

**GLOBAL OVERVIEW OF THE
POLYURETHANE CASE
MARKETS**

**VOLUME IV - EUROPE MIDDLE EAST &
AFRICA**

Section 1: Raw Materials

**© IAL CONSULTANTS
APRIL 2001**

109 Uxbridge Road, Ealing, London W5 5TL
Tel: +44 (0) 20 8832 7780 Fax: +44 (0) 20 8566 4931
Email: ial@brg.co.uk
Web site: www.ialconsultants.com

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the copyright owner.

NOTE

The information given in this report has been compiled from published sources and interpreted from fieldwork based on informed opinions. Whilst every care has been taken in the preparation of the report, there may have been some errors in the information obtained. Although it is impossible to verify every single detail by cross checking, we believe the general picture provided is reasonably accurate and comprehensive.

Many IAL reports contain an overview of selected company financial information and capabilities based on published sources where available. Although the companies represented are believed to be the major suppliers the profiles are meant to be indicative rather than definitive.

It is fundamental to the philosophy of IAL Consultants to constantly seek to extend and improve our service to clients. In pursuit of these aims, we shall be pleased to consider all requests for regular or periodic updating of all or any part of the information contained in this report, or for extensions in coverage in terms of product areas, market sectors and/or geographic regions.

We are, of course, always happy to discuss with any subscriber the possibility of undertaking further work, whether arising out of this report or in different business areas.

MORE INFORMATION ON IAL CONSULTANTS

At the end of this report you will find a copy of our corporate brochure and a list of our latest published reports. Should you require more information on either our published reports or our private client services, please contact us at the address given.

Full details on all IAL Consultants published studies (including full tables of contents and tables of tables) and ad-hoc research services can be found on our website :

www.ialconsultants.com

CONTENTS

1. INTRODUCTION.....	1
1.1 SCOPE OF THE STUDY	2
1.2 METHODOLOGY.....	3
1.3 UNITS OF VOLUME.....	3
1.4 FORECASTS.....	3
1.5 FORMULATIONS	3
1.5.1 <i>Western Europe</i>	5
Coatings.....	5
Adhesives	6
Sealants.....	7
Elastomers	8
1.5.2 <i>Eastern Europe</i>	9
Coatings.....	9
Adhesives	10
Sealants.....	11
Elastomers	12
1.5.3 <i>Middle East & Africa</i>	13
Coatings.....	13
Adhesives	14
Sealants.....	15
Elastomers	16
1.6 ABBREVIATIONS.....	17
1.7 END-USE MARKETS DEFINITIONS.....	18
1.7.1 <i>Coatings</i>	18
1.7.2 <i>Adhesives</i>	19
1.7.3 <i>Sealants</i>	20
1.7.4 <i>Elastomers</i>	21
2. POLYURETHANE RAW MATERIALS OVERVIEW.....	23
2.1 INTRODUCTION	23
2.2 ISOCYANATES	23
2.2.1 <i>Introduction and Technical Background</i>	23
2.2.2 <i>MDI - Methylene Diphenyl Di-isocyanate</i>	23
2.2.3 <i>TDI - Toluene Di-isocyanate</i>	25
2.2.4 <i>NDI - 1,5 Naphthalene Di-Isocyanate</i>	25
2.2.5 <i>Aliphatic Isocyanates</i>	25
2.3 ISOCYANATES PRODUCTION CAPACITY – EUROPE, MIDDLE EAST & AFRICA	26
2.3.1 <i>Estimated Aromatic Isocyanate Production Capacity 2000 and 2005</i>	27
2.3.2 <i>Estimated Aliphatic Isocyanate Production Capacity, 2000</i>	31
2.4 CONSUMPTION OF ISOCYANATES BY PRODUCT SECTOR.....	32
2.4.1 <i>Summary - Europe, Middle East & Africa 2000-2005</i>	32
2.4.2 <i>Summary - Western Europe 2000-2005</i>	33
2.4.3 <i>Summary - Eastern Europe 2000-2005</i>	34
2.4.4 <i>Summary - Middle East & Africa 2000-2005</i>	35
2.4.5 <i>Isocyanate Consumption by End-use Market - 2000</i>	36
Coatings.....	36
Adhesives	37
Sealants.....	37
Elastomers	38
2.4.6 <i>Forecast Isocyanate Consumption by End-use Market - 2005</i>	39
Coatings.....	39
Adhesives	40
Sealants.....	40
Elastomers	41
2.5 POLYOLS.....	41

