

Glass Peanut Brittle is a thin, translucent variation of traditional peanut brittle. I call this "glass brittle" because the peanuts are suspended in a beautiful, almost-clear brittle that has the appearance of glass.

Brittle bone disease is a disorder that results in fragile bones that break easily. Most cases are mild, resulting in few bone fractures. However, the severe forms of the disease can cause: Approximately one person in 20, will develop brittle bone disease. It occurs equally among males and females and among ethnic groups. What Causes Brittle Bone Disease? Brittle bone disease is caused by a defect, or flaw, in the gene that produces type 1 collagen, a protein used to create bone. The defective gene is usually inherited. In some cases, however, a genetic mutation, or change, can cause it. Four different genes are responsible for collagen production. Some or all of these genes can be affected in people with OI. Defective genes can produce eight types of brittle bone disease, labeled as type 1 OI through type 8 OI. The first four types are the most common. The last four are extremely rare, and most are subtypes of type 4 OI. Here are the four main types of OI: In this type of brittle bone disease, your body produces quality collagen but not enough of it. This results in mildly fragile bones. Children with type 1 OI typically have bone fractures due to mild traumas. Such bone fractures are much less common in adults. The teeth may also be affected, resulting in dental cracks and cavities. Type 2 OI can cause bone deformities. If your child is born with type 2 OI, they may have a narrowed chest, broken or misshapen ribs, or underdeveloped lungs. Babies with type 2 OI can die in the womb or shortly after birth. It causes bones to break easily. Bone deformities are common and may get worse as your child gets older. Type 4 OI Type 4 OI is the most variable form of brittle bone disease because its symptoms range from mild to severe. As with type 3 OI, your body produces enough collagen but the quality is poor. Children with type 4 OI are typically born with bowed legs, although the bowing tends to lessen with age. The symptoms of brittle bone disease differ according to the type of the disease. Everyone with brittle bone disease has fragile bones, but the severity varies from person to person. Brittle bone disease has one or more of the following symptoms:

Chapter 2 : Glass - Wikipedia

The Brittle Glass has 61 ratings and 2 reviews. Mary said: Sorrel Kingaby took over her father's business in the 's - unheard of in those days. She i.

