



US 20140235712A1

(19) **United States**(12) **Patent Application Publication**
Asmus et al.(10) **Pub. No.: US 2014/0235712 A1**(43) **Pub. Date: Aug. 21, 2014**(54) **CONFORMABLE COATING AND
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§ 371 (c)(1),

(2), (4) Date: **Mar. 26, 2014****Related U.S. Application Data**(60) Provisional application No. 61/541,426, filed on Sep.
30, 2011, provisional application No. 61/673,587,
filed on Jul. 19, 2012.**Publication Classification**(51) **Int. Cl.**
A61K 9/70 (2006.01)
A61K 31/275 (2006.01)
(52) **U.S. Cl.**
CPC **A61K 9/7007** (2013.01); **A61K 31/275**
(2013.01)
USPC **514/526**; 602/52(57) **ABSTRACT**

The disclosed conformable coating provides a highly durable and resilient film useful for protecting and repairing surfaces such as skin and mucous membranes. A conformable coating composition comprises an elastomer, a volatile liquid, wherein the volatile liquid is at least 40% wt. of the total composition and the composition has a viscosity less than 1,000 cps. Disclosed is a conformable film that comprises an elastomer on a substrate, wherein the coating weight is from 1 to 30 mg/in², and wherein the film has less than 75% failure at 100% elongation.

CONFORMABLE COATING AND COMPOSITION

FIELD

[0001] The present disclosure relates to a conformable coating composition that comprises an elastomer and a volatile liquid. The present disclosure relates to a conformable coating comprising an elastomer.

BACKGROUND

[0002] Barrier products are used to protect the skin of patients who have incontinence, skin occlusion, frequent washes, ostomys, especially ileostomy and colostomies. The presence of high moisture and corrosive enzymes from body fluids can lead to devastating breakdown of the skin, which can then lead to fungal infection, denuding, and erosion of the skin.

[0003] Commonly used products for protecting skin are occlusive barrier pastes. These barrier pastes are messy to apply and clean up. Also, the pastes interfere with the securement of ostomy devices.

[0004] Liquid, film-forming products have also been developed to be applied and to protect skin, such as disclosed in U.S. Pat. Nos. 5,103,812 and 4,987,893. To increase the durability liquid, film forming products, cyanoacrylates have been used such as disclosed in U.S. Pat. Nos. 6,183,593 and 6,143,805. Many of the thin, film-forming coating are brittle and do not flex well on skin.

SUMMARY

[0005] The disclosed conformable coating provides a highly durable and resilient film useful for protecting and repairing surfaces such as skin and mucous membranes. The conformable coating composition comprises an elastomer and a volatile liquid. A coating formed from the conformable coating composition comprises an elastomer.

[0006] In one embodiment, the conformable coating composition comprises an elastomer, a volatile liquid. The volatile liquid is at least 40% wt. of the total composition. The composition has a viscosity less than 1,000 cps. In one embodiment, the composition further comprises a hemostatic agent, such as a polymerizable cyanoacrylate monomer. In one embodiment, the volatile liquid is selected from the group consisting of volatile linear and cyclic siloxanes, volatile polydimethylsiloxanes, isooctane, octane, and combinations thereof. In one embodiment, at least 60% wt. of the total composition is the volatile liquid. In one embodiment the elastomer is a rubber or a thermoplastic elastomer. In one embodiment the elastomer has a molecular weight from 1,400 to 1,000,000. In one embodiment, the elastomer is chemically modified with a low surface energy material. In one embodiment, the composition comprises at least 1% wt. elastomer. In one embodiment, the composition further comprises an anti-blocking agent. In one embodiment, the viscosity is less than 100 cps.

[0007] In one embodiment the conformable film that comprises an elastomer on a substrate, wherein the coating weight is from 1 to 30 mg/in², and wherein the film has less than 75% failure at 100% elongation. In one embodiment, the film has a thickness of less than 1 mm. In one embodiment, the film fractures less than 75% at 200% elongation. In one embodiment, the film has an elongation of at least 50%. In one embodiment, the film has low tack, drag, and blocking.

