Case Study

Aluminium sled – Innovative folding mechanism made of Durethan® BKV 130

Figure 1 Sled with folding mechanism made of Durethan® BKV 130

Material: Durethan® BKV 130

Producer: Rudisport, Germany

Industry: Sports/Leisure

Every year, as soon as the snow gets deep enough, it's time for kids and grown-ups to take the family sled out for a tobogganing session down the slopes. Rudi Scheib, the well-known expert from Rudisport, a manufacturer of sports equipment based in Ulm, Germany, has developed a particularly stylish model for Porsche-Design Driver's Selection: the Porsche aluminum sled. The ingenious thing about the new creation is the folding mechanism, which is made of Durethan® BKV 130 from LANXESS. Even at below-freezing temperatures, the material can withstand forces like practically no other material. Wide-ranging tests on a ski-jump have confirmed that Durethan® BKV 130 can resist a load of up to a ton.

Apart from that, this TÜV-tested sled also boasts an exclusive design, a sand-blasted curved aluminum frame with stainless steel runners and the innovative folding mechanism that enables it to be made ready for action in a matter of seconds.

Rudi Scheib and LANXESS have been working together for more than 20 years on the development of folding and steerable sleds. One of the highlights to emerge from this cooperation is the Davos folding sled, which, when folded, is no more than 8 cm wide and fits easily into any trunk. This sled has received several awards for its functionality, including the Innovation award of the German Chamber of Commerce and Industry and the city of Ulm in the south of Germany, the Red Dot award from the North Rhine-Westphalia Design Center for high design quality, and a nomination as one of the best products of the year by Germany's plastic consumer goods trade association (FVKK).

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Typical Properties
Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Health and Safety
Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling LANXESS products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your LANXESS Corporation representative or contact the Product Safety and Regulatory Affairs Department at LANXESS. For materials that are not LANXESS products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

Regulatory Compliance
Some of the end uses of the products described in this brochure must comply with applicable regulations, such as the FDA, NSF, USDA and CPSC. If you have any questions on the regulatory status of any LANXESS engineering thermoplastic, consult your LANXESS Corporation representative or contact the LANXESS Regulatory Affairs Manager.

Regrind
Where end-use requirements permit, regrind may be used with virgin material in quantities specified in individual product information bulletins, provided that the material is kept free of contamination and is properly dried (see maximum permissible quantities and drying conditions in product information bulletins). Any regrind used must be generated from properly molded/extruded parts, sprues, runners, trimmings and/or film. All regrind used must be clean, uncontaminated, and thoroughly blended with virgin resin prior to drying and processing. Under no circumstances should degraded, discolored, or contaminated material be used for regrind. Materials of this type should be discarded. Improperly mixed and/or dried regrind may diminish the desired properties of a particular LANXESS product. It is critical that you test finished parts produced with any amount of regrind to ensure that your end-use performance requirements are fully met. Regulatory or testing organizations (e.g., UL) may have specific requirements limiting the allowable amount of regrind. Because third party regrind generally does not have a traceable heat history or offer any assurance that proper temperatures, conditions, and/or materials were used in processing, extreme caution must be exercised in buying and using regrind from third parties. The use of regrind material should be avoided entirely in those applications where resin properties equivalent to virgin material are required, including but not limited to color quality, impact strength, resin purity, and/or load-bearing performance.

Color and visual effects
Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

Note:
The information contained in this publication is current as of August, 2008. Please contact LANXESS Corporation to determine if this publication has been revised.