



STRATEGIC BUSINESS PLAN

ISO/TC 256

EXECUTIVE SUMMARY

Main fields and the overall size of the markets addressed by the committee (committee's environment)

The scope of TC 256 is standardization in the field of colorants, i.e. pigments and dyestuffs, and extenders, including:

1. Terminology
2. Test methods
3. Specifications
4. Nanoscale pigments and extenders
5. Excluding: bath colouring of textiles with dyestuffs, rubber and rubber products

Benefits expected from the work of the ISO/TC (for a full description see section 3)

Standardization in the pigments, dyestuffs and extenders field is an essential means of reducing costs and to obtain unambiguous test results. The large number of standards on test methods in this field is a very effective basis for the introduction and improvement of quality management systems. As shown by some impressive examples within the last few years, the consequent use of standardized test methods within a company can cut down testing costs to a fraction of the original costs. Carefully written test methods improve the precision of the test results.

Specification standards of pigments, dyestuffs and extenders as raw materials support the trade of these materials.

Globally available harmonized standards benefit both the user (customer) and supplier (manufacturer) and provide a common set of consistent and high quality standards for a uniform understanding and eased communication, also in case of critical communication (e.g. complaints).

Efficient communication is essential and terminology standards are an important tool to achieve it.

Objectives of the ISO/TC (for a full description see section 5.1)

1. To develop, maintain and optimize a set of coherent standards for pigments, dyestuffs and extenders;
2. Elaboration of standards with requirements for performance and quality of pigments, dyestuffs and extenders;
3. Development of standards related to regulations.

The work programme of the committee is directed towards serving the global market and eliminating trade barriers whilst keeping close contact with the continuing changes in the industry and its user requirements. For this ISO/TC 256 works closely together with other ISO and CEN Technical Committees, industry associations and others to come to one globally accepted set of standards.

Strategies adopted to reach the Objectives (for a full description see section 5.2)

- The kind of standards are prioritized:
 - 1) Terminology standards,
 - 2) Test method standards,
 - 3) Assessment standards,
 - 4) Specification standards and
 - 5) Performance standards.
- To maintain and optimize a set of coherent standards ISO/TC 256 cooperates with the European technical committees for pigments and extenders (CEN/TC 298) and for nanotechnologies (ISO/TC 229 and CEN/TC 352), with other International technical committees where pigments, dyestuffs and extenders are affected or being used in the respective product, i.e. paints and varnishes (ISO/TC 35), plastics (ISO/TC 61), particle characterization including sieving (ISO/TC 24), rubber and rubber products (ISO/TC 45), cement and lime (ISO/TC 74), and other important bodies that are developing standards.
- The experience and standards of the technical committees dealing with nanotechnologies (ISO/TC 229 and CEN/TC 352) are shared and coordinated with ISO/TC 256.
- The experience and standards of the technical committees dealing with and using pigments, dyestuffs and extenders (see 5.2) are shared and coordinated with ISO/TC 256.
- To work efficiently and effectively, ISO/TC 256 organizes once a year a meeting in which as much as possible the meetings of working groups and the TC take place. In preparation of this work is done by correspondence.

1. INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: [ISO](#) (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of [IEC](#) (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of [ITU](#) (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 164 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the [International Standard](#).

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its [Technical Committees](#) are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2. BUSINESS ENVIRONMENT OF THE ISO/TC

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

The standardization work is intended for use in the pigment, dyestuff and extender producing industries as well as in the industries using pigments, dyestuffs and extenders in their products, mainly paints, plastics, printing inks, rubber and rubber products, concrete and

mortar, paper, fibres. Other interested parties are users of products containing pigments, dyestuffs and extenders((food, feed)). These parties may be all kinds of end-users of goods/articles coloured with pigments and dyestuffs or reinforced/modified with extenders.

Generally, the majority of **pigments/dyestuffs producers** are globally operating companies. The biggest companies are: Altana-Eckart, BASF, Clariant, Dow Chemical, Du Pont, DIC/SUN, Evonik, Huntsman, KRONOS International, Lanxess, Merck, Tioxide.

