

ISO/ASTM 52925:2022-04 (E)

Additive manufacturing of polymers - Feedstock materials - Qualification of materials for laser-based powder bed fusion of parts

Contents	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviations	1
4.1 Symbols	1
4.2 Abbreviations	2
5 Sampling	2
5.1 General	2
5.2 Characterisation of virgin powder and powder blends	2
5.3 Characterisation of used powder	2
6 Factory test report	3
6.1 General	3
6.2 Particle size distribution	3
6.3 Residual monomer content/extract content	3
6.4 Supplementary data	3
7 Factors influencing processability	4
7.1 General	4
7.2 Spreadability of the powder	4
7.3 Relative humidity of the powder (surface moisture)	4
7.4 Particle size distribution	5
8 Factors affecting part quality	5
8.1 General	5
8.2 Melting behaviour, melt flow and MVR	6
8.2.1 General	6
8.2.2 Laboratory methods	6
8.2.3 Melt volume-flow rate (MVR)	6
8.3 Melting temperature and recrystallisation temperature	7
Annex A (informative) Hausner ratio, HR	9
Annex B (informative) Determination of the melt volume-flow rate (MVR)	12
Annex C (informative) Round robin MVR test	15
Bibliography	18