2.5.1	<i>Introduction and Technical Background</i>	41
2.5.2	<i>Polyether Polyols</i>	41
2.5.3	<i>Polyester Polyols</i>	42
2.6	POLYOL PRODUCTION CAPACITY IN EUROPE, MIDDLE EAST & AFRICA	43
2.7	CONSUMPTION OF POLYOLS BY END-USE MARKET	47
2.7.1	<i>Summary - Europe, Middle East & Africa 2000-2005</i>	47
2.7.2	<i>Summary - Western Europe 2000-2005</i>	48
2.7.3	<i>Summary - Eastern Europe 2000-2005</i>	49
2.7.4	<i>Summary - Middle East & Africa 2000-2005</i>	50
2.7.5	<i>Polyol Consumption by End-use Market - 2000</i>	51
	Coatings.....	51
	Adhesives.....	52
	Sealants.....	52
	Elastomers.....	53
2.7.6	<i>Polyol Consumption by End-use Market - 2005</i>	54
	Coatings.....	54
	Adhesives.....	55
	Sealants.....	55
	Elastomers.....	56
2.8	MARKET TRENDS AND INFLUENCES	57
2.8.1	<i>Aromatic Isocyanates</i>	57
2.8.2	<i>Aliphatic Isocyanates</i>	58
2.8.3	<i>Polyether Polyols</i>	59
2.8.4	<i>Polyester Polyols</i>	59
3.	DIRECTORY OF RAW MATERIAL MANUFACTURERS	61
3.1	ISOCYANATE MANUFACTURERS	61
3.1.1	<i>Belgium</i>	61
3.1.2	<i>France</i>	61
3.1.3	<i>Germany</i>	61
3.1.4	<i>Hungary</i>	62
3.1.5	<i>Italy</i>	62
3.1.6	<i>Netherlands</i>	63
3.1.7	<i>Poland</i>	63
3.1.8	<i>Portugal</i>	63
3.1.9	<i>Spain</i>	63
3.2	POLYOL MANUFACTURERS	64
3.2.1	<i>Belgium</i>	64
3.2.2	<i>France</i>	64
3.2.3	<i>Germany</i>	65
3.2.4	<i>Italy</i>	65
3.2.5	<i>Netherlands</i>	66
3.2.6	<i>Poland</i>	67
3.2.7	<i>Portugal</i>	67
3.2.8	<i>Romania</i>	67
3.2.9	<i>Russia</i>	67
3.2.10	<i>Saudi Arabia</i>	67
3.2.11	<i>Serbia</i>	68
3.2.12	<i>Slovakia</i>	68
3.2.13	<i>Slovenia</i>	68
3.2.14	<i>South Africa</i>	68
3.2.15	<i>Spain</i>	68
3.2.16	<i>Sweden</i>	69
3.2.17	<i>United Kingdom</i>	69

