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INTERIM FEDERAL STANDARD

RUBBER PRODUCTS,

DEFINITIONS AND TERMS FOR VISIBLE DEFECTS OF

This Interim Federal Standard was developed by the Standardization Division, Federal Supply Service, General Services Administration, based upon currently available technical information. It is recommended that Federal agencies use it in procurement and forward recommendations for changes to the preparing activity. It is subject to modification before being fully coordinated as a Federal Standard.

S1. Scope. - This Interim Federal Standard covers definitions of terms describing visible defects in rubber products. It includes words currently in general use, with a unique meaning in the rubber industry, as well as words peculiar to the industry.

S2. Purpose. - The purpose of the Interim Federal Standard is to clarify definitions and to eliminate misunderstandings concerning various interpretations and connotations. No term included is more correct than another; all are defined for information. It is not the purpose of this glossary to classify terms as being major, minor, or acceptable defects.

S3. Changes. - When a Federal agency considers that a Federal Standard does not provide for its essential needs, written request for adding to or otherwise changing the standard, supported by adequate justification, shall be sent to the Administration. This justification shall explain wherein the standard does not provide for essential needs. The request shall be sent in duplicate, to the General Services Administration, Federal Supply Service, Office of the Assistant Commissioner, Property Management, Washington 25, D. C. The Administration will determine the appropriate action to be taken and will notify the agency.

S4. Conflict with referenced specifications. - Where the terms specified in this standard conflict with any terms in a referenced specification, the terms of the standard will apply. Nature of conflict between the standard and the referenced specification shall be submitted in duplicate to the General Services Administration, as addressed in S3.

DEFINITIONS

- Abrasion:** In latex goods, thin or picked off spot due to touching another object before dry. In general, damaging or wearing away of surface.
- Acid Cut:** In latex goods, a run or thin spot (see "coagulant cut").
- Accordion-folded:** Folded in alternate directions, producing a wavy or sinusoidal disposition of the fabric strip in the cross-section.
- Adhesion:**
Poor.—Failure of one material to cling to another.
Faulty. — See "adhesion, poor" and "lay separation".
Insufficient. — Weakness of bond between materials.
- Aftercure:** Continuation of vulcanization after the desired cure is effected and the heat source removed.
- Agglomerate:**
- Agglomeration:** Unification of small particles into groups. Loosely refers to undispersed material.
- Agglutination:** See "agglomerate".
- Aggregate:**
- Aggregation:** See "agglomerate".
- Air Cell:** Sealed pockets or bubbles in article causing protrusion on surface.
- Air Check:** Surface marking and depression due to trapped air in curing. See also "check" and "plugged vent".
- Air Chute:** Surface depression, of a pattern indicated by the name. See also "air check".
- Air Mark:** See "air check".
- Air Lock:** See "air check".
- Air Pocket:** A void, usually in footwear, due to ply separation. See also "air check" and "channel".
- Air Shot:** See "air check."
- Air Spot:** In molded goods, surface unevenness due to failure of stock to fill mold. See also "fill" and "air check".
- Air Trap:** See "air check".
- Alligatoring:** Checking or surface cracking of a pattern indicated by the name. See "atmospheric cracking".
- Anchorage:** Adhesion of rubber to base cloth, metal or other material.
- Atmospheric Cracking:** Surface fissures, deeper than crazing, caused by aging or weathering.
- Backflash:** Distortion at the mold line, usually in the form of wrinkles, folds, tears or indentations. Severe cases may cause overall dimensional changes.
- Backflow:** See "backflash".
- Backrind:**
- Backrinding:** See "backflash".
- Bad Corner:** In cellular rubber, usually void or lack of proper fill in the corners.
- Bald Spot:** Uncoated area in the fabric.
- Band:**
Torn.—A cut or tear in a strip of rubberized fabric.
Pinched. — A deformation or contraction in a strip of rubberized fabric.
Wrinkled.—A ridge, furrow or crease in a strip of rubberized fabric.
- Bar:** A mark caused when coating machine is stopped. See also "STOPS".
- Bar Mark:** Surface mark or indentation by the bars of a festooning oven or chamber used for suspension of the coated fabric during vulcanizing or similar operation.
- Bare Back:** A textile face which is free of any coating or covering.
- Bare Duck:** See "bare back".
- Bead:** In latex goods, a surface protrusion caused by excess latex. See also "run".
- Bias:** Usually used as an adjective for fabrics, denoting diagonal placement at an angle of less than 90° to the principal axis; in this sense it is not a defect. However, it may denote a defect in the sense of an article being "awry".