Glass wool and Fiber-reinforced plastic Fiberglass also called glass-reinforced-plastic [] [] is a composite material made up of glass fibers also called fiberglass [] or glass friller [] embedded in a plastic resin. These fibers are woven together into a cloth and left to set in a plastic resin. There are three classes of components for oxide glass: The intermediates titanium, aluminium, zirconium, beryllium, magnesium, zinc can act as both network formers and modifiers, according to the glass composition. Their mobility decreases the chemical resistance of the glass, allowing leaching by water and facilitating corrosion. Alkaline earth ions, with their two positive charges and requirement for two non-bridging oxygen ions to compensate for their charge, are much less mobile themselves and also hinder diffusion of other ions, especially the alkalis. The most common commercial glass types contain both alkali and alkaline earth ions usually sodium and calcium , for easier processing and satisfying corrosion resistance. Addition of lead II oxide lowers melting point, lowers viscosity of the melt, and increases refractive index. Lead oxide also facilitates solubility of other metal oxides and is used in colored glass. The viscosity decrease of lead glass melt is very significant roughly times in comparison with soda glass ; this allows easier removal of bubbles and working at lower temperatures, hence its frequent use as an additive in vitreous enamels and glass solders. For more details, see lead glass. Fluorine is highly electronegative and attracts the electrons in the lattice, lowering the polarizability of the material. Such silicon dioxide-fluoride is used in manufacture of integrated circuits as an insulator. High levels of fluorine doping lead to formation of volatile SiF₂O and such glass is then thermally unstable. Stable layers were achieved with dielectric constant down to about 3. Amorphous metal Samples of amorphous metal, with millimeter scale In the past, small batches of amorphous metals with high surface area configurations ribbons, wires, films, etc. This was initially termed "splat cooling" by doctoral student W. Klement at Caltech, who showed that cooling rates on the order of millions of degrees per second is sufficient to impede the formation of crystals, and the metallic atoms become "locked into" a glassy state. Amorphous metal wires have been produced by sputtering molten metal onto a spinning metal disk. More recently a number of alloys have been produced in layers with thickness exceeding 1 millimeter. These are known as bulk metallic glasses BMG. Liquidmetal Technologies sell a number of zirconium-based BMGs. Batches of amorphous steel have also been produced that demonstrate mechanical properties far exceeding those found in conventional steel alloys. This phase is the first phase, or "primary phase", to form in the Al-Fe-Si system during rapid cooling. Experimental evidence indicates that this phase forms by a first-order transition. Transmission electron microscopy TEM images show that the q-glass nucleates from the melt as discrete particles, which grow spherically with a uniform growth rate in all directions. The diffraction pattern shows it to be an isotropic glassy phase. Yet there is a nucleation barrier, which implies an interfacial discontinuity or internal surface between the glass and the melt. In a mixture of three or more ionic species of dissimilar size and shape, crystallization can be so difficult that the liquid can easily be supercooled into a glass. The best-studied example is CaO. Glass electrolytes in the form of Ba-doped Li-glass and Ba-doped Na-glass have been proposed as solutions to problems identified with organic liquid electrolytes used in modern lithium-ion battery cells. Many molecular liquids can be supercooled into a glass; some are excellent glass formers that normally do not crystallize. An example of this is sugar glass. The substance was named amorphous carbonia a-CO₂ and exhibits an atomic structure resembling that of silica. These are useful because the solubility of the compound is greatly increased when it is amorphous compared to the same crystalline composition. Many emerging pharmaceuticals are practically insoluble in their crystalline forms. Glass-ceramic materials share many properties with both non-crystalline glass and crystalline ceramics. They are formed as a glass, and then partially crystallized by heat treatment. For example, the microstructure of whiteware ceramics frequently contains both amorphous and crystalline phases. Crystalline grains are often embedded within a non-crystalline intergranular phase of grain boundaries. When applied to whiteware ceramics, vitreous means

the material has an extremely low permeability to liquids, often but not always water, when determined by a specified test regime. The most commercially important of these have the distinction of being impervious to thermal shock. Thus, glass-ceramics have become extremely useful for countertop cooking. The negative thermal expansion.

Chapter 3 : The Brittle Glass by Norah Loftis

Glass is an amorphous brittle material. It may be shiny in appearance but it not a lustrous metal. The fracture which glass undergoes under tensile stress is also quite grainy in appearance and it shatters under fluctuating loads and shocks.