DETAILED DESCRIPTION

[0008] An elastomer when contained in a volatile, non-reactive liquid provides for a fast drying, adherent, non-stinging and non-irritating liquid adhesive coating that is resilient and flexible. Additionally, although inclusion of an elastomer into the composition can increase the surface tack of the coating, it was surprisingly found that the coatings could be designed to have a relatively low coefficient of friction, or drag.

[0009] The coating composition, comprised of a volatile solvent and elastomer when formed as a coating are useful for protecting or treating skin, nails, tissues, organs and mucous membranes, e.g. bleeding injuries, surgical sites, skin ulcers, cuts, abrasions, incisions, cold sores, blisters, rashes, abraded gums and other oral surfaces, hemorrhoids and abraded body areas, and other mucosal membrane incisions and wounds. The coatings may also be used as surgical glues. A coating formed from the conformable coating composition comprises a solvent borne or dispersion of an elastomer.

[0010] Depending on the particular requirements of the user, the compositions can be applied by known means, such as with a spray, pump, swab, rod, sterile brush or medicine dropper that may be single use or multi use items.

[0011] The elastomers that may be used in the conformable coating composition include natural or synthetic rubber and thermoplastic elastomers. Suitable rubbers include, but are not limited to, low to high molecular weight versions of the following: polyisobutylenes, polyisoprenes, butyl rubber, halogenated butyl rubbers, dienes, styrene copolymers, acrylonitrile copolymers, and copolymers or mixtures thereof, which are soluble or highly swollen in the volatile liquid. In one embodiment, the molecular weight of the primary elastomer is from 1,400 to 1,000,000, in one embodiment 10,000 to 1,000,000, in one embodiment 25,000 to 600,000, and in one embodiment 50,000 to 200,000. In one embodiment a lower molecular weight (1 to 60,000) elastomer may be blended into the elastomer system.

[0012] Although prior systems have included rubber components, these prior systems included rubbers solvated by lower molecular weight rubber oligomers, such as disclosed in U.S. Pat. No. 5,369,130. These compositions are pastes with poor durability that are easily rubbed or wiped off the skin. The disclosed conformable coating composition comprises a solution with elastomer solids of at least 1% wt. of the coating composition. In one embodiment, the conformable coating composition comprises a solution with elastomer solids of at least 5% wt. of the coating composition. The addition of elastomers, and rubbers in particular, have been found to enable the conformable coating to survive high elongation without fracturing, thus preserving the barrier performance of the coating while having excellent adhesion and durability to the substrate, typically skin.

[0013] Inclusion of elastomers in the conformable coating composition can demonstrate blocking behavior. The coating on the surface will not feel tacky but when two of the coated surfaces come in contact with one another, the coated surfaces show an affinity to each other and will adhere. Further, the elastomer components can also increase the frictional forces, or drag, between the conformable coating and an external surface, such as bedding or clothing. In one embodiment, the composition further comprises an anti-blocking agent. An anti-blocking agent may be a waxy material, such as cetyl palmitate or polyvinyl stearyl ether, or it may be an aromatic high Tg resin such as polystyrene or a C9 aromatic resin of a

methyated derivative of styrene, or copolymers which may be included in the conformable coating composition. Surprisingly, these materials provided clear cured films which have superior wear performance. Other waxy materials such as fatty alcohol, fatty alcohol esters and ethers as well as waxy polymers could also be used to reduce blocking.

[0014] In another embodiment, chemically modifying the elastomer with a low surface energy component has been found to reduce the blocking behavior and reduce the drag forces. Simply including anti-blocking agents into the composition did reduce the final tack of the film. However, the anti-blocking agents negatively impacted the overall elongation properties of the film. The chemically modified elastomer showed both a reduction in tack of the film, reduction in blocking behavior, reduction in drag, while still providing the elongation properties to the film.

[0015] Specifically, silicone, fluorinated oligomers, and hydrocarbon based oligomeric material can be used to modify the elastomer. The modification can be accomplished by grafting or hydrosilylation. In one embodiment, dimethicone is used to modify the rubber and specifically is used to modify an unsaturated rubber.

