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Foreword

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This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Impact attenuating surfacing has been shown to be fundamental to the prevention of 60 % to 75 % of the injuries in playgrounds from impacts with the surface after a fall. The surface materials can be sourced and installed locally such as sand, wood chips or rounded gravel, while others could be sourced from materials around the world and assembled on site such as poured in place rubber, tiles, mats or synthetic turfs and installed at local playgrounds. The performance of installed surfacing materials should be comparable from playground to playground no matter where this playground is situated. The equipment used to measure the performance of playground surfacing is internationally consistent, repeatable and reproducible.

The field of impact attenuation measurement as it applies to playground safety surfaces is very small, resulting in a limited market for potential manufacturers of such equipment. While a small number of reputable manufacturers do exist, organizations needing playground impact test equipment, such as test laboratories and university researchers, often have to rely on their own technical abilities or those of related engineering departments to create the needed equipment from scratch.

A wealth of information is available to aid in the effort to build one's own instruments. Of particular note is ISO 6487, which details impact measurement particularly of anthropomorphic test dummies in automotive environments. But as ISO 6487 deals with automotive situations, some of the information is not relevant and could confuse the reader. This document uses the pertinent details from ISO 6487 and also provides a concise reference for test device parameters unique to the playground sector such as the dimensions of the missile (headform). This document also introduces procedures for ensuring the integrity of the test equipment which are not applicable to the automotive sector.