- Bleeding:** Migration of an ingredient to surface, sometimes as an oily film. Also material staining or contaminating an adjacent area or article as in staining of white sidewalls by carcass stock in tires. *See* "exudation" and "sweating".
- Blemish:** Surface imperfection, usually minor.
- Blister:** A void or hole in article, causes protrusion on surface when hot, may not show on surface when cold, may be covered or open.
- Blisters, Railroad:** *See* also "blister" and "calendar blisters". Blisters in a definite pattern, as indicated by name.
- Bloat:** Swelling, more particularly as in bulging of a cement container.
- Blocking:** Adhesion between touching layers of material.
- Block Mark:** Scar or mark on a molded article showing general contour of the original raw biscuit or preform.
- Bloom:** Material migrating to surface, term usually used for solid materials (liquids usually referred to as "bleeding"). To form a blush or discoloration.
- Blow Hole:** A void. *See* also "blister" and "boil".
- Blow-up:** A void. *See* also "blister" and "boil".
- Blow, Strong:** In cellular rubber, over-expansion.
- Blow, Weak:** In cellular rubber, too little or insufficient expansion.
- Blowing:** Porosity or sponginess. In latex goods, a permanent deformation caused when the deposit leaves the form during curing or drying.
- Blush:** *See* "bloom". Also whitish surface appearance where moisture has condensed before solvent is evaporated.
- Boardy:** In coated fabrics, stiff or tinny effect; also too close-textured stock. In raw stock, very stiff material.
- Boil:** *See* "air cells".
- Bonding:** *See* "adhesion, poor".
- Bootlegging:** Progressive ply delamination. Term particularly used in belts of separate plies.
- Bow:** Depression in surface. *See* "dimple" and "dished". Also, curve or displacement in filling threads in fabric.
- Braid Photographing:** Bas-relief or outline of the reinforcement showing on the surface. Not specifically a defect but may indicate an undergage cover.
- Braid Stop:** An unevenness or neckdown in a braid reinforcement, due to application of one or more ends at a greater tension than the rest.
- Braided Smash:** A break in one or more ends in a braided reinforcement.
- Branching:** Lines, cracks or fissures of a definite pattern as indicated by the name. *See* also "flow marks" and "knit marks". In latex, *see* "sunburst" and "treeing".
- Break:** A crack or split.
- Breakdown:** In electrical testing, puncture of an insulation by an applied voltage, usually expressed as volts per mil thickness.
- Breakthrough:** Tear or hole, as a puncture in a hose wall or a split in cellular rubber skin.
- Brittleness:** Tendency to crack or snap when subjected to deformation.
- Bruise:** In latex and coated goods, a scar caused by an uncured rubber article striking a non-rubber object. *See* also "touch". Also damage to a cured article, as in sidewall in tires.
- Bubble:** Small covered hole, usually near surface. *See* also "boil".
- Buckle:** Wrinkling, folding or buckling where one layer is not adhering smoothly to another. *See* also "dog-leg".
- Buckled Ply:** *See* "buckle".
- Buckling:** *See* "buckle".
- Buckshot:** A group of circular thin spots or surface depressions. *See* also "pock mark".
- Buffing Mark:** Nick, undergage spot, or mark caused by excessive buffing.
- Bulge:** A protrusion which may be caused by ply separation in plied goods, or undercure in thick articles.
- Bump Mark:** Surface indentation or imperfection caused by excessive or improper bumping (closing and opening press to

- secure proper flow of stock). Also surface mark from raw article striking something before cure. *See also* "stuck", and "bruise".
- Bump, Wet:** In latex dipped goods, a crease or mark occurring in uncured film. Also sometimes known as "bumping crease", "bruise", "green pinch" or "touch".
- Bursted:** An internal separation or void, generally causes a surface protrusion or dimensional malformation.
- Calender Blisters:** Small air bubbles often in sheeted rubber when it is running on the calender. Usually disappear in the subsequent curing process but sometimes persist and cause porosity or large blisters in the finished product. *See also* "blisters, railroad".
- Calender:** Surface marks and lines other than design, usually parallel to flow marks direction of calendaring. *See also* "crow's feet".
- Mark.**—Usually a low or thin spot across full width of the sheet, caused by a stop or pause during the calender operation.
- Pick-off.**—*See* "pick-up".
- Pick-up.**—Material missing from surface of a coated fabric caused by its adherence to calender roll. *See also* "plucked fabric" and "pick-off".
- Shrinkage.**—"Kick" or decrease in dimensions of sheet, usually in direction of calendaring.
- Cat Eye:** Undissolved particle in cement.
- Cavity:** In tires, a surface depression at rib or sidewall usually caused by air trapped in cure.
- Cementing, Poor:** Inadequate adhesion in goods where an adhesive is used. *See also* "adhesion" and "bonding".
- Chalking:** Loosening of surface layer or pigment, or a surface graying or whitening. *See also* "frosting".
- Channel:** Long air pocket or blister (usually in footwear).
- Checks:** Rough surface, small fissures or lines. *See also* "cracking".
- Charge Mark:** A surface blemish caused by the stopping of a process. *See also* "stop" and "heat mark".
- Chewback:** *See* "backrind".
- Chicken-skin:** A type of checking or surface cracking in a pattern indicated by the name.
- Chip:** In footwear, an outsole not firmly stuck to upper during manufacture, or pulled away from the upper for a short distance during vulcanization. *See also* "started sole".
- Chipped Area:** Material missing where surfaces appear as if they had been chipped. *See* "chipped tread".
- Chipped Tread:** In tires, material knocked off the edges of ribs, bars or buttons, usually during removal from mold.
- Coagulant Cut:** *See* "acid cut".
- Coagulation (Latex):** Separation of the dispersed component of a liquid dispersion or colloid sol forming a clot or a coherent precipitate effected spontaneously or through added substances. In rubber latex, clotting of dispersed rubber globules to form a coherent irreversible jelly-like mass.
- Coagulum:** The undried jelly-like product of coagulation. The wet soft clot of rubber formed when latex is coagulated.
- Coating, Rough:** Uneven or lumpy surface. *See also* "calender flow marks".
- Cohesion:** *See* "adhesion".
- Coiling, Soup:** In coating or spreading operations, a defect caused by the curling or turning motion of a bank of lacquer or other "soup" compound in an application device, wherein streaks form on the coated fabric surface due to uneven application of the soup.
- Cog, Defective:** In V-belts, wrong size, irregularly shaped or irregularly placed indentations in the inner face.
- Cold:** A dull, flat surface where a bright, lustrous one is desired.
- Cold Checks:** A rough surface seen on calendered sheet when the temperature of the calender rolls or the feed stock is too