[0016] The molecular weight of the low surface energy portion impacts the ability of the low surface energy portion to have an effect on drag. For example, a very low molecular weight of a dimethicone had little effect on reducing drag. Too high of a molecular weight of the low surface energy side chain can cause solubility issues within the system. It is believed that either the modified elastomer is poorly soluble in the solvent or the modified elastomer is not miscible with other elastomers in solution. In one embodiment, the side-chain of the low surface energy portion is between 500 and 10,000 molecular weight.

[0017] The elastomer can have one or more side-chains of the low surface energy portion. Too many side-chains of the low surface energy portion can negatively impact the barrier performance of the resulting film. In one embodiment, if the elastomer is a saturated rubber, the amount of dimethicone should not exceed much above 60%. In one embodiment, unsaturated rubbers are able to withstand much higher levels of side chain modification, specifically with dimethicone, approaching 99% since the abundant unsaturating can ultimately be used for the grafting reaction and/or copolymerized into the other components of the composition. Copolymerization of the coating can be achieved by the incorporation of free radical initiators which are triggered by heat, air, UV light and the like which can generate radicals and enable crosslinking of the coating on skin as it dries or after it has dried.

[0018] In one embodiment, a rubber is the elastomer to which a low surface energy component is included. The saturated or unsaturated rubbers may be modified. However, unsaturated rubbers perform particularly well. Examples of saturated rubbers are styrene-ethylene/butylene-styrene copolymer, styrene ethylene propylene styrene block copolymer, polyisobutylene, ethylene-propylene, ethylene-butene, and ethylene-octene. Examples of unsaturated rubbers are polydienes, polyisoprene, natural rubber, styrene-butadiene, styrene-isoprene, butyl rubber, acrylonitrile-butadiene, halogenated rubber such as polychloroprene, EPDM rubber, and polybutadiene as well as copolymers of these rubber with polyisobutylene.

[0019] Selection of the elastomer is guided by several properties which are sometimes antagonistic to one another. The

properties are adhesion to skin, elongation, barrier properties, hardness, toughness, tackiness, draggy feel and blocking. Generally softer and lower molecular weight elastomers, and rubbers in particular, or blends of higher molecular weight with lower molecular elastomers (1-60,000 molecular weight) provide optimal adhesion to skin. However, these materials tend to all have the highest blocking, highest drag and softest feel on skin. In order to reduce the surface drag and blocking, increasing the hardness of the elastomer offsets these problems. There are several approaches to increasing the hardness, if the elastomer contains a crystallizing polymer increasing its volume fraction will help increase hardness. In the case of polystyrene copolymers, increasing the styrene phase as a percentage of end block segment or adding the styrene phase to the midblock is also effective for increasing hardness. Addition of high Tg modifying resins is also effective at increasing hardness. Reasonable levels of the modifying resins range from 1 to 150% wt. of the elastomer content of the coating. More preferred, the range of modifying resin is 20 to 100% wt. of the elastomer content. In one embodiment, these increases in hardness do not come at a loss of elongation and adhesion to skin. The effectiveness of these modifiers can be assessed using the Elongation test method disclosed at 100 and 200% elongation. It is desired that the tested films will have less than 75% failure, preferably less than 50% failure, more preferably less than 25% failure, and of course ideally no failure.

[0020] We have unexpectedly found increasing the styrene content of SEBS rubbers from 12% to 18% dramatically improves blocking resistance. In one embodiment, the range of the styrene content of the styrene copolymer elastomer is from 0.1% to 65% wt., in one embodiment from 10% to 55% wt., and in one embodiment 18 to 45% wt. Increasing the styrene content of these copolymers reduces the solubility of the systems in alkane solvents such as isooctane, however cyclic solvents like cyclohexane enable solubility of very high styrene contents exceeding 40%.

