

ISO 18177:2025-05 (E)

Plastics - Test method for estimation of the short chain branching distribution of semicrystalline ethylene 1-olefin copolymers - Differential scanning calorimetry (DSC)

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	2
5	Apparatus and materials	2
6	Test specimens	2
7	Test conditions and specimen conditioning	3
8	Calibration	3
9	Procedure	3
9.1	Setting up the apparatus	3
9.2	Loading the test specimen into the crucible	3
9.3	Insertion of crucibles	3
9.4	Determination of the minimum temperature within self-nucleation domain of the specimen	3
9.5	Temperature scan	4
10	Expression of results	6
10.1	Determination of multiple melting peaks temperatures and peak area of each melting peak	6
10.2	Calculation of short chain branching	7
10.3	Calculation of degree of crystallinity	8
10.4	Calculation of short chain branching ratio	9
10.5	Format for expression of results	9
11	Test report	10
Annex A (normative) Self-nucleation experiment		12
Annex B (informative) Interlaboratory precision study		16
Bibliography		20