



Balloonews

www.balloonartists.com.au

Official Newsletter of the Balloon Artists and Suppliers Association of Australasia Ltd
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Natural Latex balloons lots of colours, but they are all "green"

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Natural rubber, also called India Rubber or Caoutchouc, is a mixture of organic compounds and water. It is derived from latex, a milky colloid produced by some plants.

The commercial source of natural rubber latex is the Para rubber tree.

The Para rubber tree initially grew in South America.

In 1770, in England, a Joseph Priestly noted that a piece of that material was extremely good for rubbing off pencil marks on paper, to which he gave it the name *rubber*.

Rubber trees are tapped every couple of days, that is, an incision is made into the bark of the tree and the sticky, milk coloured latex sap is collected and refined into a usable rubber. The process involves attaching a small bowl to the tree. Then a small diagonal cut is made on one side of the tree to just above the bowl.

The farmed latex drips down the cut and is collected in the bowl. After a few hours the latex is collected and eventually poured into tubs and delivered to a factory where the latex is centrifuged and concentrated and is then ready to manufacture balloons

These vast forests of rubber trees around the world consume carbon dioxide (CO₂) which helps counter the effects of global warming.

- Latex Balloons are made from a natural product
- Rubber tree farming creates employment for people and a valuable export commodity in many third world countries
- The vast tree plantations take in CO₂, and capture the carbon to counter global warming
- Thousands of people around the world derive their living from either, the production, wholesaling, retailing of, or decorating or entertaining using balloons.



Editorial

Welcome to this special edition of Balloonews.

This issue is a little different to our normal publication and has been brought about by the members of our association needing to redress the balance with the emotive environmental issues we have occasionally been facing. We have divided this issue into two parts; The Environmental Section and a Member's Supplement. Members are encouraged to send out and use the Environmental Section at every opportunity to support our (your) industry

BASA was established over 20 years ago and has grown to become the Australian balloon industries recognised leading self regulating body. Over the past several years our industry has occasionally suffered attack by individuals with laudable objectives but who we would argue have not considered the very positive and large environmental support and action that our industry provides. These attacks centre on two main issues; either balloon releases becoming litter or balloons (clips and their type of ribbon) causing the death of marine animals.

This edition of Balloonews intention is to show the broader aspects of our industry and to ask everyone to understand them and not to target individual isolated incidents. Our industry in Australia does not engage in large scale balloon releases. Accredited members of our Association are fully aware not to use balloon clips and non bio-degradable ribbon in any balloon release. BASA A requests Governments, Councils, individual groups and people generally around Australia to use only BASA A Accredited Balloon Artists who are aware of their environmental responsibility and who act accordingly.

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Balloons as Litter...The Myth

In recent emails with Sunshine Coast Council particularly, and just generally over the years, with comments by various groups or even individuals that insisted that balloons are litter, BASA A decided to test those beliefs and try to understand the evidence.

Instead of relying on hearsay, BASA A investigated the two prominent authorities on litter in Australia; **Clean Up Australia** and **Keep Australia Beautiful**. The results support our insistence that balloons are not a major or even minor litter problem.

Clean Up Australia

This organisation has produced a Rubbish Report each year since 1991, which is a snapshot of waste collected on Clean Up Australia Day. The Rubbish Report has proven to be an invaluable resource in identifying trends in the types and spread of rubbish throughout Australia.

In 2011 Report, there were 7,479 registered collecting sites. 2,639 or 35% were analysed. The Facts Top Ten Rubbish Items were, 1) cigarette butts 2) glass bottles (alcohol and soft drink) 3) plastic drink bottles PET drink bottles 4) aluminium cans (alcohol and soft drink) 5) plastic bags 6) plastic chip and confectionary bags 7) plastic bottle tops 8) metal bottle tops 9) small paper pieces 10) metal foil confectionary wrappers. No Balloons!

