



## **V-Gard® GREEN Helmet Narrative for the “Innovation in Design” Section of a LEED Application**

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V-Gard GREEN is the world's first protective helmet shell produced from renewable resources. Unlike traditional helmets manufactured from high-density polyethylene (HDPE) that are sourced from nonrenewable petrochemicals, the MSA V-Gard GREEN helmet is manufactured using “green” HDPE (GHDPE) sourced from sugarcane ethanol.

For every ton of GHDPE produced, 2.5 tons of carbon dioxide are captured from the atmosphere and the environment. Conversely, one ton of polyethylene sourced from petrochemicals actually emits more than two pounds of carbon dioxide into the atmosphere<sup>1</sup>. Additionally, the production of 200,000 tons of GHDPE represents an annual reduction of CO<sub>2</sub> in the atmosphere of some 920,000 tons. This is equivalent to the CO<sub>2</sub> emitted annually by the energy consumption of 226,000 families<sup>2</sup>.

The V-Gard GREEN Helmet carries a #2 Plastic recycling rating, carries low risk of leaching, and is readily recyclable into many other goods, including detergent bottles, pens, recycling containers, and drainage pipes.

The GHDPE used in the construction of the V-Gard GREEN protective helmet has earned a four-star “OK biobased” certification, the highest rating awarded by the European certification organization Vinçotte of Vilvoorde, Belgium. A class four rating recognizes products composed of more than 80 percent biobased carbon content. As one of the few certification bodies using both the European and U.S. standards in system certification, Vinçotte OK biobased certification quantifies the amount of renewable carbon content in manufactured products. The Vinçotte OK biobased certification meets the ASTM D6866 standard for determining the renewable/biobased carbon content of products.

If you require any additional information on this topic, please contact MSA Customer Service Center at 1-800-672-2222.

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<sup>1</sup>Ecoefficiency Study, Fundação Espaço Eco, 2007).

<sup>2</sup> Brazilian Government – Ministry of Science and Technology – National Climate Change Program, on the CO<sub>2</sub> emissions produced by generating the electricity consumed by a Brazilian home in 12 months.