Glass and Other Ceramics One of the characteristic properties of a substance is its viscosity, which is a measure of its resistance to flow. Motor oils are more viscous than gasoline, for example, and the maple syrup used on pancakes is more viscous than the vegetable oils used in salad dressings. Viscosity depends on any factor that can influence the ease with which molecules slip past each other. Liquids tend to become more viscous as the molecules become larger, or as the intermolecular forces become stronger. They also become more viscous when cooled. Imagine what would happen if you cooled a liquid until it became so viscous that it was rigid and yet it lacked any of the long-range order that characterizes the solids discussed in this chapter. You would have something known as a glass. Glasses have three characteristics that make them more closely resemble "frozen liquids" than crystalline solids. First, and foremost, there is no long-range order. Second, there are numerous empty sites or vacancies. The simplest way to understand the difference between a glass and a crystalline solid is to look at the structure of glassy metals at the atomic scale. By rapidly condensing metal atoms from the gas phase, or by rapidly quenching a molten metal, it is possible to produce glassy metals that have the structure shown in the figure below The structure of a glassy metal on the atomic scale. The amorphous structure of glass makes it brittle. Excessive stress therefore forms a crack that starts at a point where there is a surface flaw. Particles on the surface of the crack become separated. The stress that formed the crack is now borne by particles that have fewer neighbors over which the stress can be distributed. As the crack grows, the intensity of the stress at its tip increases. This allows more bonds to break, and the crack widens until the glass breaks. Thus, if you want to cut a piece of glass, start by scoring the glass with a file to produce a scratch along which it will break when stressed. Glass has been made for at least years, since the Egyptians coated figurines made from sand SiO_2 with sediment from the Nile river, heated these objects until the coating was molten, and then let them cool. Calcium oxide or "lime" CaO and sodium oxide or "soda" Na_2O from the sediment flowed into the sand to form a glass on the surface of the figurines. Sand is still the most common ingredient from which glass is made. Sand consists of an irregular network of silicon atoms held together by Si-O-Si bonds. If the network was perfectly regular, each silicon atom would be surrounded by four oxygen atoms arranged toward the corner of a tetrahedron. Because each oxygen atom in this network is shared by two silicon atoms, the empirical formula of this solid would be SiO_2 and the material would have the structure of quartz. In sand, however, some of the Si-O-Si bridges are broken, in a random fashion. This separates the SiO_2 tetrahedral from each other, which makes the mixture more fluid and therefore more likely to form a glass after it has been melted and then cooled. Al_2O_3 is added to some glasses to increase their durability; MgO is added to slow down the rate at which the glass crystallizes. Replacing Na_2O with B_2O_3 produces a borosilicate glass that expands less on heating. Adding PbO produces lead glasses that are ideally suited for high-quality optical glass. The most common way of preparing a glass is to heat the mixture of sand and modifiers until it melts, and then cool it quickly so that it solidifies to produce a glass. Instead, they occupy randomly arranged lattice sites in which no planes of atoms can be identified. The result is an amorphous literally: Glass-Ceramics An accidental overheating of a glass furnace led to the discovery of materials known as glass-ceramics. When the glass was overheated, small crystals formed in the amorphous material that prevented cracks from propagating through the glass. The first step toward glass-ceramics involves conventional techniques for preparing a glass. Because glass-ceramics are more resistant to thermal shock, cookware made of this material can be transferred directly from a hot stove burner to the refrigerator without breaking. Because they are more crystalline glass-ceramics are also slightly better at conducting heat than conventional glasses. Glass-ceramics are also stronger at high temperatures than glasses. Thus, the glass-ceramic $\text{MgO} - \text{Al}_2\text{O}_3 - \text{SiO}_2$ is used to make electrical insulators that have to operate at high temperatures, such as spark plug insulators. The properties and uses of some glasses and glass-ceramics are

given in the table below.

Chapter 4 : Brittle | Definition of Brittle by Merriam-Webster

A different philosophy is used in composite materials, where brittle glass fibres, for example, are embedded in a ductile matrix such as polyester resin. When strained, cracks are formed at the glass-matrix interface, but so many are formed that much energy is absorbed and the material is thereby toughened.