- low or when the sheet is too suddenly chilled.
- Collapse:** In cellular rubber, contraction of an article on cooling due to cell-tight condition. In extruded hollow sections, permanent distortion by caving in.
- Color Variation:** Nonuniformity of color.
- Combining, Faulty:** Poor bond or joining of two materials by an intervening rubber layer.
- Contact Scar:** In latex goods, a surface irregularity caused by contact between two dipped articles before curing.
- Contamination:** Presence of foreign material.
- Convolution:** Fold, coil or annular mark in material.
- Cord:** Heavy string on surface in dipped goods.
- Cord, Defective:** May refer to a missing, loose, broken or poorly positioned string in cellular rubber or in a reinforcing pickless fabric.
- Cord, Pinched:** Cord displaced in manufacture, as in V-belts. *See also* "pinch".
- Cord, Wavy:** Misalignment of pickless fabric.
- Core Cut:** Cleft, gash, slit or notch resulting from the core of a mold.
- Corkscrew Twist:** In a yarn or cord, a spot where an uneven twist gives a corkscrew-like appearance.
- Corona, Checking, Cutting or Cracking:** Cracks on the surface caused by ozone, generated by a high potential discharge usually appearing at right angles to a stress.
- Corona, Internal:** In electrical cable, fault due to ionization of air between conductor and insulation.
- Corrugated Cover:** A ribbed or wavy surface obtained from a lead press.
- Cover Splice** (*Heavy, extended, open, bad, light.*): Improper joining of laps or plies at joint.
- Cover Pushback:** In insulated wire a slipping back of insulation forming a bunch in the insulating wall. *See also* "pullback".
- Cover Lap:**
Heavy.—Overlapping at joint causing excessive thickness or a protrusion.
Short, open.—Failure of two plies or parts to meet at joint.
- Cracking:** Fissured surface condition. When the fissures are minute, the condition is called "crazing". Also, treatment of rubber by passing it through moving corrugated rolls to disintegrate.
- Crack** (*at chafer or at shoulder*): In tires, failure of stock to knit together properly.
- Cracked Eye:** In heels, small split or knit mark at the nail hole on heel face.
- Crawl:** Shrinkage of raw stock on coatings, usually calendered stock, sometimes creating a curl effect.
- Crazing:** Presence of a network of very fine lines (other than design) disrupting the continuity of an exposed surface. *See also* "cracking".
- Crease:** The adhering together of a surface, causing wrinkles or overlaps, generally used in latex or thin sheet goods. *See also* "pinch".
- Crocking:** *See* "bloom".
- Crossover:** In insulated wire, diagonal indentation in the insulation where one turn of wire has overlapped others before curing.
- Crow's Feet:** Radial lines and marks of a pattern indicated by the name. *See also* "cold checks" and "calender flow marks".
- Cure:**
Over.—Vulcanizing to the point that physical properties are impaired.
Under.—Degree of cure less than optimum. May be evidence by tackiness, loginess or inferior physical properties.
- Curling:** *See* "coiling, soup". Also, excessive warping of sheet goods, or distortion by uneven shrinkage. *See also* "crawl".
- Cut(s):** *See* "acid cut", "coagulant cut", "die cut", "trim cut", "core cut" and "soap cut".
- Defective Mold Mark:** Distortion or excessive backrinding as where mold is off register.

