

Abstract

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OCTANE IMPROVERS FOR GASOLINE

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Lead phaseout in the United States has brought about a strong interest in oxygenated octane improvers for gasoline. In the 1980s, the use of MTBE as a gasoline octane improver saw meteoric growth. This is expected to continue as U.S. refiners begin major gasoline reformulation as mandated by the 1990 Clean Air Act. The use of other oxygenates, such as ethers and alcohols, will also become more common in the future. This report examines the state-of-the-art technologies and economics for the manufacture of MTBE, ETBE, and etherified gasoline.

We also evaluate the economics associated with the likely process changes and modifications that refiners will have to make in order to produce reformulated gasoline. Since the United States leads the world in reformulating gasoline, most of our attention is devoted to this country. However, the trends and conclusions should also be relevant to other industrialized nations.

The report details worldwide 1990 production capacities for all ethers and alcohols that may be used as octane improvers. MTBE supply projections for 1995 and 2000 are also included. This report will be useful for refiners and petrochemical producers in understanding the technologies and economics of producing octane improvers and in identifying future opportunities.

CONTENTS

1 INTRODUCTION	1-1
2 SUMMARY	2-1
GENERAL ASPECTS	2-1
Methyl tertiary-Butyl Ether	2-1
Ethyl tertiary-Butyl Ether	2-2
tertiary-Amyl-Methyl Ether	2-2
Ethanol	2-2
Methanol	2-2
Etherol Process	2-3
tertiary-Butyl Alcohol	2-3
TECHNICAL ASPECTS	2-3
ECONOMIC ASPECTS	2-4
MTBE AND ETBE	2-4
Cracked Naphtha Etherification (Etherol Process)	2-5
REFORMULATED GASOLINE ECONOMICS	2-6
3 INDUSTRY STATUS	3-1
COMMERCIAL PROCESSES AND LICENSORS	3-1
Methyl tertiary-Butyl Ether	3-1
MTBE-Related Processes	3-2
Ethanol	3-2
Methanol	3-3
tertiary-Butyl Alcohol	3-3
tertiary-Amyl Methyl Ether (TAME)	3-3
Ethyl tertiary-Butyl Ether	3-4
Flexible Ether Units	3-4
PRODUCTION AND CONSUMPTION	3-5
Methyl tertiary-Butyl Ether	3-5
United States and Canada	3-5
Production	3-6
Consumption	3-14
Western Europe	3-15

CONTENTS (Continued)

3 INDUSTRY STATUS (Continued)

Production	3-15
Consumption	3-19
Eastern Europe	3-20
Asia-Pacific	3-22
Middle East	3-24
Latin America	3-24
Ethanol	3-24
United States	3-27
Production	3-27
Consumption	3-28
Western Europe	3-34
Japan	3-34
Latin America	3-35
Methanol	3-35
United States	3-35
Production	3-37
Consumption	3-37
Canada and Mexico	3-39
Western Europe	3-39
Production	3-39
Consumption	3-42
Japan	3-44
Rest of the World	3-43
tertiary-Butyl Alcohol	3-45
United States	3-45
Production	3-45
Consumption	3-45
Western Europe	3-46
Production	3-46
Consumption	3-47
Japan	3-48
tertiary-Amyl-Methyl Ether	3-48
United States	3-48

CONTENTS (Continued)

3 INDUSTRY STATUS (Concluded)	
Western Europe	3-49
Latin America	3-49
Asia-Pacific	3-49
Etherified Gasoline	3-50
4 GASOLINE DEMAND AND FORMULATIONS	4-1
MARKET CHARACTERISTICS	4-1
United States	4-1
Western Europe	4-3
Japan	4-8
GOVERNMENT REGULATIONS	4-9
United States	4-9
Ethanol Credits - 1990	4-14
California	4-14
Western Europe	4-16
Japan	4-17
5 METHYL TERTIARY-BUTYL ETHER	5-1
CHEMISTRY	5-1
PROCESS REVIEW	5-3
Catalyst	5-3
Feed Pretreatment	5-4
MTBE Reactor Design	5-4
MTBE Recovery	5-5
Methanol Recovery	5-5
C ₄ Raffinate Treatment	5-5
Alternative Recovery Scheme	5-5
PROCESS DESCRIPTION	5-6
Case A: MTBE From an FCC C ₄ Stream	5-6
Case B: MTBE From Steam-Cracked Mixed Butene Stream	5-6
PROCESS DISCUSSION	5-16
Pretreatment	5-16