Producers of extenders are some multi-national companies and a number of smaller, sometimes more nationally oriented companies. However, these companies are concentrated in a relatively few countries only. Worldwide there are more than 500 companies in the market. Producers of particular extenders are located in many European countries having rather small production volumes.

The most important products of extenders are: Calcium carbonate, Barium sulfate, Silica, Talcum, Carbon Black, China Clay, Feldspar, Glassfibers and nanoparticulate extenders. **Users of pigments/dyestuffs and extenders** are globally operating companies and a wide variety of small or medium-sized enterprises, which is easily understandable in view of the many fields of application of such materials.

Information on the world market of pigments, dyestuffs and extenders is given in Tables 1 and 2.

Table 1 — World market of pigments, dyestuffs and extenders by regions

Product group	Tons/year	Estimated value 1000 EUR
Pigments		
World (year 2006)	7 400 000	13 000 000
Europe	2 700 000	4 800 000
Asia	2 000 000	3 500 000
North America	2 500 000	4 300 000
ROW	200 000	400 000
Dyestuffs		500 000
Extenders (year 2006)		
World	52 000 000	25 000 000
Europe	15 500 000	
Asia	19 000 000	
North America	13 500 000	

Table 2 — World market of pigments, dyestuffs and extenders by products

Product group	Tons/year	Estimated value 1 000 EUR
Pigments		
Titanium dioxide (2015)	5 500 000	8 900 000
Iron oxides (2016)	900 000	500 000
Inorganic coloured pigments (2006)	300 000	400 000
Carbon black pigments (2016)	915 000	680 000
Organic pigments (2006)	300 000	3 600 000
Effect pigments and functional pigments (2006)	30 000	300 000
Dyestuffs		500 000
Extenders		21 011 000 (2016, estimated)
Calcium carbonate (2008)	34 000 000	
Barium sulfate (2008)	100 000	
Silica (2013)	2 300 000	5 000 000 (2016)

Product group	Tons/year	Estimated value 1 000 EUR
Talc (2008)	2 000 000	
Carbon Black (2008)	10 000 000	
China clay (2008)	6 000 000	
Feldspar (2008)	2 000 000	

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

The percentage of total production of these materials used in the various fields of application is shown in Table 3.

Table 3 — Approximate percentage of total production of pigments, dyestuffs and extenders used in the various field of application within the scope of ISO/TC 256

Product group	Approximate percentage of total production used in					
	Paints/ coatings	Plastics	Printing inks/ toner	Paper	Construc tion	Others
Pigments						
Titanium dioxide	57	23	3	—	—	8
Inorganic coloured pigments	40	40	—	—	15	5
Carbon black pigments	4	69	13	—	—	14
Organic pigments	25	20	40	—	—	15
Iron oxide	26	5	—	3	48	18
Dyestuffs	10	15	10	—	—	65
Extenders (estimated)	15	20	—	55	—	10

3. BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC

Market Environment

Political, economical, social, technical, legal and international factors that either directly require some or all of the standardization activities proposed by the ISO/TC, or significantly influence the way these activities are carried out are the following:

Political factors

With more upcoming environmental issues standardization, e.g. of suitable methods of analysis for the determination of heavy metals or low amounts of organic substances as by-products, will become more essential to ensure the quality of the produced goods/articles for the end-user.

Economic factors

The benefit of standardization is estimated to about 1 % of the turnover. This is far away from the (relatively) low cost of standardization work.

The majority of producers of high quality pigments are located in Europe, however serving the worldwide market. Producers of dyestuffs are mostly located in Asia. Extenders are produced worldwide.

Savings are, in particular, to be expected by the use of standardized test methods. Standardized test methods are necessary as the basis for product specifications, safety data sheets, product certificates and quality management systems, and render a direct exchange of test results possible.

Technical factors

Changes in requirements for end-use applications of pigments, dyestuffs and extenders in the various fields influence standardization work.

Standardization work on test methods is influenced by more sophisticated analytical techniques.

Legal factors

Potential upcoming legislation and regulations concerning the use of pigments, dyestuffs and extenders need standardization to allow objective assessment.

4. REPRESENTATION AND PARTICIPATION IN THE ISO/TC

4.1 Membership

Countries/ISO member bodies that are P and O members of the ISO committee

4.2 Analysis of the participation

The principal players in this field (the industrialized countries) are represented. For ensuring the approval of NWIPs and the active participation, there is a need to increase the number of P-members and the number of active acting experts.

