

Australian Standard™

**Industrial automation systems and  
integration—Product data  
representation and exchange**

**Part 49: Integrated generic resources:  
Process structure and properties**



Standards Australia

This Australian Standard was prepared by Committee IT/6, Information Technology for Industrial Automation and Integration. It was approved on behalf of the Council of Standards Australia on 28 April 2000 and published on 8 June 2000.

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First published as AS 10303.49—2000.

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Published by Standards Australia International Ltd  
PO Box 1055, Strathfield, NSW 2135, Australia

ISBN 0 7337 3443 X

## PREFACE

This Standard was prepared by the Standards Australia Committee IT/6, Information Technology for Industrial Automation and Integration. This Standard is identical with and has been reproduced from ISO 10303-49:1998, *International automation systems and integration—Product data representation and exchange*, Part 49: *Integrated generic resource: Process structure and properties*.

The objective of this Standard is to provide designers of computer-interpretable representation and exchange of product actions to affect a process. These actions include: relationship between processes, the effectivity of a process, the properties of a process, the resources and their properties required by the process, representation of the process and their resource, and relationship of the process to the product.

This Standard is Part 49 of AS 10303, *Industrial automation systems and integration—Product data representation and exchange*, which is published in parts as follows:

- Part 1: Overview and fundamental principles
- Part 11: Description methods: The EXPRESS language reference manual
- Part 12: Description methods: The EXPRESS-I language reference manual
- Part 21: Implementation methods: Clear text encoding of the exchange structure
- Part 22: Implementation methods: Standard data access interface
- Part 31: Conformance testing methodology and framework: General concepts
- Part 41: Integrated generic resources: Fundamentals of product description and support
- Part 42: Integrated generic resources: Geometric and topological representation
- Part 43: Integrated generic resources: Representation structures
- Part 44: Integrated generic resources: Product structure configuration
- Part 45: Integrated generic resources: Materials
- Part 46: Integrated generic resources: Visual presentation
- Part 47: Integrated generic resource: Shape variation tolerances
- Part 49: Integrated generic resources: Process structure and properties (this Standard)
- Part 101: Integrated application resources: Draughting
- Part 105: Integrated application resource: Kinematics
- Part 201: Application protocol: Explicit draughting
- Part 202: Application protocol: Associative draughting
- Part 203: Application protocol: Configuration controlled design
- Part 203: Application protocol: Configuration controlled design (Amendment No.1)
- Part 207: Application protocol: Sheet metal die planning and design
- Part 224: Application protocol: Mechanical product definition for process planning using machining features

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A normative annex is an integral part of a Standard, whereas an informative annex is only for information and guidance.

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<i>Reference to International Standard</i>		<i>Australian or Australian/New Zealand Standard</i>	
ISO		AS	
10303	Industrial automation systems and integration—Product data representation and exchange	10303	Industrial automation systems and integration—Product data representation and exchange
10303-1	Part 1: Overview and fundamental principles	10303.1	Part 1: Overview and fundamental principles
10303-11	Part 11: Description methods: The EXPRESS language reference manual	10303.11	Part 11: Description methods: The EXPRESS language reference manual
10303-41	Part 41: Integrated generic resources: Fundamentals of product description and support	10303.41	Part 41: Integrated generic resources: Fundamentals of product description and support
10303-43	Part 43: Integrated generic resources: Representation structures	10303.43	Part 43: Integrated generic resources: Representation structures
10303-45	Part 45: Integrated generic resource: Materials	10303.45	Part 45: Integrated generic resources: Materials
ISO/IEC		AS/NZS	
8824	Information technology—Abstract Syntax Notation One (ASN.1)	8824	Information technology—Abstract Syntax Notation One (ASN.1)
8824-1	Part 1: Specification of basic notation	8824.1	Part 1: Specification of basic notation

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**Industrial automation systems and integration —  
Product data representation and exchange —  
Part 49:  
Integrated generic resource:  
Process structure and properties**

## 1 Scope

This part of ISO 10303 specifies the resource constructs to specify the actions or potential actions to effect a process. The integrated resource constructs within this part of ISO 10303 define the structure for specifying: relationships between processes, the effectivity of a process, the properties of a process, the resources required for the process, the properties of the resource, the representation of the process, the representation of the resource, and the relationship of the process to the product. When these integrated resource constructs are utilized in the context of an application resource or an application protocol, the integrated resource constructs can be assembled into a structure to represent a process plan.

The following are within the scope of this part of ISO 10303:

- specification of a process;
- specification of the relationships between processes;
- specification of the effectivity of a process;
- specification of the relationship between a process and a product;
- specification of the steps for a process plan to realize a product;

### NOTES

1 - This part of ISO 10303 does not make any distinction between a process plan that has been executed and one that has not been executed.

2 - This part of ISO 10303 does not address administrative information within a process plan. Administrative information may include organization, date, or person responsible for developing a process plan.

- specification of alternative process plan definitions;
- specification of the method for realizing a process plan;
- specification of a resource;