

Explosives and Blasting Agents

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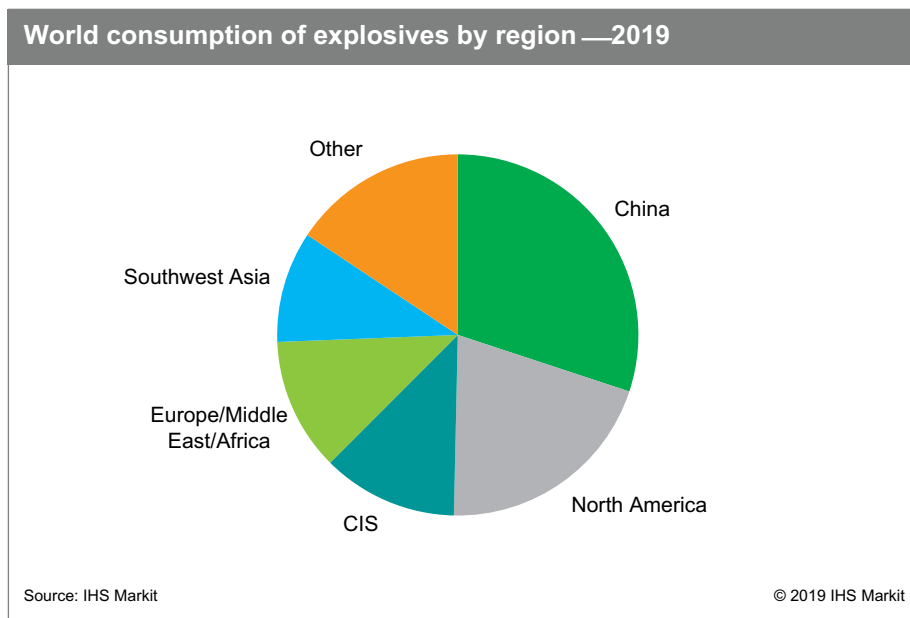
Abstract

The principal distinction between explosives and blasting agents is their sensitivity to initiation. Explosives are cap-sensitive, whereas blasting agents are not and therefore require a primer. Water gels and slurries may be either explosives or blasting agents.

The many industrial and military uses for explosives and blasting agents—ranging from earth moving to seismic wave generation to materials modification to munitions to propulsion—have generated a host of sophisticated and specialized explosives products and delivery packages. However, in terms of overall revenues, markets, and products, the business is overwhelmingly dominated by chemical materials based on the intermediate production of nitric acid (principally ammonium nitrate [AN]) that are used by the world's mining and quarrying industries.

Ammonium nitrate consumption for explosives has grown because of its safety advantage over other products such as dynamite. Ammonium nitrate can be shipped and stored and mixed with fuel oil when needed. Ammonium nitrate fuel oil (ANFO) is made of about 94% ammonium nitrate and 6% fuel oil. ANFO is widely used as an explosive in mining, quarrying, and tunneling construction or wherever dry conditions exist.

The following pie chart shows world consumption of explosives:



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The largest consumers of explosives in industrial applications are China, the United States, the Commonwealth of Independent States, and Central and South America. In addition to consumption by the mining industry, a significant volume of explosives is also consumed by the construction industry and in miscellaneous applications.

Coal mining is by far the largest consuming sector for industrial explosives, accounting for just under 40% of total consumption. The coal mining output started to decrease a few years ago as a consequence of the global effort to reduce carbon dioxide emissions. Coal mining and use of explosives in this segment is expected to continue to decrease in the forecast period.

The second-largest end use, metal mining, accounts for about 33% of the total. World consumption of explosives by this sector of the mining industry is projected to increase during the 2019–24 forecast period. Because metallic minerals are generally low-grade ores found only in geologically favorable areas of the world, consumption of explosives by this sector of the mining industry follows their geographical distribution.

Production of stone for construction and production of cement from quarrying operations accounts for an additional 16% of the world mining market for explosives. Consumption of explosives in quarrying materials is forecast to stagnate over the next five years, mainly because of an expected stagnation in this sector in China.

For more detailed information, see the table of contents, shown below.

IHS Markit's Chemical Economics Handbook – *Explosives and Blasting Agents* is the comprehensive and trusted guide for anyone seeking information on this industry. This latest report details global and regional information, including



Global summary;
regional coverage



Producers with
annual capacities
and plant sites



Production figures
and trends



Consumption and
forecasts by end use
application



Manufacturing
processes and
environmental issues



Trade – imports
and exports

Key Benefits

IHS Markit's Chemical Economics Handbook – *Explosives and Blasting Agents* has been compiled using primary interviews with key suppliers, organizations and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence, expert insights into industry dynamics, trade and economics.