Beach/ coastal sites had the most rubbish items (a staggering 35,988 items) of all sites surveyed with an average of 205 items per site surveyed. Rivers and creeks moved from fifth in 2010 to second most polluted site type with over 90 average items at each site surveyed. Beach coastal sites ranked highest for miscellaneous items, glass and plastic items 48%, 19% and 17% as a percentage of each site types rubbish composition. Note

rubber has its own category, and at beaches/coastal total rubber was 1%.

Rubber, in 2011 rubber was the smallest category of waste at just over 1% which was consistent with 2010 results. The most common significant rubber item found was rubber gloves, which account for 46% of all rubber followed by thongs 25% and tyres 22%.....**Balloons not even listed!** (Miscellaneous items include cigarette butts (92%), clothing, food scraps, ceramics, car parts and batteries).....**No Balloons!**

Keep Australia Beautiful

KAB produces a report each year called the National Litter Index. It is funded by every Australian State or Territory Government. The 2010/ 2011 Report was compiled by McGregor Tan Research in South Australia and is a 177 page in depth analytical report on litter

Summary: The filthy five are Cigarette butts, plastic, paper/cardboard, metal and glass..**No Rubber**. The results here are expressed two ways:- items per 1000m² and by volume per 1000m².

Total sites surveyed were 983 Nationally, including Beach, Car Park, Highway, Industrial, Recreational Park, Residential, Retail and Shopping Centre. Total area surveyed 1,499,791 sq mtrs

The Facts The major categories are further divided into items which are very extensive in detail. The only reference to Rubber appears in Miscellaneous.....Rubber pieces (not tyres) averaged is listed as 0.0001 litres per 1,000sq metres. Miscellaneous includes items such as syringes, ice cream sticks, condoms, disposable nappies, clothing and materials, tyres and pieces.....No Balloons category

“So, in summary, balloons as litter is a myth...it is not supported by the facts”.

The Real Polluting Culprits

Who are the real polluting culprits?

I heard a brief interview with Chris Bowler on ABC radio, who along with his team aboard the schooner "Tara" netted flotsam from the Great Pacific Garbage Patch. He is a micro biologist and stated that the flotsam of plastic is starting to photosynthesize and is leaching its chemicals into the ocean this in turn is absorbed by plankton which in turn is eaten by fish which are then caught and eaten by us. In other words we are slowly poisoning ourselves.



This floating garbage (non biodegradable plastic) is also killing millions of fish and birds, in particular Albatross who eat food along with pieces of plastic and regurgitate this to their chicks thus killing them. (No mention of biodegradable balloons).

Captain Charles Moore of the Algalita Marine Research Foundation first discovered the Great Pacific Patch. Captain Charles Moore on the seas of plastic – u tube is very interesting.

The world's biggest garbage dump – u tube...synthetic sea narrated by Capt. Charles Moore.

A swirling sea of plastic bags, bottles and other debris is growing in the North Pacific, and now another one has been found in the Atlantic.

Thank goodness our industry is based on natural biodegradable latex. Not the man made concoction of plastics and leaching chemicals. Where is the environmental lobby that are so quick to attack our industry?

*“Don't Rubbish our industry
Latex Balloons are
Biodegradable”*

BASA A's Accreditation Program

BASA A has been working over a number of years to bring together industry expertise from around the world and particularly from our experienced local members. BASA A's aim has been to produce training modules and use these modules to be the basis of our Accreditation Program and to allow us to acknowledge members who BASA considers to be proficient to a professional standard in all aspects of our industry

Currently there are two (2) modules, they are

- Module 1- Introduction to Products, Equipment and Standards
- Module 2- Basics of Balloon Decorating Incorporating
 - (a) Elements and Principles of Design
 - (b) Basic Practical Work

Module 1

Covers a diverse range of topics, from background information, to basic technical data.

Importantly, module 1 also has a Code of Conduct in relation to Balloon Releases as BASA A and its members are aware and sensitive to our environmental obligations.

This Code of Conduct is covered on page 15 and has six (6) main points and firmly states

“It is extremely important that everyone adheres to this code in the interests of safeguarding the environment and our industry”.