- Also pit or protrusion caused by damage to the mold.
- Deformation:** Any defective change of form or shape.
- Degradation:** Deterioration, usually in the sense of a physical or chemical rather than mechanical process.
- Delamination:** Separation or splitting, usually lack of adhesion in plied goods. *See* also "lay separation" and "ply separation".
- Depression:** Hollow in a surface. *See* also "dished" and "bow".
- Die Cut:** Cleft, gash, slit or notch in the material, left from the punching out operation, or in extruded items from foreign material in the extruding die.
- Diffusion:** Running or "striking" through as in frictioning.
- Dimple:** Small surface depression. May describe a collapsed blister.
- Dirt:** Foreign material, usually internal.
- Discoloration:** Staining. Also any change in color from the standard or original. *See* also "fading".
- Dished:** Surface with a spherical or spheroid concave depression. Antonym of "domed".
- Dispersion, Poor:** Compounding or filler material nonhomogeneous with base matrix. *See* also "agglutination", "speck", and "flocculation".
- Doctor Mark or Streak:** Streak or ridge in coated fabrics caused by damaged doctor blade. Also "knife mark".
- Dog-ear:** Surface slit of a pattern indicated by the name. Particularly describing a squeezed-out blister in thin gage conveyor belt covers.
- Dog-leg:** In Vee belts, a fold, pleat or doubling back of cord members causing a bend. In lead press cured hose, a bend.
- Dogskin:** Very small surface irregularities of a pattern indicated by the name.
- Domed:** Surface with a convex spherical or spheroid protrusion. Opposite of "dished".
- Doubling:** Folding of material surfaces against each other during processing. *See* also "combining, faulty".
- Drag-down:** Thinning in gage or narrowing in width of a sheet by tension in windup. In tires, bead out of position and/or distortion of surrounding fabric. In tubing, a rough, irregular condition. In dipped goods, excess material. *See* also "pinch-out".
- Drop Ply:** Omission of a reinforcing layer of fabric.
- Dry:** Lack of tack.
- Dry Joint:** Lack of adhesion; more specifically poor contact of adhering surfaces.
- Duck on Edge:** Exposed threads through cover stock of reinforcing fabric.
- Dull Finish:** Lack of lustre or gloss.
- Ear:** Unadhered fold-in surface. May refer to cured-down blister.
- Eccentricity:** Off-center condition where more material is on one side than on the other where evenness is desired. Most commonly used in insulated wire to denote off-center wire.
- End Scrap:** Most commonly used in lathe-cut goods to describe undergage material at end of the run.
- Excessive Lubricant:** Residues of mold lubricant or wash material giving surface an oily or waxy appearance, and sometimes causing poor knitting or poor adhesion where adhesion is desired.
- Extrusion Mark:** In extruded items, a cleft, gash, slit, or notch. *See* "die cut".
- Exudation:** *See* "bleeding".
- Fabric Mark:** Surface imprint caused by the cloth used in curing or processing, i.e., cloth impression. Not necessarily a defect.
- Fading:** Lightening of the initial color.
- Fill (Non-, unfilled, etc.):** Improper contour due to lack of material or lack of flow of the material. *See* also "light stock", and "short".
- Filler Speck:** Small particle of undispersed compounding or foreign material. Also, dirt in fabric. *See* also "dirt", "foreign material", "dispersion, poor", and "flocculation".

- Fin**—(“rind” or “flash”): Material protruding from the surface; usually appearing at mold parting line or mold vent points.
- Finish (poor)**: (a) Blemished surface.
(b) Incomplete or faulty finishing operations, such as trimming, buffing, tumbling.
- Fish Eye**: *See* “cat eye”.
- Fish Scaling**: Overlap of thin unadhered surfaces of a definite pattern as indicated by the name.
- Flaking**: In footwear, separation at the edges of heavy gage outsoles.
- Flash**: Spew-out of material at mold parting line. *See* “fin”.
- Flashback**: *See* “backrind”.
- Flash Pickout**: Material missing at mold parting line. *See* also “backrind”.
- Flat Spot**: Level area not following prescribed contour.
- Flattening or Flattening**: Distorted contour, thinness or weakness, usually occurring prior to or during cure, due to lack of stiffness of raw stock.
- Floating**: A misplaced internal item in the finished product, such as a floating washer in a heel.
- Flocculation**: The tendency of particles of certain finely divided powders to gather into loose flakes or flocs when dispersion of the substances in a liquid or plastic medium such as rubber is attempted. Incomplete dispersion when the disperse component is not properly wetted by the dispersion medium. Also denotes coagulation of colloid sols. *See* also “dispersion poor”, “agglutination”, and “speck”.
- Flow Distortion**: Twisted or misshapen.
- Flow Marks, Lines, or Cracks**: Surface imperfections caused by improper flow of raw material during moulding operation. *See* also “knit mark” and “flow-over”.
- Flow-over**: A surface crack sometimes not apparent until article is bent or flexed. *See* also “knit-mark”.
- Flowery**: In cut sheet or lathe-cut gaskets, frost-like flowers due to poor dispersion in compound.
- Fog, Foggy**: *See* “cold”.
- Fold**: A crease or pleat. *See* also “dog leg” and “foldback”.
- Foldback**: Overlap of material on itself or another material. Also edge turnover or doubled edge. *See* also “fold”.
- Foldover**: *See* “foldback”.
- Foreign Material**: Any extraneous matter. *See* also “contamination”, and “dirt”.
- Friction, Poor**: *See* “adhesion” (poor). Also scanty, rough or uneven, application in frictioning operation.
- Frosting**: An oxidation product of rubber forming very fine white bloom not soluble in common solvents, acids or bases.
- Fuzzy (surface)**: A surface with lint or small threads embedded in it.
- Gas Pocket**: *See* “air, check”.
- Gas Trap**: *See* “air, check”. Also, large void in cellular rubber.
- Gelation**: Jelly-like condition. In colloidal solutions, change from sol to gel.
- Grease Mark**: *See* “excessive lubricant”.
- Growth**: In tires, any dimensional increase during service.
- Hazing**: Dulling of the finish. *See* “bloom”, “chalking” or “frosting”.
- Heater Damage**: Defects like “bump marks” occurring during an air or open steam curing operation. Also defects from faulty operation of heater.
- Heat Mark**: In semi-continuous curing as in press-cured belts, mark of the overlap area from one heat to the next. *See* also “charge mark” and “press mark”.
- Heavy**: Overgage or overweight material.
- Holiday**: In coated fabrics, a place not covered by coating compound.
- Horseshoe**: *See* “dog-ear”.
- Hot Mold**: Defects, usually cracks and cavities, caused by putting uncured material in too hot a mold. Particularly in reference to autoclave curing of tires.

