



Herbal Bulletproof Jacket

Consolation

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Background

Makarand Kale (45), a manufacturer of sports goods and a sports teacher, has developed a bulletproof material using herbs, which is much lighter when compared to the conventional available materials.

He completed his bachelors in commerce from Sangli and started his own sports club where he trained the youth. His father is a retired army officer. Due to this background, he has always been much interested in defence tools, guns, bombs, etc., and wanted to contribute something new in the field of defence and sports. Such was the dedication of the man to the cause, that he vowed not to marry, as he feared that marriage and subsequent responsibilities would draw his attention away from the work he has always wanted to do.

With a mind full of creative ideas, Makarand is always busy in finding ways to solve common problems. Once he wrote to the Australian Prime minister with his suggestions to control the bush fire in Sydney. The same were appreciated by him and also by Shri Atal Bihari Vajpayee, the then Prime

Minister of India. He has always been doing a lot of work for social cause in his area, which has been appreciated by the people and the Government officials alike.

Genesis

The story of the generation of theof how the idea to develop a bulletproof jacket evolved is as interesting as the product itself. Once, while chewing wheat grains, he felt some sweet taste. He did that several times, each time experiencing the same sweetness. He then took the masticated wheat out, which felt like gum and pasted it on a wall.

After two or three days, he tried to hit it with a hammer. But to his surprise, he was not able to crush the dried paste though the plaster of the wall got damaged a bit. He tried several times but failed to damage the dried paste stuck on the wall.

He observed that the hardness of the paste had increased several times. This gave him the idea to make a bulletproof jacket using plant related products. Thus en began the research to identify the





comes to be less than ten thousand rupees.

The bulletproof jacket is light weight and has good resistance against bullets, apart from having stability against temperature fluctuations. It can be moulded in any shape and size. It has good shock



absorption properties and also provides good resistance to chemicals and abrasive substances.

This bulletproof material can be used to make jackets, body of bulletproof cars, shields of shoulders,

helmet, and fireproof devices.

There are no such herbal products available in the market to make bullet proof jackets. GIAN-West through the L.D. College of engineering, Ahmedabad conducted a test to find the hardness, compression and impact of the jacket. The results were satisfactory. Similarly, tensile strength at break and compressive strength were tested at Central Institute of Plastic Engineering and Technology, Ahmedabad. Based on the results, further testing is being planned at DRDO and talks are on for the same.

