ISO 24564:2022-11 (E)

Space systems - Adhesives - General requirements

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Selection requirements for adhesive materials 3
4.1 General requirements 3
4.1.1 Classification of adhesive application 3
4.1.2 Selection criterion 4
4.2 Selection procedure 4
4.2.1 Primary characteristics before selection 4
4.2.2 Selection steps 7

5 Test methods for adhesive properties 8
5.1 General 8
5.2 Shrinkage 8
5.3 Adhesion 8
5.4 Glass transition temperature 9
5.5 Electrical volume resistivity 9
5.6 Thermal decomposition temperature 9
5.7 Thermal conductivity 9
5.8 Thermal expansion 9
5.9 Ground environment durability 9
5.10 Outgassing 9
5.11 UV-resistance 9
5.12 Radiation resistance 10
5.13 Atomic oxygen resistance 10

6 Lifetimeverificationandfailure 10
6.1 Lifetime verification 10
6.2 Failure 10
6.2.1 Failure mode 10
6.2.2 General failure analysis and preventive measures 10

7 Adhesive bonding process design, safety and environmental protection requirements 11
7.1 General requirements 11
7.2 Process technology and tool design requirements 11
7.3 Safety and environmental protection requirements 12

8 Quality assurance requirements 12
8.1 General requirements 12
8.2 Inspection 12
8.3 Traceability 13
8.4 Worker and inspector training 13

Annex A (informative) Reference tables 15

Bibliography 18