CONTENTS (Continued)

5 METHYL TERTIARY-BUTYL ETHER (Concluded)	
Reaction Section	5-16
Methanol Recovery	5-16
C ₄ Raffinate Treatment	5-16
Waste Treatment	5-16
Materials of Construction	5-17
Storage Requirements	5-17
COST ESTIMATES	5-17
Investment Costs	5-17
Production Costs	5-17
Feed and Product Prices	5-17
Utilities Costs	5-18
Value of MTBE in Gasoline	5-18
6 ETHYL TERTIARY-BUTYL ETHER	6-1
CHEMISTRY	6-1
PROCESS REVIEW	6-3
PROCESS DESCRIPTION	6-3
PROCESS DISCUSSION	6-9
Reaction Section	6-9
Product Recovery	6-9
Ethanol Recovery	6-9
PROCESS ECONOMICS	6-11
Investment Costs	6-11
Production Costs	6-11
Raw Material Costs	6-11
Catalyst Costs	6-12
Utilities Costs	6-12
Product Value	6-12
ETBE Value in Gasoline	6-12
7 CRACKED NAPHTHA ETHERIFICATION	7-1
CHEMISTRY	7-1
CATALYST	7-2

CONTENTS (Continued)

7 CRACKED NAPHTHA ETHERIFICATION (Concluded)

PRODUCT PROPERTIES	7-4
PROCESS REVIEW	7-4
Pretreatment	7-4
Hydrogen Makeup	7-4
Reaction Section	7-4
Etherol Processing Options	7-6
Methanol Recovery Section	7-6
PROCESS DESCRIPTION	7-6
PROCESS DISCUSSION	7-12
Reaction Section	7-12
Methanol Recovery	7-12
PROCESS ECONOMICS	7-13
Investment Costs	7-13
Processing Costs	7-13
Refinery Integration	7-13
Gasoline Economics and Etherol Profitability	7-15
8 ADDITIVE BLENDING PROPERTIES	8-1
ALCOHOLS	8-1
Methanol	8-1
Blending Octane	8-1
Effect on Reid Vapor Pressure and Distillation Curve	8-1
Phase Separation	8-1
Ethanol	8-5
Blending Octane	8-5
Effect on Reid Vapor Pressure and Distillation Curve	8-5
tertiary-Butyl Alcohol	8-6
Blending Octane	8-6
Effect on Reid Vapor Pressure and Distillation Curve	8-6

CONTENTS (Continued)

8 ADDITIVE BLENDING PROPERTIES (Concluded)	
ETHERS	8-7
Methyl tertiary-Butyl Ether	8-8
Blending Octane	8-8
Effect on Reid Vapor Pressure and Distillation Curve	8-9
Ethyl tertiary-Butyl Ether (ETBE)	8-10
9 REFORMULATED GASOLINE ECONOMICS	9-1
TRENDS	9-1
Lead Phaseout and Octane Demand	9-1
Environmental Regulations	9-2
REFORMULATED GASOLINE REQUIREMENTS	9-2
Aromatics Reduction	9-3
Benzene Reduction	9-6
Volatility Reduction (Rvp)	9-6
Olefin Reduction	9-7
Oxygenated Additives	9-7
Refinery Product Balance	9-8
CASE STUDY - TYPICAL U.S. REFINERY	9-8
Future Gasoline Specifications	9-8
Base Case Refinery	9-9
Processing Options to Meet Future Regulations	9-10
C ₅ -C ₆ Isomerization	9-10
Reforming	9-12
SR versus CCR	9-12
Feed/Product Cut Point Adjustment	9-17
Fluid Catalytic Cracking	9-17
Gasoline Mode versus Olefin Mode	9-18
Lower FCC Gasoline Cut Point	9-18
Oxygenate Production	9-18
Purchased Blending Components	9-19
Economic Impact on the Refiner	9-19
WORLDWIDE GASOLINE REFORMULATION ISSUES	9-21
Canada	9-21
Western Europe	9-21