[0021] The molecular weight of the polymer as well as its crystallinity and copolymer content influences the viscosity of the composition. Ideally the viscosity of the composition is less than 1,000 cps, and preferably below 100 cps. Targeting a low viscosity and yet maintaining as high a coating solids as possible is desired for delivering an adequate film thickness on skin by a foam pad or swab applicator. Preferred thermoplastic elastomers are at the lower range of the available molecular weight range. Selection of preferred candidates is made by solvating the elastomer in the desired solvent and determining the maximum concentration before the viscosity exceeds the desired target. In one embodiment, the coating composition has viscosity of 1,000 cps and less at solids levels above 10%.

[0022] It is desired that the amount of solution applied to the substrate, such as skin, be in the range of 10 to 100 mg/square inch. Based on solids contents ranging from 10 to 30% the likely coating weight of the dried film will range from 1 to 30 mg/square inch.

[0023] The elastomer is incorporated into a solvent system comprising non-stinging, non-irritating, volatile, non-reactive liquids. The non-stinging, non-irritating solvent system can comprise volatile liquid siloxanes, such as hexamethyldisiloxane (HMDS), octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, octamethyltrisiloxanes and the like. Other volatile solvents, including volatile organosilicones, such as caprylyl methicone, ethyl trisiloxane, and the like;

(C6 to C10) alkanes, such as isooctane, octane, nonane and decane (and their structural isomers, including cyclic isomers such as cyclohexane, methylcyclohexane and the like; acetates such as methyl and ethyl acetate, propylene glycol diacetate, volatile ketones such as acetone and methyl ethyl ketone, volatile ethers, glycol ethers and cellosolve ethers such as diethyl ether, ethyl propyl ether, dipropyl ether and dipropylene glycol dimethyl ether and the like as well as blends of the above. Volatile fluorocarbons, such as pentafluoropropane, perfluoroheptane, perfluoromethylcyclohexane and the like; or a volatile gas, such as carbon dioxide, can also be employed, each with varying degrees of user discomfort. In one embodiment, the non-stinging, non-irritating, volatile non-reactive liquid is present from about 40% up to 99.9%, in another embodiment, 65% up to 99%, in another embodiment 75% to 90%, by weight of the total conformable coating composition.

[0024] Overall, in one embodiment, the total solids content of the conformable coating composition is at least 20% wt., and in one embodiment is at least 30% wt., and in one embodiment is less than 50% wt. of the total conformable coating composition.

[0025] In one embodiment of the present disclosure, the volatile liquid portion evaporates so that the dried film forms in less than 2 minutes. In one embodiment, the dried film forms in less than 90 seconds.

[0026] In a published article titled, "The Extensibility in Human Skin: Variation According to Age and Site", British Journal of Plastic Surgery (1991), 44, 418-422, skin extensibility depended on the body site, age but in general ranged from 10% to over 60%. The desired range of elongation for the conformable coating should be at least 10%, preferably greater than 50% and most preferably greater than 100%.

[0027] Use of elastomers in the conformable coating composition significantly increases the elongation capabilities of the coating. Therefore, the coating can stretch and recover while maintaining a continuous coating and limited cracks or breaks in the coating. In one embodiment the coating has an elongation of greater than 50%. In one embodiment, the coating has a percent fracture less than 75% when subject to 100% elongation. In one embodiment, the coating has a percent fracture is less than 75% when subject to 200% elongation. The disclosed coating is a significantly more durable and flexible barrier film when applied on such flexible surfaces such as skin.

[0028] Other substances may be added to the liquid material or formulation for additional plasticization, tackifiers for improved adhesion, or rheology control, and the like, with the proviso that they do not induce spontaneous polymerization of the cyanoacrylate monomer. In one embodiment, a hemostatic agent may be included in the composition. In one embodiment, the hemostatic agent is cyanoacrylate. Other examples include hemostatic agents include microfibrillar collagen, chitosan, bone wax, ostene, oxidized cellulose and thrombin.