Currently, additions are being worked through to have our members recognised as

Accredited Balloon Artists.....ABA

This award includes a signed certificate, a BASA ABA badge a special presentation and permission to use ABA after their name. In addition there is currently consideration of adding to Module 1 to include a signed pledge from the BASA member who would agree to be a responsible balloon wholesaler, retailer, decorator or entertainer under the banner of responsible balloon practices

Further, it is BASA A's intention to add further Modules and to eventually bring a Master Balloon Artist award as the pinnacle achievement of the accreditation program in our industry



Sample of BASA A's ABA Badge

Report from a Life Member

The following is reprinted with permission from Gunter Blum, Immediate BASA A Past President, current BASA QLD President and recently awarded Life Membership of BASA A

Members of the Balloon Artists and Suppliers Association are aware and supportive of our environment. We do not allow balloons to be released with any non biodegradable attachment, nor in adverse weather such as rain. Let us put a balloon into context in our environment.

Clean Up Australia campaign launched by Ian Kiernan and in their diagnosis of litter found that in 2011 only 1% of litter was rubber based. So of 10,000's of items of litter only 100 were of rubber origin and of that rubber gloves attributed 46%, thongs 25% tires 22% which leaves 7 % or 7 items which could be a hair band, rubber band, washer, eraser, elastic band, condom or a balloon. (www.cleanup.org.au this site has some invaluable information.)

It takes one day to collect enough latex sap to manufacture 2 balloons, the trees are on plantations of tropical areas of mostly third world countries, which creates employment for thousands of people and a valued export commodity for these countries. A rubber tree's latex is not harvested until it is mature enough usually after 4 years and is not cut down but remains active for its life time, thus also contributing to our carbon capture.

Sea Life

Studies by Kathy Townsend a marine biologist on North Stradbroke Island Research Station has found that the cause of turtle deaths was mainly due to the intake of plastic and of the entanglement in netting. Though it was stated that some latex particles were found in some of the turtles stomach the cause of death could not be attributed solely to a piece of balloon. A piece of latex/balloon would usually pass through the digestive system of a turtle or fish .

Far more turtles and Dugong were found to have been caught up in netting or ghost nets and being fatally injured through boat

propellers as they come to the surface to breath and cannot escape a fast approaching vessel.

* There are numerous articles when connecting to her site including 60 minutes seas of shame.

www.biologist.uq.edu.au/staff/kathy-townsend

These ghost nets are also responsible for the deaths of thousands of fish from Dolphins to Whales and Sharks which find themselves trapped. Turtles and Dugong are also severely injured causing death by boat propeller blades.

Fish and other sea creatures are also dying in their millions due to environmental damage such as pollution from river flow of toxic chemicals and oil spills.

The only turtle that eats jellyfish (ie mistaking balloon fragments for a jellyfish) is the leatherback Turtle found only in northern tropical waters. These Turtles grow to the size of 2 meters.

Funerals

The release of balloons at funerals has become a more common event. Religions other than Christian make sacrificial offerings to their dear departed. This usually takes the form of the departed's personal effects and of food to take in the afterlife. When such offerings such as toys are placed on a grave site it is frowned upon by councils who are the cemetery custodies. In our western Christian Society we simply lower a coffin into the ground .When a cremation takes place the coffin disappears behind a curtain and then all that is left is the deceased ashes. This can have a philological affect upon the grieving family, in particular when the deceased has meet with foul play or a body may not be found or only partially recovered years latter (as with Daniel Morcombe of Queensland).

Report from a Life Member Continued

It has been explained to us many, many times that the release of helium balloons represents the spirit rising to heaven and thus brings comfort to the family, relatives and friends. This is of immense importance to the closure and healing process to those associated. These events are usually organized by the Funeral Directors who see their significance. These balloons are never released with any non biodegradable attachment

Numerous organizations use balloons as a way of creating attention such as the prevention of child abuse which are emphasized through a White Balloon Day awareness campaign.