CONTENTS (Concluded)

9 REFORMULATED GASOLINE ECONOMICS (Concluded)	
Far East	9-23
Latin America	9-23
Middle East	9-24
APPENDIX A: PATENT SUMMARY TABLE	A-1
APPENDIX B: DESIGN AND COST BASES	B-1
APPENDIX C: CITED REFERENCES	C-1
APPENDIX D: PATENT REFERENCES BY COMPANY	D-1
APPENDIX E: PROCESS FLOW DIAGRAMS	E-1

ILLUSTRATIONS

3.1	U.S. MTBE CAPACITY	3-11
5.1	METHYL TERTIARY-BUTYL ETHER (CASE A AND CASE B) PROCESS FLOW DIAGRAM	E-3
6.1	ETHYL TERTIARY-BUTYL ETHER PROCESS FLOW DIAGRAM	E-5
6.2	ETHYL TERTIARY-BUTYL ETHER CATALYTIC DISTILLATION TOWER	6-10
6.3	EFFECT OF ETHANOL PRICE ON ETBE VALUE	6-14
6.4	EFFECT OF SUBSIDIES ON ROI	6-14
7.1	CRACKED NAPHTHA ETHERIFICATION EFFECT OF TEMPERATURE ON ETHER YIELD	7-3
7.2	CRACKED NAPHTHA ETHERIFICATION CRACKED NAPHTHA OCTANE NUMBER INCREASE	7-5
7.3	CRACKED NAPHTHA ETHERIFICATION PROCESS FLOW DIAGRAM	E-7
7.4	CRACKED NAPHTHA ETHERIFICATION BASE CASE GASOLINE PRODUCTION	7-21
7.5	CRACKED NAPHTHA ETHERIFICATION FCC GASOLINE PRODUCTION WITH ETHEROL PROCESS	7-22
7.6	CRACKED NAPHTHA ETHERIFICATION INCREMENTAL GASOLINE PRODUCTION WITH ETHEROL	7-23
8.1	METHANOL RVP BLENDING CHARACTERISTICS	8-4
8.2	EFFECTS OF MTBE ON DISTILLATION	8-11
8.3	DISTILLATION EFFECTS OF MTBE AND ETBE	8-12
9.1	FUEL EFFECTS ON AUTO EXHAUST EMISSIONS	9-4
9.2	FUEL EFFECTS ON AUTO EXHAUST EMISSIONS	9-5
9.3	TYPICAL MAXIMUM-GASOLINE REFINERY	9-13

TABLES

2.1	METHYL TERTIARY BUTYL ETHER AND ETHYL TERTIARY BUTYL ETHER MANUFACTURING COST SUMMARY	2-8
2.2	CRACKED NAPHTHA ETHERIFICATION MANUFACTURING COST SUMMARY	2-9
3.1	WORLD CAPACITY FOR MTBE	3-5
3.2	CAPACITY OF U.S. PRODUCERS OF MTBE AS OF DECEMBER 1990	3-8
3.3	PLANNED U.S. AND CANADIAN MTBE CAPACITIES	3-12
3.4	ANNUAL U.S. CONSUMPTION OF MTBE	3-14
3.5	MAJOR WESTERN EUROPEAN PRODUCERS OF MTBE	3-17
3.6	ANNOUNCED WESTERN EUROPE MTBE CAPACITIES	3-19
3.7	WESTERN EUROPEAN CONSUMPTION OF MTBE	3-21
3.8	ANNOUNCED EASTERN EUROPEAN MTBE CAPACITIES	3-22
3.9	ANNOUNCED ASIA-PACIFIC MTBE CAPACITIES	3-23
3.10	ANNOUNCED AFRICAN AND MIDDLE EASTERN MTBE CAPACITIES	3-25
3.11	ANNOUNCED LATIN AMERICAN MTBE CAPACITY	3-26
3.12	WORLDWIDE ETHANOL CAPACITY	3-27
3.13	SYNTHETIC ETHANOL - CAPACITY OF U.S. PRODUCERS AS OF APRIL 1990	3-29
3.14	FERMENTATION ETHANOL - CAPACITY OF U.S. PRODUCERS AS OF APRIL 1990	3-30
3.15	U.S. SUPPLY OF ETHANOL FOR GASOLINE	3-32
3.16	U.S. CONSUMPTION OF ETHANOL/GASOLINE BLEND	3-32
3.17	GASOHOL SALES IN 10 STATES WITH HIGHEST CONSUMPTION - 1989	3-33
3.18	LATIN AMERICAN ETHANOL PRODUCERS	3-36
3.19	WORLD CAPACITY FOR METHANOL, 1990	3-36

