DIN SPEC 91521:2025-06 (E)

Recycled plastic materials for the packaging of cosmetic and home care products - Suitability levels and analytical methods; Text in English

Inhalt

Seite

Foreword 4

Introduction 6

1 Scope 7

2 Normative references 7

3 Terms and definitions 7

4 Use of recycled plastics in the packaging of cosmetic and home care products 10

5 Suitability levels for recycled plastics 10
5.1 General 10
5.2 Testing procedures to establish the suitability level of a recycled plastic material 11
5.2.1 General 11
5.2.2 Non-targeted screening 11
5.2.3 Targeted analyses 12
5.3 Determination of the suitability level of a recycled plastic material 13
5.4 Compounding of recycled plastic materials 17
5.5 Information to be provided alongside the suitability level 17

Annex A (normative) Testing procedures 18
A.1 Principle 18
A.1.1 General 18
A.1.2 Apparatus 18
A.1.3 Materials 20
A.1.4 Sampling 20
A.1.5 Preparatory procedures 20
A.1.6 Procedure for the extraction testing of pellets of recycled plastic material 20
A.1.7 Procedure for the migration testing of pellets of recycled plastic material 21
A.1.8 Procedure for the non-targeted screening 21
A.1.9 Expression of results 23
A.1.10 Test report 23

Annex B (informative) Template for the testing report 26

Annex C (informative) Suggested MACE values for commonly detected substances 32
C.1 General 32

Bibliography 101

Figures

Figure 1 — Decision tree for assigning recycled plastic materials into a suitability level 16

Figure A.1 — Glass test tubes used for testing 19

Figure B.1 — Tested material — rHDPE pellets, 100 % recycled content 26

Tables

Table 1 — Targeted analyses for recycled plastic materials for use in cosmetic, detergent and home care product packaging 12

Table A.1 — Recommended GC equipment settings 21

Table C.1 — List of commonly found substances, with toxicological and regulatory information 33