Over the past years due to some of the environmental concerns, balloon releases have gradually diminished in numbers and quantities from the late 80's and 90's where releases of 10,000 – 20,000 balloons for various sporting finals and public openings of infrastructure were common. In 2012 only 500 were released in September for a football final on the Gold Coast. This reduction is partially due to action taken by BASA members advising clients that although balloons are biodegradable the perceived environmental impact may culminate in adverse publicity for the organizations concerned. The cost of balloon releases has also escalated making them far less attractive. This along with a CASA permit authorization of \$ 180 per release has also discouraged any further activity of balloon releases.

Helium balloons are still used as celebrations on events but are handed out to the public such as the recent opening of the Airport Link Tunnel in Queensland. On these occasions each person receiving a balloon is informed that the balloon must be tethered and not deliberately released.

A recent call for the total ban of helium balloons by a previous Queensland parliamentary member for Ashgrove, has sparked this comment from (the now Minister for Health The right Honorable Lawrence Springborg) as “ the fun police. BASA Qld in conjunction with BASA A is preparing to monitor and recording any releases or balloon hand outs of its members so a clearer picture and data can be obtained for any future evaluation. BASA A is the main industry body in Australasia and provides benchmark and guidelines for the industry.

Perhaps a better solution to saving sea life, waterways and oceans would be to curb untreated waste entering the system and irresponsible fishing as well as ensuring that events requiring balloons are ordered from an accredited member of BASA who conforms to our strict code of conduct.

The Great Helium Debate

The Great Helium Debate – Putting Things into Perspective

A fantastic article posted by NABAS and written by Steve Marsh of The Balloon Experience in Wales about helium, well worth a read, enjoy

Helium Shortage

Ask most people what helium is used for and they will probably say balloons. The reason is simply that balloons are very visual and used in so many celebrations as decorations and as releases for promotion and numerous charity events. However the use of helium in balloons represents only a small fraction of the total use. People are generally not aware that the gas has any other use.

Helium Production

Helium is the second most abundant gas in the universe; the first being hydrogen. Unfortunately it is also the second lightest meaning that it cannot be contained within the earth's atmosphere in any great quantity. This makes it commercially impossible to extract helium by fractionally distilling normal air. It is therefore extracted along with natural gas from wells predominately in areas of the USA and Russia. The crude mix of gases is processed to recover the helium in a liquefied state and this is then purified to give helium of purity in excess of 99%. Helium of this grade is suitable for medical and industrial applications.

Uses of Helium

Helium has a number of key properties which make it a commercially valuable gas:

1. It is inert so it is therefore non-combustible and non-reactive;
2. It is lighter than air so useful for lifting applications;
3. It has a very low boiling point making it suitable for intense cooling;
4. It has a very small molecular size which makes it suitable for leak testing (but this also allows it to leak out of latex balloons).

About 24% of helium is used in cryogenic applications including MRI scanners where it is used to keep the coils of the electromagnets at a low enough temperature to maintain superconductivity and hence produce an intense magnetic field. As it cools the magnets some of the helium evaporates into the atmosphere and is lost.

About 20% is used in the space industry. Being non-reactive, the gas is used to expel the liquid rocket fuel into the combustion chamber. Once again it is lost into the atmosphere and into space.

About 18% is used for welding. Once again the non-reactive property of helium means that it will not combine with the metal and prevents contamination of the weld by oxygen and other components of the air.

The Great Helium Debate Continued

About 16% is used for controlled atmospheres used for example in the electronics industry for growing crystals etc. Approximately 6% is used for leak detection owing to its small molecular size and about 3% for breathing mixtures.

This leaves a very small amount (about 16%) for other uses; about half of which is used for balloons and airships of all type including meteorological experiment and military reconnaissance. A reasonable estimate is that latex "party" balloons and their foil equivalent account for between 5% and 7% of the total helium usage.

