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Graphic technology — Input data for characterization of 4-colour process printing —

Part 2:
Expanded data set

Technologie graphique — Données d'entrée pour caractérisation d'impression en quadrichromie —

Partie 2: Ensemble de données élargies

Reference number
ISO 12642-2:2006(E)

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO 12642-2 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

ISO 12642 consists of the following parts, under the general title *Graphic technology — Input data for characterization of 4-colour process printing*:

— *Part 1: Initial data set*

— *Part 2: Expanded data set*

This corrected version incorporates corrections to the manner in which the data is designated in 4.4.

Introduction

The existing characterization data set defined in ISO 12642-1 has proven very effective for use in characterizing various printing processes. Two concerns have been raised with respect to the ISO 12642-1 data set. First, many of those developing characterization data for colour management systems feel that additional data points are needed to provide better sampling of the data space. The second concern comes from the packaging industry which would like to see both more data points in general but also more data at the highlight end of the scale and in particular more 4-colour data with low levels of black.

Several drafts of a data set optimized for package printing (referred to as IT8.7/4) have been prepared by ANSI Committee for Graphic Arts Technologies Standards (CGATS). In addition, the European Colour Initiative (ECI) took an early draft and combined parts of it with the ISO 12642-1 data set and developed a data set known as ECI 2002 that has 1 485 data set elements. ECI 2002 has since been approved as DIN 16614:2004. The data set contained in this part of ISO 12642 adds a series of 4-colour overprints at the 10 % black level to the data set elements in the current ECI 2002 data set. It is believed that this combined data set can fill the general colour characterization needs of all segments of the industry.

During development of this part of ISO 12642, concerns were raised by the Japanese delegates concerning adequate representation of flesh tones. While additional flesh tones were not included in the standard data set, a 112-element flesh tone data set has been included in Annex B.

It is important to note that there will always be special applications where additional or special data will be needed because of the peculiarities of a process or critical colour needs in certain parts of the tone scale or colour space.

There is no required layout or patch size defined for the data set defined in this part of ISO 12642. Users are free to randomize the layout and/or "fit" it to the space available. However, the members of TC 130/WG 2 strongly believe that default layouts need to be defined so that electronic versions of the target can be made readily available. This will facilitate the use of this new data set by both users and colour management vendors. Accordingly, two default layouts are described in Annex A, i.e. one optimized for visual inspection, and the other randomized with the goal of uniform ink loading in each colour across the target area to minimize interaction between patch areas.

In addition, the reference files that are included in this part of ISO 12642 clearly identify the elements that represent the data set defined as ISO 12642-1:1996 (often referred to as IT8.7/3) and the data set defined in ECI 2002. These can both be easily extracted from and/or related to the larger data set where appropriate.

The International Organization for Standardization (ISO) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent (Japanese Patent No. 2554366) held by Konica Minolta.

ISO takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured ISO that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with ISO. Information may be obtained from:

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. ISO shall not be held responsible for identifying any or all such patent rights.

Graphic technology — Input data for characterization of 4-colour process printing —

Part 2: Expanded data set

1 Scope

This part of ISO 12642 defines a data set of ink value combinations that are intended to be used to characterize 4-colour process printing. This data set is not optimized for any printing process or application area but is robust enough for all general applications. The needs of publication, commercial, and package printing with offset, gravure, flexography, and other printing processes have been considered. While it is primarily aimed at process colour printing with CMYK inks, it can also be used with any combination of three chromatic coloured inks and a dark ink. It is an alternate to the ISO 12642-1 data set where more robust data is required.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 12642-1:1996, *Graphic technology — Input data for characterization of 4-colour process printing — Part 1: Initial data set*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
data set
total collection of independently identified ink value sets that are defined by this part of ISO 12642

NOTE   The terms patch and target are deliberately avoided because they imply a physical object or layout. This part of ISO 12642 only defines the data values which the user is free to arrange in any target layout that meets their needs using patches of any size compatible with their measuring equipment.

3.2
ink values
digital value that represents the amount of a colourant required in a rendering process

NOTE   For the half-tone printing process this is equivalent to the tone value/dot area of the half-tone film expressed as a percentage.

3.3
ink value set
set of four ink values representing the amount of the four colours to be used in a process colour area

1

4 Technical requirements

4.1 Data set characteristics

In order to meet the colour characterization needs of both the printing industry in general and the package printing industry, this data set needs to contain ink value sets that will provide sufficient detail in the highlight and shadow areas when printed using gravure, offset, flexographic and metal-decorating printing processes. In addition, this data set should be suitable for use with both traditional process colours as well as with three chromatic colours and a dark colour.

During the various development steps that led to the target defined in this standard, several groups of ink value sets (e.g. tone scales, grey balance, etc.) were identified. Those that are contained within the data set of this part of ISO 12642 are summarized in Table 1.

