpendicular force (W) pressing the two surfaces together; $K=F/W$. It can be further specified as to a STATIC coefficient (applicable when the two surfaces are not moving relative to one another) or a SLIDING coefficient of friction when relative motion exists.	11/02	<ol style="list-style-type: none"> 1 Handbook of Chemistry and Physics, 39 Edition 2 University Physics, Sears and Zemansky
FULL FRAME BED SYSTEM SUGGEST THE TERM BE CHANGED TO: <i>Integrated Bed System</i>	An <i>Integrated Bed System</i> is used in place of a standard hospital bed and includes bed frame, support surface and power supply.	11/02	<ol style="list-style-type: none"> 1. Pieper B. Mechanical Forces: Pressure, Shear and Friction, Chapt. 11 In. Bryant, R. (Ed) <u>Acute and Chronic Wounds Nursing Management 2nd Edition</u>. Mosby, St. Louis.
GEL	A semisolid system consisting	11/02	#1 Wheelchair cushion

	of a network of solid aggregates in which a liquid is held.		terminology Whittington, 1968; Parker 1989; ISO 1382:1996
IMMERSION	<i>Immersion</i> is to partially submerge a body into a support medium such as fluid, air, gel, or foam.	11/02	1. Stedman's Medical Dictionary 26 th Edition. 2. Webster's New World Dictionary of the American Language, 2 nd Edition
INTERFACE PRESSURE	<i>Interface pressure</i> is the measurement of the perpendicular (or vertical) mechanical force (pressure) per unit area, at the point of contact between the human body and the support surface.	11/02	1. Bergstrom .N, Allman RM, Carlson CE, et al. <i>Pressure Ulcers in Adults: Prediction and Prevention</i> . Clinical Practice Guideline, Number 3. AHCPR Publication No. 92-0047. Rockville, MD: AHCPR, Public Health Service, US Department of Health and Human Services (1992). (p. 55) 2. Burman, P.S. (1993). Using pressure measurements to evaluate different technologies. <u>Decubitus</u> 6:3 38-42. 3. <u>Chronic Wound Care, 3rd edition</u> (eds.) Krasner, D., Rodeheaver, G.T. & Sibbald, R.G. (2001) p.677. 4. <u>Acute and Chronic Wounds</u> (ed) Bryant, R.A., (1992) p. 127. 5 Barnett, R.I. & Shelton, F.E. (1997). Measurement of support surface efficacy: pressure. <u>Advances in Wound Care</u> 10;7 21-9. 6. Allen,V., Ryan, D.W. & Murray, A. (1993). Potential for bed sores due to high pressures; influence of body sites, body position, and mattress design. <u>British</u>

			<p><u>Journal of Clinical Practice</u> 47:4 195-197.</p> <p>7. Allen, V., Ryan, D.W., Lomax, N. & Murray, A. (1993). Accuracy of interface pressure measurement systems. <u>Journal of Biomedical Engineering</u> 15 344-348.</p> <p>8. Fontaine, R, Risley, S. & Castellino, R. (1998). A quantitative analysis of pressure and shear in the effectiveness of support surfaces. <u>Journal of WOCN</u> 25:5 233-239.</p>
LIFE EXPECTANCY	<i>Life expectancy</i> is the defined period of time during which a product is able to effectively fulfill its designated purpose.	11/02	<p>1. Hover AE, Krouskop. Pressure relief characteristics of a new foam overlay: A preliminary performance evaluation. <u>JET Nurs.</u> 1992;19:42-47</p> <p>2. Krouskop T, Rijswijk LV. Standardizing performance –based criteria for support surfaces. <u>Ostomy/Wound Management</u> 41:1 34-44 1995</p>
LOAD VERSES DEFORMATION CURVE	<i>Load versus deformation curve</i> is the relationship between the amount of weight that is being carried on the foam and the depth to which the foam is compressed. <u>(Refer this term to the TI work group)</u>	11/02	<p>1. Hover AE, Krouskop. Pressure relief characteristics of a new foam overlay: A preliminary performance evaluation. <u>JET Nurs.</u> 1992;19:42-47</p>

LOW AIR LOSS	A feature of a support surface that provides air flow directly to the patient's skin at a controlled rate to assist in managing the humidity and temperature (micro-climate) immediately adjacent to the patient's skin.	4/03	
MATTRESS	A <i>Mattress</i> is a cushion like mass of soft material used as a bed or on a bed frame to support or cushion the human body.	11/02	<p>1. Joseph V. Agostini, MD Dorthory I. Baker, PhD, RNCS Sidney T. Bogardus, Jr., MD <i>Making Health Care Safer: A Critical Analysis of Patient Safety Practices</i> AHRQ Evidence Report/Technology Assessment Number 43 Chapter 27 (p. 302)</p> <p>2. Random House Websters College Dictionary</p>
MATTRESS REPLACEMENT	A <i>Mattress Replacement</i> is a support surface designed to take the place of the standard hospital mattress and can be placed directly on the existing bed frame.	11/02	<p>1. Pieper B. Mechanical Forces: Pressure, Shear and Friction, Chapt. 11 In. Bryant, R. (Ed) <u>Acute and Chronic Wounds Nursing Management 2nd Edition</u>. Mosby, St. Louis.</p> <p>2. www.kci1.com/glossary/ index.2002</p> <p>3 "Chronic Wound Care: A Clinical Source Book for Healthcare Professionals" 3rd Edition. Co-edited by: Diane Krasner, George Rodeheaver, Gary Sibbald Ch. 63 p.646. Ch. 65 p.664</p> <p>4. Robin Whittemore, RN, MS Cynthia Bautista, RN, MS Coy Smith, RN, ND, MSN Kathleen Bruttomesso, DNSc, RNCS; Interface pressure measurements of support surfaces with subjects in the supine and 45-degree</p>