This report can help you:

- Identify trends and driving forces influencing chemical markets
- Forecast and plan for future demand
- Understand the impact of competing materials
- Identify and evaluate potential customers and competitors
- Evaluate producers
- Track changing prices and trade movements

- Analyze the impact of feedstocks, regulations, and other factors on chemical profitability

Contents

Executive summary	9
Summary	10
Introduction	14
Ammonium nitrate–fuel oil (ANFO) explosives	15
Slurries and water gels	16
Explosive emulsions	16
ANFO versus emulsion explosives	16
Low explosives	17
High explosives	18
Alternative technologies	18
Industrial explosives	19
Military explosives	20
Environmental and security issues	21
Study methodology	22
Coal mining	22
Metal mining	22
Nonmetal mining and quarrying	22
Supply and demand by region	24
North America	24
– United States	24
– Producing companies	24
– Accurate Energetic Systems, LLC	25
– Apache Nitrogen Products, Inc.	25
– Austin Powder Company	25
– Bae Systems Ordnance Systems	26
– CF Industries (formerly Terra Industries)	26
– Dyno Nobel Inc.	26
– El Dorado Chemical Company	27
– Goex, Inc.	27
– Mining Services International (MSI)—Maxam International	27
– Nelson Brothers LLC	27
– Orica USA Inc.	28
– PCS Nitrogen, Inc.	28
– Consumption	28
– Industrial explosives	28
– Coal mining	37
– Metal mining	38
– Quarrying materials and nonmetal mining (industrial minerals)	40
– Construction	41
– Other industrial uses	43

– Marketing and distribution channels	44
– Customer purchase of ingredients	44
– Customer purchase of formulated/mixed products	44
– Customer purchase of formulated/mixed products and complete blasting services	44
– Price	45
– Explosive-grade AN	45
– ANFO and emulsions	46
– Trade	46
– Canada	48
– Producing companies	48
– Consumption	48
– Coal mining	51
– Metal mining	51
– Quarrying materials	51
– Industrial minerals (nonmetal mining)	51
– Price	51
– Trade	52
– Mexico	53
– Producing companies	53
– Consumption	53
– Metal mining	56
– Quarrying materials	56
– Coal mining	56
– Industrial minerals (nonmetal mining)	56
– Price	56
– Trade	56
Central and South America	58
– Producing companies	58
– Consumption	60
– Argentina	65
– Brazil	67
– Chile	69
– Colombia	71
– Peru	73
– Venezuela	75
– Other	77
– Price	79
– Trade	79
Europe	80
– Producing companies	81
– Consumption	86
– Albania	91
– Austria	93

– Belgium	95
– Bosnia and Herzegovina, Croatia, Serbia, and Montenegro	97
– Bulgaria	99
– Czech Republic	101
– Denmark	103
– Finland	105
– France	107
– Coal mining	109
– Metal mining	109
– Quarrying and nonmetal mining	109
– Germany	109
– Coal mining	111
– Metal mining	111
– Quarrying and nonmetal mining	111
– Greece	111
– Hungary	113
– Iceland	115
– Ireland	115
– Italy	117
– Metal mining	119
– Quarrying and nonmetal mining	119
– Malta	119
– Norway	119
– Poland	121
– Portugal	123
– Romania	125
– Slovakia	127
– Slovenia	129
– Spain	131
– Coal mining	133
– Metal mining	133
– Quarrying and nonmetal mining	133
– Sweden	133
– Metal mining	135
– Quarrying and nonmetal mining	135
– Switzerland	135
– United Kingdom	137
– Coal mining	139
– Quarrying and nonmetal mining	139
Commonwealth of Independent States (CIS)	139
– Producing companies	139
– Consumption	141
Middle East	143

– Producing companies	143
– Consumption	144
– Iran	146
– Coal mining	146
– Metal mining	147
– Quarrying and nonmetal mining	147
– Israel	147
– Turkey	147
– Metal mining	147
– Quarrying and nonmetal mining	147
– Other Middle East	148
Africa	148
– Producing companies	148
– Consumption	150
– Algeria	152
– Metal mining	154
– Quarrying and nonmetal mining	154
– Democratic Republic of the Congo	154
– Coal mining	156
– Metal mining	156
– Quarrying and nonmetal mining	156
– Egypt	156
– Metal mining	158
– Quarrying and nonmetal mining	158
– Morocco	158
– Coal mining	160
– Metal mining	160
– Quarrying and nonmetal mining	160
– Namibia	160
– Metal mining	162
– Quarrying and nonmetal mining	162
– South Africa	162
– Coal mining	164
– Metal mining	164
– Quarrying and nonmetal mining	164
– Zambia	164
– Metal mining	166
– Quarrying and nonmetal mining	166
– Zimbabwe	166
– Coal mining	168
– Metal mining	168
– Quarrying and nonmetal mining	168
– Other Africa	168

– Coal mining	170
– Metal mining	170
– Quarrying and nonmetal mining	170
Southwest Asia	173
– India	175
– Producing companies	175
– Consumption	177
– Coal mining	179
– Metal mining	179
– Quarrying and nonmetal mining	179
– Trade	179
– Pakistan	180
– Producing companies	180
– Consumption	180
– Other Southwest Asia	182
China	184
– Producing companies	184
– Salient statistics	187
– Production	188
– Consumption	189
– Coal mining	192
– Metal mining	192
– Quarrying and nonmetal mining	192
– Price	192
Japan	193
– Producing companies	193
– Salient statistics	193
– Production	194
– Consumption	195
– Coal mining	198
– Metal mining	198
– Quarrying and nonmetal mining	198
– Construction	198
– Price	198
– Trade	199
Southeast Asia	199
– Producing companies	199
– Consumption	201
– Indonesia	201
– Malaysia	203
– Myanmar	205
– North Korea	207
– Philippines	209

– South Korea	211
– Thailand	213
– Other Southeast Asia	215
Oceania	217
– Producing companies	217
– Consumption	218
– Australia	219
– Coal mining	221
– Metal mining	221
– Quarrying and nonmetal mining	221
– New Zealand	221
– Other Oceania	223
Additional resources	225
Revisions	226

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