- Imbibition:** Absorption of a liquid by a gel accompanied by expansion of the gel., e.g. swelling of rubber by oil.
- Impression Top:** Surface with ridges or projections. May or may not be a defect.
- Inclusion:** Foreign material in the finished material. *See* "dirt".
- Indentation:** Permanent recess or deformation in a surface area formed by an applied force.
- Internal Void:** *See* "blister", "boil", and "ply separation".
- Knife Mark:** *See* "doctor mark".
- Knit Mark:** A fissure or crack where raw stock did not unite during the cure.
- Knockout:** Surface damage in removal from mold.
- Knot:** In coated fabrics, a protrusion caused by tying two ends of fabric warp or filling.
- Knotted Ring:** In latex goods, a lumpy ring or bead.
- Lacquer Stop:** A defect caused by temporary halt in the application of lacquer or other "soup" to the embossed surface of a coated fabric. Excessive penetration of base film by the solvent occurs, and sometimes excessive deposition of lacquer or soup occurs due to longer time of dwell.
- Lake:** Surface depression. *See* "air check".
- Lap:** *See* "cover lap".
- Lap Short:** Open spot where two or more plies should be joined. *See* also "cover splice".
- Lasting. Poor:** Any defect occurring during construction of footwear upon a last.
- Lay Separation:** Detachment where adhesion is desired in a plied article. *See* "adhesion" and "delamination".
- Lead Chip Mark:** Nick or mark in the surface usually for hose cured in a lead press.
- Lead Dent:** An indentation in the surface usually used for hose cured in a lead press.
- Lead Press Joint:** A mark caused by temporary halt in lead curing operation. *See* also "charge mark".
- Lead Pop:** A surface protrusion or blister, usually referring to hose cured in a lead press.
- Leaker:** In footwear, a boot that shows air bubbles in air pressure-under water test. In hose, an assembly which leaks at coupling or fitting.
- Let-go:** An area of no adhesion where adhesion is desired. *See* also "delamination", "adhesion" and "ply separation".
- Lifting:** Raising and wrinkling of a coating. Usually caused by a solvent or plasticizer from an external source.
- Light Bead:** Insufficient material around a reinforcing ring.
- Light Stock (light blanks):** Usually insufficient material to fill the mold. Also undergage material in sheet goods or underweight articles. *See* also "short" and "fill".
- Light Tread (Bare Tread):** In tires, failure of tread stock to completely fill mold, especially at edges, of ribs, bars, or buttons.
- Line:** *See* "air check" and "cold check".
- Liner Mark:** *See* "fabric mark".
- Lint:** Inclusion of a small fiber where not desired. Also, a hole in thin latex goods caused by an entrapped fiber.
- Livering:** Gelling in cements giving a liver-like appearance.
- Logy:** Sluggish, low snap or recovery of a material.
- Loose:** Separation or lack of adhesion where adhesion is required.
- Low Spot:** Depression below prime surface, an undergage area. *See* also "dished" and "dimple".
- Lubricant Bloom:** *See* "excessive lubricant".
- Lumps:** Surface protrusions, usually of the basic material as distinguished from foreign material.
- Machining Mark:** Surface imperfection or mark on a molded article due to a machine mark or poor finish of mold cavity. *See* also "mold mark".
- Malformation:** Structural deformation. In gloves, failure of the glove to fit the human hand.

- Mark-off:** Imprint of the back of the material onto the face when the material is rolled.
- Melted Rubber:** A soft sometimes tacky condition, usually indicates excessive chemical degradation rather than tackiness from a physical cause such as oil immersion.
- Mica Specks:** Specifically, a spotty surface from excess mica dust used as a lubricant. Loosely, any spotty surface appearing like excess mica dust.
- Microporous:** Presence of a number of very small voids.
- Migration:** Movement of dissolved material from high concentration area to a low concentration area, sometimes refers to bleeding.
- Mismatch:** Poor matching or meeting in splice. Also, non-identical pairs as in rubber footwear.
- Mispick:** In coated fabrics, misplaced weft thread or a missing filler yarn.
- Misweave:** A general term describing any defect in a fabric occurring in the weaving operation such as mispick, snag, or broken end.
- Moisture Pocket:** Surface void. Usually used for material cured in a liner; for example, cloth too wet at start of curing.
- Mold Mark:** Deformity caused during the molding operation.
Cocked mold—Malformation due to displacement of the mold.
Damaged cavity—Deformity of the finished article due to a damaged mold.
Dirty—Blemished surface due to dirty mold.
Pinch—See also “cocked mold” and “pinch”.
Scratch—A small groove in the surface.
- Mottle:** Marble-like appearance caused by undiffused stocks feeding into calender bite at the same time. May or may not be a defect.
- Multiporous:** Presence of many internal holes or voids. See also “microporous”.
- Neck-down:** Too narrow below specified dimensions. See also “pinch-out” and “drag-down”.
- Nick:** Small cut.
- Non-fill:** See “air-spot” and “light stock”.
- Notch, Defective:** See “cog, defective”.
- Off Center:** See “eccentricity”.
- Off Color:** Nonmatching shade. See “color variation” and “discoloration”.
- Off Gage:** See also “heavy”, “light stock”, and “undergage”.
- Off Section Splice:** Out-of-line joining of laps or plies. See also “splice, defective”.
- Oiliness (oil spots):** See “exudation”.
- Open Lap:** See “lap, short”.
- Open Seam:** See “lap, short”.
- Orange Peel:** Surface unevenness of a pattern indicated by the name.
- Overbuffed:** Removal of too much material by buffing.
- Overflow:** See “flash”.
- Pebbles:** Bumpy surface. Also small bubbles in cements. See also “orange peel”.
- Peeling:** Stripping of rubber coating from a base material. See also “delamination”.
- Pepper:** Very minute protrusions or surface blisters.
- Pickoff:** See “calender pickup”. Also a missing portion of coating in spreader goods.
- Pickout:** In coated fabrics, mark due to a pull-out of an original pick.
- Pickup:** See “calender pickup”.
- Pigmentation (Insufficient, nonuniform, etc.):** Loading of rubber with fillers. Insufficient amounts or nonuniform mixing may result in off-color goods or poor physical properties.
- Pimple:** A small, conical protrusion on the surface. Also, small surface blister.
- Pinch:** A crease or pleat where surfaces adhere.
- Pinch, Green:** A crease or pleat where surfaces adhere before cure. See also “bump, wet”.
- Pinched Coating:** In coated fabric, a ridge or wrinkle in the coating.
- Pinch-out:** To narrow, taper, terminate or stop. Also, squeeze out of fabric through a mold parting line. See also “drag-down”.
- Pinhole:** Minute circular void or solvent blow hole.