TABLES (Continued)

3.20	CAPACITY OF U.S. PRODUCERS OF METHANOL AS OF JANUARY 1, 1991	3-38
3.21	U.S. CONSUMPTION OF METHANOL AS AN OXYGENATED BLENDING AGENT IN GASOLINE	3-39
3.22	CANADIAN AND MEXICAN PRODUCERS OF METHANOL	3-40
3.23	WESTERN EUROPEAN PRODUCERS OF METHANOL	3-41
3.24	WESTERN EUROPEAN CONSUMPTION OF METHANOL FOR GASOLINE	3-43
3.25	REST OF THE WORLD PRODUCERS OF METHANOL	3-44
3.26	U.S. CONSUMPTION OF TBA	3-46
3.27	WESTERN EUROPEAN PRODUCERS OF TBA	3-47
3.28	WESTERN EUROPEAN CONSUMPTION OF TBA FOR GASOLINE	3-48
3.29	ANNOUNCED U.S. TAME CAPACITIES	3-49
3.30	WESTERN EUROPEAN PRODUCERS OF TAME	3-50
3.31	ANNOUNCED LATIN AMERICA TAME CAPACITIES	3-50
4.1	(R + M)/2 OCTANE NUMBERS OF U.S. GASOLINES	4-2
4.2	WESTERN EUROPEAN CONSUMPTION OF GASOLINE	4-4
4.3	WESTERN EUROPEAN CONSUMPTION OF GASOLINE BY GRADE	4-5
4.4	JAPANESE PRODUCTION OF GASOLINE	4-8
4.5	U.S. AVERAGE ANNUAL CAFE MILEAGE MANDATE	4-11
4.6	OXYGENATED BLENDING AGENTS CURRENTLY APPROVED FOR USE IN UNLEADED GASOLINE-1990	4-13
4.7	CARB PROPOSED STANDARDS FOR PASSENGER CARS	4-15
4.8	HISTORICAL WESTERN EUROPEAN MAXIMUM ALLOWABLE LEAD CONTENT OF MOTOR GASOLINE	4-18
4.9	WESTERN EUROPEAN MAXIMUM ALLOWABLE LEAD CONTENT OF MOTOR GASOLINE AS OF JANUARY 1, 1989	4-20

TABLES (Continued)

4.10	WESTERN EUROPEAN CONSUMPTION OF UNLEADED GASOLINE AS OF YEAR-END 1988	4-21
4.11	BENZENE CONTENT OF GASOLINE POOL IN THE GERMANY - 1988	4-22
4.12	JAPANESE INDUSTRIAL STANDARD FOR LEAD CONTENT OF MOTOR GASOLINE	4-22
5.1	METHYL TERTIARY-BUTYL ETHER PROPERTIES OF MTBE	5-2
5.2	METHYL TERTIARY-BUTYL ALCOHOL PATENT SUMMARY	A-3
5.3	METHYL TERTIARY-BUTYL ETHER CASE A: MTBE FROM AN FCC C ₄ STREAM DESIGN BASES	5-8
5.4	CASE A: MTBE FROM AN - FCC C ₄ STREAM (96% ISOBUTENE CONVERSION) STREAM FLOWS	5-9
5.5	CASE A: MTBE FROM AN-FCC C ₄ STREAM (96% ISOBUTENE CONVERSION) MAJOR EQUIPMENT	5-10
5.6	CASE A: MTBE FROM AN FCC C ₄ STREAM (96% ISOBUTENE CONVERSION) UTILITIES SUMMARY	5-11
5.7	METHYL TERTIARY-BUTYL ETHER CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM DESIGN BASES	5-12
5.8	CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) STREAM FLOWS	5-13
5.9	CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) MAJOR EQUIPMENT	5-14
5.10	CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) UTILITIES SUMMARY	5-15