The economic partners involved in the work of the technical committee are:

- manufacturers of pigments, dyestuffs and extenders
- industrial users (e.g. paint industry, plastic and masterbatch industry, paper industry, printing ink industry, gauges manufacturers, building material producers, electronic industry)
- governments (in view of legislation and as user)
- private consumer organisations
- testing laboratories
- research institutes
- certifying bodies
- etc.

Presently it is not felt that a specific stakeholder lacks in participation.

5. OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 Defined objectives of the ISO/TC

The objective of ISO/TC 256 is to establish International Standards in the field of pigments, dyestuffs and extenders which reflect the needs of the interested parties and the actual practice in industry.

This standardization work includes:

1. Terminology
2. Nanotechnological properties of pigments and extenders

3. Test methods for colorants
4. Test methods and specifications for extenders
5. Specifications for colorants for plastics
6. Specifications for colorants for coating materials and printing inks
7. Functional pigments
8. Specifications for Pigments for all other applications

The objectives include the intention to follow technological changes by appropriate standardization work.

5.2 Identified strategies to achieve the ISO/TC's defined objectives

- First, ISO/TC 256 will develop test method standards for pigments, dyestuffs and extenders
- Second, ISO/TC 256 will produce terminology standards for efficient communication for all parties;
- Third, ISO/TC 256 will develop specification standards and performance standards.

To maintain and optimize a set of coherent standards ISO/TC 256 cooperates with the European technical committees for pigments and extenders (CEN/TC 298) and for nanotechnologies (CEN/TC 352), with other International technical committees where pigments, dyestuffs and extenders are affected or being used in the respective product, i.e. paints and varnishes (ISO/TC 35), plastics (ISO/TC 61), nanotechnologies (ISO/TC 229), particle characterization including sieving (ISO/TC 24), rubber and rubber products (ISO/TC 45) and other important bodies that are developing standards.

ISO/TC 256 and CEN/TC 298 cooperate through the Vienna Agreement. General test methods should be available for the global paint industry and are therefore developed within ISO/TC 256. Requests for general test methods within CEN/TC 298 are transferred to ISO/TC 256.

The experience and standards of the technical committees dealing with nanotechnologies are shared and co-ordinated with the pigments, dyestuffs and extenders committee.

To work efficiently and effectively, TC 256 organizes once a year a meeting week in which as much as possible the meetings of working groups, subcommittees and the TC take place. In preparation of this week a lot of work is done by correspondence.

6. FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

Conditions for successful pigments, dyestuffs and extenders standardization are:

1. Participation of experts dealing with the subject in their daily work. In practice, however, these experts are often over-loaded with work for their company and are therefore often not available for standardization work.
2. Availability of funding and laboratory facilities to provide new data requirements and to provide experimental backup to check precision comparisons of proposed standards.
3. With an increasingly global pigments, dyestuffs and extenders industry it becomes more difficult to find five P-members to participate in a project.

4. Adequate resources (e.g. funding) for help of professionals from standardization institutes, including the work of the secretariats. Proper application of the standardization rules, organization of efficient meetings and assistance in drafting unambiguous standards are indispensable.
5. Viewpoints should not differ fundamentally. Viewpoints can differ because of national education and habits, different commercial interests, different climates etc. Without a clear outline of the purpose of the standard and the commitment of all parties concerned a standard cannot be developed within a reasonable time schedule.

7. STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

This section gives an overview of the ISO/TC's structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardization projects, publication of the ISO/TC and its subcommittees.

Information on ISO online

The link below is to the TC's page on ISO's website:

[**ISO/TC 256 on ISO Online**](#)

Click on the tabs and links on this page to find the following information:

[**7.1 Structure of the ISO committee**](#)

[**7.2 Current projects of the ISO technical committee and its subcommittees**](#)

[**7.3 Publications of the ISO technical committee and its subcommittees**](#)

Reference information

[**Glossary of terms and abbreviations used in ISO/TC Business Plans**](#)

[**General information on the principles of ISO's technical work**](#)