[0029] Cyanoacrylate monomers that may be used include readily polymerizable alpha-cyanoacrylates, including alkyl cyanoacrylates, aryl cyanoacrylates, alkoxyalkyl cyanoacrylates, such as butyl cyanoacrylate and n-butyl cyanoacrylate in particular, octyl cyanoacrylate and 2-octyl cyanoacrylate in particular, ethyl cyanoacrylate, methyl cyanoacrylate, n-dodecyl cyanoacrylate, phenyl 2-cyanoacrylate, methoxyethyl 2-cyanoacrylate, and the like. The composition may be composed of one or more polymerizable cyanoacrylate

monomers. In one embodiment, the cyanoacrylate monomer is present from about 0.1% to about 99.9%, in another embodiment 0.1% to about 65%, in another embodiment, 0.1% to about 55%, by weight of the nonvolatile portion of the conformable coating composition. In one embodiment, the cyanoacrylate is present in at least 5%, by weight, of the nonvolatile portion of the composition, so that the system demonstrates good hemostatic and lymphostatic performance

[0030] A broad range of plasticizers and tackifiers can be useful, including dibutylphthalate, acetyl tributyl citrate, sucrose acetate isobutyrate, sucrose benzoate, acetyltriethyl citrate, benzyl-(2-ethylhexyl) adipate, di-butyl adipate, hydrogenated polyisobutylene, mineral oil, decamethylcyclopentasiloxane, octamethylcyclotetrasiloxane, poly(methylphenylsiloxane), butyl glycolate and others. Suitable plasticizers include polymeric plasticizers, such as poly(ethylene glycol) (PEG) esters and capped PEG esters or ethers, polyester glutarates and polyester adipates. Other compositions are exemplified by U.S. Pat. Nos. 5,259,835 and 5,328,687; 5,981,621; 6,143,352; 6,565,840; 6,010,714; 6,217,603; and 5,928,611, all incorporated by reference herein in their entirety.

[0031] Typical rheology additives that may be added to the liquid material or formulation are fumed silica, bentonite and other clay derivatives, and the like. Fillers can also be useful in modifying the slip, hardness and blocking performance of the coating. Large particles such as glass beads can be utilized to reduce the blocking performance of the coating.

[0032] The composition may optionally also include thickeners, although the rubbers elastomers typically impart significant thickening to the system and hence do not require additional thickening. The compositions may also include pH modifiers or buffers to reduce the irritancy of urine and feces.

[0033] To improve the cohesive strength of adhesives formed from the compositions of this invention, difunctional monomeric crosslinking agents in concentration of less than 2 wt % of the composition may be added. Such crosslinking agents are known such as in U.S. Pat. No. 3,940,362.

[0034] The compositions may further contain fibrous reinforcement and colorants such as dyes, pigments, and pigment dyes. Examples of suitable fibrous reinforcement include PGA microfibrils, collagen microfibrils, and others as described in U.S. Pat. No. 6,183,593, the disclosure of which is incorporated by reference herein in its entirety. Examples of suitable colorants as described in U.S. Pat. No. 5,981,621 include 1-hydroxy-4[4-methylphenylamino]-9,10-anthracenedione (FD&C violet No. 2); disodium salt of 6-hydroxy-5-[(4-sulfophenyl)oxo]-2-naphthalenesulfonic acid (FD&C Yellow No. 6); 9-(o-carboxyphenyl)-6-hydroxy-2,4,5,7-tetraiodo-3H-xanthen-3-one, disodium salt, monohydrate (FD&C Red No. 3); and the like.

[0035] The use of florescent dyes and pigments are also beneficial by enabling the coating to be viewed under blacklight. The coating would be clear and transparent under normal lighting so the site can be easily viewed and inspected for changes in the skin. As a means of ensuring the coating is intact and covering the desired area, the site can be inspected by the use of a backlight wand or flashlight which reveals the coating by its florescence. A particularly useful hydrocarbon soluble fluorescing dye is 2,5-bis(5-tert-butyl-2-benzoxazolyl) 1 thiophene.

[0036] Although specific embodiments have been shown and described herein, it is understood that these embodiments

are merely illustrative of the many possible specific arrangements that can be devised in application of the principles of the invention. Numerous and varied other arrangements can be devised in accordance with these principles by those of ordinary skill in the art without departing from the spirit and scope of the invention. Thus, the scope of the present invention should not be limited to the structures described in this application, but only by the structures described by the language of the claims and the equivalents of those structures.