TABLES (Continued)

5.11	CASE A: MTBE FROM A CAT-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) TOTAL CAPITAL INVESTMENT	5-19
5.12	CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) TOTAL CAPITAL INVESTMENT	5-20
5.13	CASE A: MTBE FROM A CAT-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) PRODUCTION COSTS	5-21
5.14	CASE B: MTBE FROM A STEAM-CRACKED C ₄ STREAM (96% ISOBUTENE CONVERSION) PRODUCTION COSTS	5-23
6.1	ETHYL TERTIARY-BUTYL ETHER COMPARSION OF ETBE AND MTBE	6-2
6.2	ETHYL TERTIARY-BUTYL ETHER ETBE FROM AN FCC C ₄ STREAM DESIGN BASES	6-5
6.3	ETBE FROM AN FCC C ₄ STREAM (95% ISOBUTENE CONVERSION) STREAM FLOWS	6-6
6.4	ETBE FROM AN FCC C ₄ STREAM (95% ISOBUTENE CONVERSION) MAJOR EQUIPMENT	6-7
6.5	ETBE FROM CAT-CRACKED C ₄ STREAM (95% ISOBUTENE CONVERSION) UTILITIES SUMMARY	6-8
6.6	ETBE FROM A CAT-CRACKED C ₄ STREAM (95% ISOBUTENE CONVERSION) TOTAL CAPITAL INVESTMENT	6-15
6.7	ETBE FROM A CAT-CRACKED C ₄ STREAM (95% ISOBUTENE CONVERSION) PRODUCTION COSTS	6-16
7.1	CRACKED NAPHTHA ETHERIFICATION STREAM FLOWS	7-8

7.2 CRACKED NAPHTHA ETHERIFICATION
MAJOR EQUIPMENT

7-10

TABLES (Continued)

7.3	CRACKED NAPHTHA ETHERIFICATION UTILITIES SUMMARY	7-11
7.4	CRACKED NAPHTHA ETHERIFICATION TOTAL CAPITAL INVESTMENT	7-18
7.5	CRACKED NAPHTHA ETHERIFICATION PRODUCTION COSTS	7-19
8.1	ADDITIVE BLENDING PROPERTIES PROPERTIES OF ALCOHOLS	8-2
8.2	ADDITIVE BLENDING PROPERTIES EFFECT OF METHANOL ON OCTANE NUMBERS	8-2
8.3	ADDITIVE BLENDING PROPERTIES EFFECT OF METHANOL ON RVP AND DISTILLATION	8-3
8.4	ADDITIVE BLENDING PROPERTIES EFFECT OF ETHANOL ON OCTANE NUMBERS	8-5
8.5	ADDITIVE BLENDING PROPERTIES EFFECT OF ETHANOL ON RVP AND DISTILLATION	8-6
8.6	ADDITIVE BLENDING PROPERTIES PROPERTIES OF ETHERS	8-7
8.7	ADDITIVE BLENDING PROPERTIES EFFECT OF MTBE ON OCTANE NUMBERS	8-8
8.8	ADDITIVE BLENDING PROPERTIES IMPACT OF MTBE ON RVP	8-9
8.9	ADDITIVE BLENDING PROPERTIES IMPACT OF MTBE ON ASTM D86 DISTILLATION CURVE	8-10
9.1	REFORMULATED GASOLINE ECONOMICS TYPICAL 1990 U. S. REFINERY OPERATION	9-9
9.2	REFORMULATED GASOLINE ECONOMICS ISOMERIZATION OPERATING CONDITIONS	9-11
9.3	REFORMULATED GASOLINE ECONOMICS ISOMERIZATION ECONOMICS	9-12
9.4	REFORMULATED GASOLINE ECONOMICS CATALYTIC REFORMING	9-15

TABLES (Concluded)

9.5	REFORMULATED GASOLINE ECONOMICS CATALYTIC REFORMING ECONOMICS	9-16
9.6	REFORMULATED GASOLINE ECONOMICS COMPARISON OF TYPICAL U. S. REFINERY OPERATIONS	9-20