			Fowler positions. Journal of ET Nursing, May/June 1993, (p. 112)

MECHANICAL LOADING	<p><u>Mechanical loading</u> is the process of quantifying the weight supported by an object, as determined by the force of that weight on the object.</p> <p><u>(Mechanical loading - Force to which a structure is subjected.</u></p> <p><u>Tissue loading – Force to which tissue is subjected.)</u></p>	11/02	<p>1. Bergstrom N, Allman RM, Carlson CE, et al. <i>Pressure Ulcers in Adults: Prediction and Prevention</i>. Clinical Practice Guideline, Number 3. AHCPR Publication No. 92-0047. Rockville, MD: AHCPR, Public Health Service, US Department of Health and Human Services (1992). (p. 55)</p> <p>2. <u>Tabor’s Cyclopedic Medical Dictionary</u>, edition 18 (1997)</p> <p>3. <u>American Heritage Dictionary</u></p>
NON-POWERED	Any support surface not requiring or utilizing electricity for operation.	4/03	Definition (Webster’s Dictionary)
OVERLAY	An <i>Overlay</i> is a support surface designed to be placed directly on top of an existing mattress.	11/02	<p>1. Pieper B. Mechanical Forces: Pressure, Shear and Friction, Chapt. 11 In. Bryant, R. (Ed) <i>Acute and Chronic Wounds Nursing Management 2nd Edition</i>. Mosby, St. Louis.</p> <p>2. www.kci1.com/glossary/ index.2002</p> <p>3. “Chronic Wound Care: A Clinical Source Book for Healthcare Professionals” 3rd Edition. Co-edited by: Diane Krasner, George Rodeheaver, Gary Sibbald Ch. 65 p. 664</p>
PAD	A <i>Pad</i> is a cushion-like mass of soft material used for comfort, protection or positioning.	11/02	Random House Websters College Dictionary.
PASSIVE	A powered or non-powered support surface with the capability to alter its load distributing properties in response to external forces.	4/03	
POWERED	Any support surface requiring or utilizing electricity to	4/03	Definition (Webster’s Dictionary)

	operate.		
PRESSURE	<i>Pressure</i> is the force per unit area exerted perpendicular to a surface.	11/02	<ol style="list-style-type: none"> 1. Stedman's Medical Dictionary 26th Edition. 2. Handbook of Chemistry and Physics, 39 Edition 3. University Physics, Sears and Zemansky
SHEAR	A term used to describe either shear strain or shear stress.	11/03	<ol style="list-style-type: none"> 1. Stedman's Medical Dictionary 26th Edition 2. Webster's New World Dictionary of the American Language, 2nd Edition
SHEAR STRAIN	The distortion of a body by two oppositely directed parallel forces. The effect of tissue layers sliding against each other.	11/03	Webster's New World Dictionary of the American Language, 2 nd Edition
SHEAR STRESS	The force causing two contacting parts, surfaces, or layers to slide upon each other.	11/03	<ol style="list-style-type: none"> 1. Webster's New World Dictionary of the American Language, 2nd Edition
SUPPORT SURFACE	<i>Support Surfaces</i> are mattresses, mattress replacements, overlays or seat cushions that are designed for management of tissue loads, micro-climate, and/or other therapeutic functions.	11/03	<ol style="list-style-type: none"> 1. Pieper B. Mechanical Forces: Pressure, Shear and Friction, Chapt. 11 In. Bryant, R. (Ed) <u>Acute and Chronic Wounds Nursing Management 2nd Edition</u>. Mosby, St. Louis. 2. www.kci1.com/glossary/ index.2002 3. Sharp-Pucci M (1998). "Special Report: Pressure-reducing support Surfaces in the prevention and treatment of pressure ulcers: Group I Technologies" Blue Cross/Blue Shield Association. MDA 906-95-D-0014; 1-45.

			Sharp-Pucci M (1998). “special Report: Pressure-reducing support surfaces in the prevention and treatment of pressure ulcers: Group II.” Blue Cross/Blue Shield Association. MDS 906-95-0014; 1- 63. Sharp-Pucci M (1998). “Special Report: Pressure-reducing support Surfaces in the prevention and treatment of pressure ulcers: Group III Technologies and continuous rotational devices.” Blue Cross/Blue Shied Association.
VISCOELASTIC FLUID	Relatively incompressible substance that can flow under small stresses and exhibits both elastic (ability to store energy) and viscous (resistance to flow) properties. Conforms to the contours of the body.	11/03	#1 Sprigle S – Materials and Construction #2 http://www.kci1.com/products/surfaces/mrs/rikMrs/faq.asp

In October 2002, the following terms were recommended to be deleted:

CONSTANT FORCE

DRY PRESSURE MATTRESS / PAD – (Refer to DMERC LMRP/support surfaces).

VARIABLE LOAD

VARIABLE PRESSURE

In October 2002, the following terms were tabled until a later point in time:

PRESSURE REDUCTION

PRESSURE RELIEF

In October 2002, the following terms were tabled until a later discussion regarding lateral rotation/pulmonary therapy:

LATERAL ROTATION

PERCUSSION

VIBRATION

KINETIC