EXAMPLES

[0037] Objects and advantages of this invention are further illustrated by the following examples, but the particular materials and amounts thereof recited in these examples, as well as other conditions and details, should not be construed to unduly limit this invention.

Materials

[0038] Materials utilized for the examples are shown in Table 1.

TABLE 1

Materials List		
Compound	Source	Description
Kraton™ D-1117	Kraton™ Polymers, Houston, TX	Triblock copolymer based on styrene and isoprene
Kraton™ G-1645	Kraton™ Polymers, Houston, TX	Triblock copolymer based on styrene and ethylene/butylene.
Kraton™ G-1643	Kraton™ Polymers, Houston, TX	Triblock copolymer based on styrene and ethylene/butylene with a polystyrene content of 20%
Kraton™ D-1113	Kraton™ Polymers, Houston, TX	Triblock copolymer based on styrene and isoprene
Cyclohexane	EMD Chemicals, Gibbstown, NJ	Cyclohexane
Kraton™ G-1657	Kraton™ Polymers, Houston, TX	Styrene, ethylene/butylenes triblock copolymer
Kraton™ MD-6951	Kraton™ Polymers, Houston, TX	Styrene, ethylene/butylenes triblock copolymer, 34% styrene content
Kraton™ G-2806	Kraton™ Polymers, Houston, TX	Styrene, ethylene/butylenes triblock copolymer
Kraton™ G-1650	Kraton™ Polymers, Houston, TX	Triblock copolymer based on styrene and ethylene/butylene with a polystyrene content of 30%
Kraton™ G-1642	Kraton™ Polymers, Houston, TX	Copolymer based on styrene and ethylene/propylene with a polystyrene content of 21%
Sibstar™ 073T	Kaneka Corporation, Pasadena, TX	Thermoplastic Elastomer
Quintac™ SL-167	Zeon Chemicals L.P., Louisville, KY	SIS Block Copolymers
Quintac™ SL-169	Zeon Chemicals L.P., Louisville, KY	SIS Block Copolymers
Quintac™ SL-159	Zeon Chemicals L.P., Louisville, KY	SIS Block Copolymers

Test Methods

Elongation

[0039] Several drops of each formulation were spread across a 2.54 cmx5.08 cm CHG gel pad (for example, 3M Tegaderm™ CHG Dressing, catalogue # 1657, 3M Company, St. Paul, Minn.). The formulation was spread to a thin film and was allowed to dry (cure) for at least 15 minutes at room temperature. The CHG gel pads were then stretched to 100% or 200% of their initial length and placed on a flat surface so that they remained in their stretched position. At least 5 drops of common bleach were placed on top of the coated gel. If the coating had fractured, the NaOCl in the bleach reacted with

the CHG in the gel pad to form a brown color. After application of the bleach, the cured formulations were visually assessed for amount of fracture within 15 min and the amount of brown coloration within each drop is recorded. The reported % Failure is an average of 5 drops.

Drag

[0040] Drag is a sensory evaluation conducted by lightly rubbing the dried coatings with a finger. The coatings were rated from 1 (low) to 5 (high).

Tack

[0041] Tack is a sensory evaluation conducted by lightly touching the dried coatings on the gel with a finger. The coatings were rated from 1 (no tack) to 5 (tacky like a pressure sensitive adhesive).

Blocking

[0042] Blocking is the tendency of a material to adhere to itself. The dried coatings may not feel tacky but when two

coated surfaces are placed in contact and the coatings show an affinity to each other and adhere, this property is called blocking. The test is performed by allowing the coating to dry for 1 hour on the CHG gel pad. The gel pad is then folded in half so the coating touches itself. Light finger pressure is applied for 10 seconds. Once pressure is released if the gel surfaces separate without adhering the coating is rated 1, if the surfaces stick together strongly its rated a 5.

EXAMPLES

E-1 Through E-13

[0043] Components were combined in a sealed glass vial and heated to 65° C. with mixing until dissolved (24-48

hours). The solution was cooled to room temperature prior to testing.