- Pipe Seam:** Longitudinal tubular void in calendered strip articles of a pattern indicated by the name.
- Piping:** See also "dimple", and "dished".
- Pit:** A spherical depression, usually small. See also "pock mark".
- Placing, Poor:** Faulty placement of plies as in tire building or improper spotting of inserts. Nonconformity of finished article with design dimensions due to mold misalignment during cure. See also "flow distortion".
- Plucked Fabric:** See "calender pick-up".
- Plugged Vent:** In molded goods, failure to obtain proper fill of the article due to trapped air. See "air-check".
- Ply Separation:** Lack of adhesion between plies. See also "lay separation" and "delamination".
- Ply, Wrinkled:** See "buckled ply".
- Pock Mark:** A circular depression, indentation, or thin spot. See also "pit" and "buck-shot".
- Pocket, Surface:** Usually a surface defect such as a depression caused by entrapped air during the molding process. See also "delamination" and "air check".
- Pore:** Minute opening in surface of cured goods. May refer to minute bubble within the article. See also "pinhole".
- Porosity:** Presence of numerous minute voids in cured material.
- Premature Vulcanization:** Uncontrolled curing or setting up of material before final cure.
- Press Change:** See "heat mark".
- Press Lap:** See "heat mark".
- Press Mark:** See "heat mark".
- Press Overlap:** See "heat mark".
- Prick Mark:** Hole caused by pricker roll or hand prick in puncturing blister in raw stock, or by a hand prick in removing article from mold.
- Pricker Mark:** See "prick mark".
- Printing, Improper:** Incorrect placement of or off-register coloring.
- Protrusion:** Raised portion of surface. May indicate an internal void or blister.
- Puckered:** Usually in footwear or plied goods, wrinkled or ridged.
- Pull:** Separation of component parts, usually in footwear. See "delamination" and "chip".
- Pullback:** In hose, a bunching and slipping back of cover stock sometimes forming knit marks in the cover. See also "cover pushback".
- Pulldown, Poor:** Lack of wrapping tension in wrap-curing. The term may refer to such defects as porosity, overgage or delamination. See also "wrap," defective".
- Pull-up:** See "delamination" and "pull".
- Pushback:** See "cover pushback".
- Rag Mark:** See "fabric mark".
- Railroad Tracks:** In coated fabric, depressions in surface forming a pattern indicated by the name.
- Reams:** Layers of nonhomogeneous material parallel to the surface in a transparent or translucent material or article.
- Register, Off or Uneven:** See "placing, poor".
- Release Mark:** Deformity caused by improper removal from mold. May also refer to "backrind" or deformation due to inadequate mold pressure.
- Reversion:** Softening, or other impairment, such as tackiness or decreased strength of vulcanized article.
- Rind:** See "flash".
- Ring:** In latex goods, undergage area. See also "horseshoe".
- Ring Hole:** In latex goods, hole at the bead line.
- Roll:**
Defective: In gloves, defects on the roll at the cuff.
Back: See "horseshoe" and "pullback".
Blistered: Bubble in the roll.
Bunched: Squeezed spot on the roll.
Blown: Bubble in the roll usually where condition is larger than blistered.
Loose: Lack of proper adhesion.
- Rolling, Poor:** See "roll, defective". See also "stitching, poor."
- Ropiness:** In cements, gelled or solidified parts resembling rope.