So let us put this into perspective. If the entire balloon industry gave up using helium tomorrow, the extra helium would contribute about 1-2% to MRI scanners and a similar amount to the space industry.

A typical MRI scanner uses about 10000 litres of liquid helium. The gas laws dictate that liquid helium at a temperature of -268 degrees Celsius expands by approximately 300 times at room temperature so the equivalent volume of gas would be some 3000,000 litres. This is equivalent to about 105944 cubic feet. A 12 inch latex balloon uses about 0.5 cubic feet so this is equivalent to about 211888 balloons worth of helium. Moreover the process of shutting down an MRI scanner; a process known as quenching results in an extremely rapid (near explosive) expansion of the liquid helium and this must be vented into the atmosphere to prevent contamination of the treatment area. Once again this helium is lost.

The Hadron Collider used to study particle collisions required about 96 tonnes of helium. At room temperature this is equivalent to 537815126 litres or about 38 million balloons (12-inch).

The record-breaking free-fall skydive by Felix Baumgartner was performed on 14 October 2012 from a helium filled balloon required 30 million cubic feet of helium (redbull.co.uk); enough for 60 million 12-inch balloons.

Balloon Gas

It is important to make a distinction between the helium used for balloons and other lifting uses and that used for medical and cryogenic applications. Both originate from the same sources but balloon-gas is unrefined containing about 2% other gases. Both are non-flammable and non-toxic but balloon gas is quite unsuitable for more scientific applications owing to these impurities.

One might wonder why balloon-gas is not purified to the same level of purity as for these other medical and scientific applications. The answer is one of economics. Separation of gases which have different boiling points is referred to as fractional distillation and can be a costly process as can other forms of purification. It is not deemed necessary to separate out such impurities just for the purpose of filling balloons.

The Great Helium Debate Continued

Hence a small amount of air (mostly nitrogen) is permitted although it should be noted that this is not deliberately added to the helium but is a natural constituent of the crude helium.

It is therefore quite possible to make use to helium which contains contaminates as part of its use for the purpose of filling balloons and thus there appears to be a ready market for recycled helium from scientific research and cryogenics. This is preferable to more costly purification to restore the helium to its former A-grade (99.8%) and certainly preferable to venting the 'unwanted' gas into the atmosphere.

Supply Difficulties

It is important to make the distinction between a helium shortage and a difficulty in supply. Back in the 1970s there were difficulties in the UK in supplying electricity to both the domestic and industrial market. However this was not due to a shortage of electricity itself, but rather to an era of troubled industrial relations. Similarly with the supply of helium and natural gas much of the difficult is down to the recession, the culture of reducing the demand for energy and issues of maintenance at one of the major helium processing plants. The result is one of instability in the supply and demand curves with a corresponding hike in prices.

In 2006, two of the 21 privately owned domestic crude helium plants did not produce or extract helium at all, according to the US Geological Survey. In 2007, a new plant in Algeria ramped up production later than expected and at half the expected capacity, a plant in Qatar came online slower than expected, and problems at the ExxonMobil Corp. plant in Shute Creek, Wyo., the world's largest source of commercial helium, left it operating below capacity. These issues have had a serious effect on the supply of helium but curiously have reduced the total amount of helium extracted from the earth.

Conserving Helium

We should all try to conserve helium and the balloon industry is making grade progress in this are through a greater emphasis on air-filled décor and the use of 60/40 helium/air inflators. However we must not be alone in this. It is easy to use emotive language such as 'helium is being squandered' and that it is 'being used at an unprecedented rate'.

Unprecedented simply mean more than before. Well of course things are unprecedented. There are more MRI scanners and more cryogenic applications than there have ever been.

The party industry is both a commercial and a leisure activity and as such is entitled to use resources as with any other industry. The book industry uses paper; the automotive industry uses oil and the entertainment industry uses electricity from fossil fuels all of which are non-renewable. The answer is to use such resources wisely. This is a challenge facing the balloon industry and one which it is happy to take on.

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