War Economy Standard books came with this seal: The two heroines perhaps have little in common and I doubt that Sorrel spent quite so much time worrying about her close-ups, but they are both women ahead of their time, occupying nontraditional positions for women, but also having to face the limitations, restrictions, and resentments those positions entail. He has alienated Sorrel with shoddy treatment, due to his resentment of her sex, but she is, in fact, a chip off the old block. Cover of a more recent reprint This novel—“unlike so many of the books I write about here”—is heavy on plot. There is drama, bitterness, adventure, danger, resentment, romance, and crime galore, and Lofts is certainly a gifted storyteller—or else I am a pushover—as I found the novel compulsively readable. The story is told in turn by four main narrators, each of whom sees Sorrel from a different perspective—plus a fifth, who may be more or less Norah Lofts herself and who appears in a short epilogue. Now, I admit that I very often find this strategy annoying. Just as I get accustomed to one narrator, he or she vanishes and I have to familiarize myself with another one. In the wrong hands, the technique can make an entire novel feel as awkward and alienating as those first few pages of even a quite good novel—all explication and scene-setting and introduction of characters without anything to really pull the reader in. And that might be judged a weakness from a higher brow literary perspective, but is a huge strength if the goal is readability and enjoyment. The first section is narrated by Louisa Kingaby Cousin Lou. When I mentioned the book in my book sale post, I quoted the beginning of her section as having made me want to read the book. But I actually cut off the quote too soon: For nearly fifty years I had performed the tasks and carried out the duties which fall to the lot of the unmarried and not-quite-independent member of a large family. I had been present at births, and deathbeds, tended numerous cases of sickness, and been often entrusted with the tactful breaking of bad news. But I do not think I ever had a task less to my liking than that of telling my cousin Josiah that his first-born was a daughter. For the ending of this paragraph introduces, right from the start, the crucial theme of girls being of less value than boys. In fact, Lou goes on soon after to ponder this puzzling valuation: And I thought how strange men were. My father had not welcomed me; yet it was I who stayed with him to the end and nursed him through two apoplectic strokes and closed his eyes at the last. Men were indeed very strange. But although I have always been kept busy my mind has never been so much occupied that I could not notice what went on around me. Sometimes I thought that if I had had more time and more privacy when I was young I could have written a book like Mrs. Radcliffe or Miss Fanny Burney. I described a perfectly ordinary young girl whom circumstances had placed in an unusual position; but as the days followed one another and financial worries became so familiar to me that they no longer could absorb all my attention, I became aware that Sorrel Kingaby was not a perfectly ordinary young girl. She was like a box with which I used to play when I was small. It was square and the sides were painted; and inside it there was another square box with other pictures on the sides; and within that there was another, and another, until the last cube was too small to have a lid and was like a dice, solid, but with infinitesimal pictures on its tiny sides. And each box, although only part of the whole plaything, was complete and perfect in itself. All of the narrations are equally compelling—even the last, for whose narrator few readers will find much sympathy. It was the thing that I called, in my mind, my darkness; it was, I think, akin to the evil spirit that troubled Saul, the king of Israel; but in my case sweet music, especially harp music would only have aggravated the condition. And this bleak vision is at the heart of *The Brittle Glass*, as the short epilogue spells out. After all, how much nearer, even with much documentary evidence, can we come to understanding anyone of the myriad dead who have gone to their graves, carrying their real secrets, of motive and essence and personality, into the silence with them? Several of her novels have been reprinted in the last few years and remain in print, and more are available in ebook format. But *The Brittle Glass* is not among them. How could this be? Are there any recommendations as to what my next Lofts experience should be?

DOWNLOAD PDF THE BRITTLE GLASS

Chapter 5 : FURROWED MIDDLEBROW: NORAH LOFTS, The Brittle Glass ()

This is the fictional story of Sorrel Kingaby, the oldest daughter of Josiah who wanted a son. Told in five parts, The first is told by her aunt who was there at her birth and through her childhood until Sorrel inherits her father estate.

Chapter 6 : Glass and Brittle Plastics | Food Safety | BAKERpedia

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Chapter 7 : Brittleness - Wikipedia

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Chapter 8 : Why is glass brittle? | Yahoo Answers

And this bleak vision is at the heart of The Brittle Glass, as the short epilogue spells out. There, a fifth narrator, in the year , comes across Sorrel's grave, and then meets a schoolmistress who tells her a bit more about Sorrel and mentions an old man in town who might know more.

Chapter 9 : Fans of Norah Lofts - The Brittle Glass: The Brittle Glass Discussion Showing of 72

This is the official audio for the song 'Brittle Glass' by Lillye - an alternative metal music group from Sydney, Australia. This song is taken from their debut full-length album 'Evolve' which.