Results

[0044] Several elastomeric rubbers, covering several classes of styrene copolymer and a range of styrene levels were formulated in cyclohexane. Formulations and test results of the cured coatings are shown in Table 2. Highly elastic barrier films were obtained.

TABLE 2

Formulations and Test Results								
Polymer	Polymer (%)	Cyclohexane (%)	Tack	Drag	Blocking	Failure (%)		
						100%	200%	
						Elongation	Elongation	
E-1	Sibstar 073T	12	88	3	4	5	0	0
E-2	Quintac SL-167	12	88	2	4	3	0	0
E-3	Quintac SL-169	12	88	1	3	2	0	0
E-4	Quintac SL-159	12	88	1	3	1.5	8	0
E-5	Kraton MD-6951	12	88	3	4	5	0	0
E-6	Kraton G-1645	12	88	3	4	4	0	0
E-7	Kraton G-1643	12	88	3	4	4	0	0
E-8	Kraton D-1113	12	88	4	5	5	0.4	1
E-9	Kraton D-1117	12	88	4	5	5	0	0
E-10	Kraton G-2806	12	88	3	4	4	0.4	0
E-11	Kraton G-1657	12	88	1.5	4	3	0	0
E-12	Kraton G-1650	12	88	1	3	2	6	0
E-13	Kraton G-1642	12	88	2	4	5	0	0

1-37. (canceled)

38. A conformable coating composition comprising:

an elastomer;

a volatile liquid;

wherein the volatile liquid is at least 40% wt. of the total composition;

wherein the composition has a viscosity less than 1,000 cps.

39. The composition of claim 38, further comprising a hemostatic agent.

40. The composition of claim 39, wherein the hemostatic agent is a polymerizable cyanoacrylate monomer.

41. The composition of claim 39, wherein the composition contains at least 5% of a hemostatic agent as polymerizable cyanoacrylate monomer.

42. The composition of claim 38, wherein the volatile liquid is selected from the group consisting of volatile linear and cyclic siloxanes, volatile polydimethylsiloxanes, isooctane, octane, and combinations thereof.

43. The composition of claim 38, comprising at least 60% wt. of the total composition is the volatile liquid.

44. The composition of claim 38, wherein the elastomer is a rubber or a thermoplastic elastomer.

45. The composition of claim 44, wherein the rubber is selected from the group consisting polyisobutylenes, polyisoprenes, butyl rubber, halogenated butyl rubbers, dienes, sty-

rene copolymers, acrylonitrile copolymers, and copolymers or mixtures thereof, which are soluble or highly swollen in the volatile liquid.

46. The composition of claim 38, wherein the elastomer has a molecular weight from 40,000 to 1,000,000.

47. The composition of claim 38, wherein the elastomer is chemically modified with a low surface energy material.

48. The composition of claim 47, wherein the low surface energy material is silicone, fluorinated oligomers, or hydrocarbon based oligomeric material.

49. The composition of claim 38, comprising at least 1% wt. elastomer.

50. The composition of claim 38, further comprising an anti-blocking agent.

51. The composition of claim 38, wherein the viscosity is less than 1,000 cps at elastomer content greater than 10% wt.

52. A conformable film comprising an elastomer on a substrate, wherein the coating weight is from 1 to 30 mg/in², and wherein the film has less than 75% failure at 100% elongation.

53. The conformable film of claim 52, wherein the film has a thickness of less than 1 mm.

54. The conformable film of claim 52, wherein the film fractures less than 75% at 200% elongation.

55. The conformable film of claim 52, wherein the film has an elongation of at least 50%.

56. The conformable film of claim 52, wherein the elastomer is a rubber or a thermoplastic elastomer.

57. The composition of claim 56, wherein the rubber is selected from the group consisting polyisobutylenes, polyisoprenes, butyl rubber, halogenated butyl rubbers, dienes, styrene copolymers, acrylonitrile copolymers, and copolymers or mixtures thereof, which are soluble or highly swollen in the volatile liquid.