- Rough Top:** See "impression top".
- Rough Trim:** Usually refers to removal of flash by pulling or picking. May or may not be a defect.
- Rugosity:** Surface roughness.
- Run:** In latex goods, small ridges usually formed by downward flow of excess latex.
- Run-off Stitching:** Improper placement of stitching, usually in footwear. Not a defect unless adhesion is impaired.
- Runover:** In footwear, bulging of upper above heel or sole. See also "undershot".
- Sags:** In mandrel curing, off center or out of shape from raw stock drifting on mandrel.
- Scorching:** Premature curing or setting up of raw stock during processing. May also refer to burning.
- Scuff Mark:** Damage to surface due to rough handling.
- Scuffing:** See "scuff-mark".
- Sealed:** Surfaces, supposed to be separate, which are stuck or cured together.
- Seed:** Small surface protrusions. Also fine bubbles in cement. In fabrics, hulls of seeds remaining after weaving. See "pebbles".
- Semi-cure:** A partial vulcanization.
- Separation:** See "delamination".
- Setting, Poor:** In footwear, sole or heel too short, too narrow, or misplaced.
- Settling:** In latex and cement, internal separation or breaking of a suspension or emulsion.
- Short:** Unfilled, insufficient stock. Also low elongation and elastic limit. In cements, immediate pre-gel stage. See also "fill".
- Short Finish:** Dull surface.
- Short Ply:** See "lap, short".
- Shrinkage:** Decrease in size of an article. Not usually used for decrease in weight. See also "Kick".
- Shrinkage Mark:** In coated fabrics, surface markings, depressions, creases and wrinkles.
- Sink Blister:** See "dimple" and "dished".
- Sink Mark:** See "dimple" and "dished".
- Skip:** Missing portion of coating usually in spreader goods. See also "calender pick-up".
- Skim:** Streaks of dense small protrusions or depressions on surface. See also "pit", "seed", and "pebbles".
- Skin (in cellular rubber):**
Folded.—Wrinkles or pinches.
Heavy.—Coarse, sometimes thick surface layer.
Loose.—Separation of surface layer from base material.
Poor.—Rough, sometimes irregular surface layer.
Thin.—Undergage surface layer.
- Skiving, Poor:** Improper beveling of edges of a lapped joint causing poor union or appearance.
- Sleezy:** In coated fabrics, a poor grade of woven fabric.
- Slide:** In latex goods, surface skinning or sliding, may cause a pinch. In sheet goods, see "calender mark". In coated fabrics, hole caused by a missing thread.
- Slick Tube:** Glossy surface caused by low adhesion between tube and adjacent fabric ply or layer.
- Slip:** See "slide".
- Sloughing:** Surface deterioration of rubber after solvent immersion.
- Slub:** In coated fabric, an abruptly thickened place.
- Slug:** In coated fabric, an enlarged section of yarn or a bunch of lint entangled in the fabric.
- Smash:** In coated fabric, area of missing or ruptured coating.
- Snag:** In coated fabric, rupture caused by an external puncture followed by a tear.
- Snapback:** In latex gloves, a thin line, ridge, or pit caused by entrapped latex between digits.
- Soap Cut:** Surface fissure caused by excess mold lubricant. See also "knit mark".
- Soapstone Mark:** Surface roughness caused by excess dusting powder.
- Soft Center:** Undercured center portion (usually in thick molded items).

- Soft End:** In hose, an end in which the rigid reinforcement of the body is omitted. Usually not used to denote a defect.
- Soft Top:** Closed end of a prophylactic due to tackiness.
- Soup Skip:** In coated fabrics, an unlacquered or two-toned area.
- Soup Streak:** In coated fabrics, a streak or scratch in the surface. *See also* "doctor mark".
- Speck:** *See* "filler speck".
- Spew:** *See* "flash". Also, cement runback at splice.
- Spider Mark:** A cleavage or delamination caused by failure of compound to reunite after passing the spoke of the spider in an extrusion machine.
- Spitting:** Small globules of cement stock on coated cloth surface.
- Splice, Defective:** *See* "cover splice".
- Split Core (Wood core heel):** Broken wooden core in heels.
- Split Eye:** *See* "cracked eye".
- Split Sole:** In footwear, a blown sole, such as a blister or separation.
- Splitting, (split):** Fissures, usually caused by poor flow or knitting during molding. Also cords poorly spaced, for example, spread and sometimes bunched in cord fabric.
- Sponginess:** Numerous small to medium sized voids. Usually a more severe defect than "porosity".
- Spotting:** Surface blemishes. *See also* "plac-ing, poor".
- Spread Cord:** In tires, uneven distribution of cords, usually in the inside ply.
- Sprue Mark:** In injection or transfer mold-ing, the protrusion or mark left at the mold charging point.
- Stain, Contact:** Discoloration of surface by direct contact with a rubber article.
- Stain, Migration:** Discoloration of surface from an adjacent rubber article.
- Started Sole:** In footwear, separation of sole from upper.
- Starved:** *See* "short", "light stock". Also in-sufficient adhesion where adhesion is de-sired.
- Steam-pitting:** Small surface cavities from an open steam cure. *See also* "pock mark".
- Sticking:** In heater or autoclave curing, de-fect caused by one article striking another before being cured. May also refer to tear or hole in a molded article caused by ma-terial sticking to the mold. *See also* "heater damage" and "bump mark".
- Sticking Lead:** Adhesion of material to lead during lead-molded cure.
- Sticky:** *See* "tackiness". In latex goods, ad-hesion of surfaces from foldover without powder.
- Stitching, Poor:** Missing or defective stitch-ing or rolling, especially where adhesion is impaired. *See also* "run-off stitching". Improper placing of stitching.
- Stones:** Opaque inclusions in a transparent or translucent article.
- Stops:**
Calender.—Mark caused by pausing or stopping calender operation. *See* "calen-der, mark".
Grainer.—Mark caused by temporary halt in the operation of an embossing roller, wherein the design is embossed more deeply.
Lacquer.—Excessive penetration of base film by lacquer solvent, sometimes ex-cessive lacquer, caused by a temporary halt and longer dwell in application.
Lead.—*See* "lead press joint".
Soup.—*See* "lacquer stop".
- Stopover:** In coated fabrics, mark caused by temporary halt in process of coating. *See* "stop".
- Streak Compound:** Line or strip of undis-persed pigment. *See also* "speck".
- Striated Cover:** Drawn or pinched surface lines, generally in a longitudinal direction due to drawing or transfer of irregulari-ties from contact with the curing or form-ing equipment.
- Strike Through:** In coated fabric, rubber compound coating which has penetrated through the fabric.
- String:** Threadlike inhomogeneity in a trans-parent or translucent article. *See also* "cord".