TABLE OF TABLES

1.	INTRODUCTION.....	1
1.1	SCOPE OF THE STUDY	2
1.2	METHODOLOGY.....	3
1.3	UNITS OF VOLUME.....	3
1.4	FORECASTS.....	3
1.5	FORMULATIONS	3
	Coatings: Raw Material Formulations Used (%).....	5
	Adhesives: Raw Material Formulations Used (%).....	6
	Sealants: Raw Material Formulations Used (%).....	7
	Elastomers: Raw Material Formulations Used (%).....	8
	Coatings: Raw Material Formulations Used (%).....	9
	Adhesives: Raw Material Formulations Used (%).....	10
	Sealants: Raw Material Formulations Used (%).....	11
	Elastomers: Raw Material Formulations Used (%).....	12
	Coatings: Raw Material Formulations Used (%).....	13
	Adhesives: Raw Material Formulations Used (%).....	14
	Sealants: Raw Material Formulations Used (%).....	15
	Elastomers: Raw Material Formulations Used (%).....	16
1.6	ABBREVIATIONS.....	17
	Polyurethane Abbreviations and General Terms	17
1.7	END-USE MARKETS DEFINITIONS.....	18
2.	POLYURETHANE RAW MATERIALS OVERVIEW.....	23
2.1	INTRODUCTION	23
2.2	ISOCYANATES	23
2.3	ISOCYANATES PRODUCTION CAPACITY – EUROPE, MIDDLE EAST & AFRICA	26
	Estimated Aromatic Isocyanate Production Capacity in EMEA, 2000 (Tonnes).....	27
	Forecast Aromatic Isocyanate Production Capacity in EMEA, 2005 (Tonnes).....	29
	Estimated HDI Production Capacity in EMEA, 2000 (Tonnes).....	31
	Estimated IPDI Production Capacity in EMEA, 2000 (Tonnes).....	31
2.4	CONSUMPTION OF ISOCYANATES BY PRODUCT SECTOR.....	32
	Production of PU CASE Products and Related Isocyanate Consumption in EMEA, 2000 (Tonnes).....	32
	Forecast Production of PU CASE Products and Related Isocyanate Consumption in EMEA, 2005 (Tonnes).....	32
	Production of PU CASE Products and Related Isocyanate Consumption in Western Europe, 2000 (Tonnes).....	33
	Forecast Production of PU CASE Products and Related Isocyanate Consumption in Western Europe, 2005 (Tonnes).....	33
	Production of PU CASE Products and Related Isocyanate Consumption in Eastern Europe, 2000 (Tonnes).....	34
	Forecast Production of PU CASE Products and Related Isocyanate Consumption in Eastern Europe, 2005 (Tonnes).....	34
	Production of PU CASE Products and Related Isocyanate Consumption in Middle East & Africa, 2000 (Tonnes).....	35
	Forecast Production of PU CASE Products and Related Isocyanate Consumption in Middle East & Africa, 2005 (Tonnes).....	35
	PU Coating Production and Related Isocyanate Consumption in EMEA, 2000 (Tonnes).....	36
	PU Adhesive Production and Related Isocyanate Consumption in EMEA, 2000 (Tonnes).....	37
	PU Sealant Production and Related Isocyanate Consumption in EMEA, 2000 (Tonnes).....	37
	PU Elastomer Production and Related Isocyanate Consumption in EMEA, 2000 (Tonnes).....	38
	Forecast PU Coating Production and Related Isocyanate Consumption in EMEA, 2005 (Tonnes).....	39
	Forecast PU Adhesive Production and Related Isocyanate Consumption in EMEA, 2005 (Tonnes).....	40
	Forecast PU Sealant Production and Related Isocyanate Consumption in EMEA, 2005 (Tonnes).....	40
	Forecast PU Elastomer Production and Related Isocyanate Consumption in EMEA, 2005 (Tonnes).....	41
2.5	POLYOLS.....	41
2.6	POLYOL PRODUCTION CAPACITY IN EUROPE, MIDDLE EAST & AFRICA	43
	Estimated Polyol Production Capacity in Europe, Middle East & Africa, 2000 (Tonnes).....	43
	Speciality Polyol Production Capacity in EMEA, 2000 (Tonnes).....	46
2.7	CONSUMPTION OF POLYOLS BY END-USE MARKET.....	47
	Production of PU CASE Products and Related Polyol Consumption in EMEA, 2000 (Tonnes).....	47
	Forecast Production of PU CASE Products and Related Polyol Consumption in EMEA, 2005 (Tonnes).....	47

	Production of PU CASE Products and Related Polyol Consumption in Western Europe, 2000 (Tonnes)	48
	Forecast Production of PU CASE Products and Related Polyol Consumption in Western Europe, 2005 (Tonnes).....	48
	Production of PU CASE Products and Related Polyol Consumption in Eastern Europe, 2000 (Tonnes).....	49
	Forecast Production of PU CASE Products and Related Polyol Consumption in Eastern Europe, 2005 (Tonnes)	49
	Production of PU CASE Products and Related Polyol Consumption in the Middle East & Africa, 2000 (Tonnes).....	50
	Forecast Production of PU CASE Products and Related Polyol Consumption in the Middle East & Africa, 2005 (Tonnes)	50
	PU Coating Production and Related Polyol Consumption in EMEA, 2000 (Tonnes)	51
	PU Adhesive Production and Related Polyol Consumption in EMEA, 2000 (Tonnes).....	52
	PU Sealant Production and Related Polyol Consumption in EMEA, 2000 (Tonnes)	52
	PU Elastomer Production and Related Polyol Consumption in EMEA, 2000 (Tonnes).....	53
	Forecast PU Coating Production and Related Polyol Consumption in EMEA, 2005 (Tonnes).....	54
	Forecast PU Adhesive Production and Related Polyol Consumption in EMEA, 2005 (Tonnes).....	55
	Forecast PU Sealant Production and Related Polyol Consumption in EMEA, 2005 (Tonnes).....	55
	Forecast PU Elastomer Production and Related Polyol Consumption in EMEA, 2005 (Tonnes)	56
2.8	MARKET TRENDS AND INFLUENCES.....	57
3.	DIRECTORY OF RAW MATERIAL MANUFACTURERS.....	61
3.1	ISOCYANATE MANUFACTURERS	61
3.2	POLYOL MANUFACTURERS.....	64