- Stripper Cut or Mark:** In lead press cured hose, longitudinal cuts in surface caused by improper setting of the lead stripping knife.
- Stuck:** In heater or autoclave curing, defect caused by one article striking another before being cured. May also refer to a tear or hole in a molded article caused by material sticking to the mold. *See also* "heater damage" and "bump mark."
- Sub-permanent Set:** Temporary deformation of an article after distortion, as distinguished from permanent set.
- Suck Back:** *See* "backrind".
- Sunburst:** Small surface streaks, lines or voids of a pattern indicated by the name.
- Sweating:** Leaking or oozing of liquid. *See* "bleeding".
- Tackiness:** Adhesive or sticky condition. In cured goods, usually under-or-overcuring, or other defect.
- Tear Drop:** A surface blemish of a pattern indicated by the name.
- Temporary Set:** *See* "sub-permanent set".
- Tendering:** In coated fabrics, weakening by improperly neutralized acid cure, overheating, or other chemical rather than mechanical means.
- Thermal Deterioration:** Impairment of physical properties due to overheating.
- Thick Spot:** Overgage area.
- Thin Spot:** Undergage area. *See also* "weak spot" and "window".
- Thread In Cover:** In golf balls, a thread protruding into or through the cover. May be out-of-round core or cover or a poor thread tieoff.
- Tie Coat, Poor, Missing, Etc.:** Defect in an adhesive layer between surfaces.
- Tight Braid:** *See* "braid stop".
- Tinny:** *See* "boardy".
- Tool Mark:** *See* "release mark". Also mark in mold from tool used in opening mold.
- Torn Tread:** In tires, section of the tread pulled loose, usually by the extraction of tire from the mold.
- Touch:** In latex goods, *see* "abrasion" and "bump, wet".
- Touched:** Partially set-up stock.
- Trapped Air:** *See* "pocket, surface" and "air check".
- Treeing:** In latex goods, uneven buildup in dipping operation. *See also* "branching".
- Trim Cut:** Removal of too much material or a nick, cleft, slit or gash in trimming by cutting operations.
- Tuck-under (Loose, poor or separated):** Delamination in a cover ply as in the chafer strip in tires.
- Tumbling (Excessive or Insufficient):** A process of finishing, by placing articles in a rotating barrel with or without added finishing materials such as wooden pegs or dry ice. Excess tumbling roughens surface, destroys contours, etc. Insufficient tumbling leaves flash, etc. more or less on the article.
- Twist:** Nonsymmetry due to improper molding.
- Undercure:** *See* "cure".
- Undergage:** A dimension less than that desired or specified.
- Undershot (footwear):** In footwear, sole wider at tread surface than at midsole surface. *See also* "runover".
- Underweight:** *See* "light stock".
- Undispersed Material, Compound:** *See* "dispersion, poor".
- Unfilled Stock:** Failure to fill mold to proper depth. *See* "light bead, stock and tread", "fill" and "short".
- Union, Poor:** *See* "adhesion, poor", "ply separation", "lap, short" and "delamination".
- Vacuole:** Small cavity produced when stretched rubber pulls away from coarse fillers.
- Variegation:** *See* "mottle".
- Vent:** *See* "plugged vent" and "air check".
- Void:** Hole.
- Warping:** Dimensional distortion.
- Washoff:** In latex goods, a thin or weak spot, or a void due to improper processing.
- Water Mark:** Surface blemish from steam condensation in open steam cure.

Wavy Plies: Askew or nonparallel plies.

Weak Spot: Usually an area where material is missing or undergage. See also "slip".

Webbing: Formation of film between contacting or nearby parts in latex dipping process. May cause a "snapback".

Weld Mark: More particularly denotes a fissure where two dissimilar components should be joined. See also "knit mark".

Well: Surface depression deeper than "dished" or larger than "pit". See also "weld mark".

Whitening: Blooming or chalking to the extent that surface appears white or milky.

Wild Blow: In cellular rubber, large, uneven cells or voids.

Window: In coated fabrics, void in the coating, of a pattern indicated by the name. See also "weak spot".

Wire Defective: In wire-reinforced articles or insulated wire, any flaw such as a snag, break, or misplacement.

Wire, Looped: In wire-reinforced articles, a doubling or folding back of a wire strand.

Wire Throw-out: In wire-reinforced articles, a broken end of reinforcement protruding through the surface.

Worm-tracks: A series of connected surface indentations of a pattern indicated by the name.

Wrap Defective: In goods cured by fabric wrapping, over or undergage, surface irregularities, protrusions, wrinkles or creases due to improper wrapping.

Wrapper Mark: An impression in the surface caused by the material used to wrap the product during vulcanization. See "fabric mark".

Wrinkle: Crease, ridge, furrow, or fold on the surface.

Yellowing: Strictly, the development or increase in saturation of a yellow hue. Loosely, darkening of light-colored or translucent materials, or articles.

Military Interest:

Army - CEMSigT
Navy - AMcMdOrSY
Air Force

(Note: These definitions are the same as in MIL-STD-177).