During evaluation of the requirements for this data set, a number of additional elements were considered. One group of these elements involved a regular array of flesh tone data. While these flesh tone data were not selected for inclusion in the defined data set, they were felt to be important enough to be documented as Annex B.

4.2 Data set definition

The groups of ink value sets of Table 1 have many individual sets of ink values that appear multiple times. Eliminating all duplicated sets would result in a composite data set of 1 588 ink value combinations. However, for any layouts that attempt to provide ease of visual inspection it is important to have symmetry within tone scales and within systematic 3-colour overprint arrays. This requires the presence of 29 duplicate ink value sets. These are the C, M, and Y single-colour data sets with tone values of 10 %, 20 %, 30 %, 40 %, 70 %, 85 %, and 100 % and the black single-colour data sets with tone values of 10 %, 20 %, 40 %, 60 %, 80 % and 100 %. In addition, there are two additional data set combinations assigned to paper to allow some flexibility in that area, particularly when the printing substrate is not traditional paper. This results in a total of 1 617 combinations.

Table 1 — Required groups of ink value sets

Group	Description
1	All combinations of 0 %, 10 %, 20 %, 30 %, 40 %, 55 %, 70 %, 85 %, 100 % in C, M and Y
2	All combinations of 0 %, 10 %, 20 %, 40 %, 70 % in C, M and Y with 10 % black All single-colour and 2-colour overprints at 100 % in C, M and Y with 10 % black
3	All combinations of 0 %, 10 %, 20 %, 40 %, 70 %, 100 % in C, M and Y with 20 % black
4	All combinations of 0 %, 20 %, 40 %, 70 %, 100 % in C, M and Y with 40 % black
5	All combinations of 0 %, 20 %, 40 %, 70 %, 100 % in C, M and Y with 60 % black
6	All 2-colour overprints at 40 % in C, M and Y with 70 % black All single colour and 2-colour overprints at 100 % in C, M and Y with 70 % black
7	All combinations of 0 %, 40 %, 70 %, 100 % in C, M and Y with 80 % black
8	All combinations of 0 %, 40 %, 100 % in C, M and Y with 100 % black
9	Near neutral combinations of C, M, Y as follows: 5 %, 3 %, 3 % with a black level of 0 % 10 %, 6 %, 6 % with black levels of 0 %, 10 %, 20 %, 40 %, 60 %, 80 %, 100 % 20 %, 12 %, 12 % with black levels of 0 %, 10 %, 20 %, 40 %, 60 %, 80 %, 100 % 40 %, 27 %, 27 % with black levels of 0 %, 10 %, 20 %, 40 %, 60 %, 80 %, 100 % 50 %, 40 %, 40 % with a black level of 0 % 60 %, 45 %, 45 % with black levels of 0 %, 20 %, 40 %, 60 %, 80 %, 100 % 80 %, 65 %, 65 % with black levels of 0 %, 40 %, 60 %, 80 %, 100 % 100 %, 85 %, 85 % with black levels of 0 %, 60 %, 80 %, 100 %
10	All combinations of 0 %, and 3 % in C, M, Y and K
11	All combinations of 0 %, and 7 % in C, M, Y and K
12	All combinations of 0 %, 3 %, and 40 % in C, M, Y and K
13	Single-colour scales in C, M, Y, and K with values of 100 %, 98 %, 95 %, 90 %, 85 %, 80 %, 75 %, 70 %, 60 %, 50 %, 40 %, 30 %, 25 %, 20 %, 15 %, 10 %, 7 %, 5 %, 3 %, 2 %, 0 %

Table 2, and the data file 12642-2_summary.csv accompanying this part of ISO 12642, lists the ID numbers and their associated CMYK ink values that shall constitute this characterization data set. Within this listing ink value data sets numbers 1 to 1485 are taken directly from the ECI 2002 specification [1].

NOTE 1   For convenience, separate ID numbers were assigned to the duplicated ink value sets noted above.

Users are cautioned that, while the data in Table 2 may be included in application software and reproduced as part of reports generated by such applications, reproduction of these data separate from accompanying measurement or layout data is a violation of ISO copyright.

NOTE 2   The 1 617 ink value data sets include all ink value combinations of the ECI data set (see Introduction) as well as all ink value combinations included in the original ISO 12642-1 data set, but not the duplicate ink value sets of the ISO 12642-1 data set.

NOTE 3   DIN 16614:2004 (ECI 2002) does not contain all of the ink value sets of Group 2 and it does not contain the near neutral combinations of 50 %, 40 %, 40 % with black.

Table 3, and the data file 12642-1_vs_12642-2.csv, tabulates the relationship between the ink value sets used in ISO 12642-1 and those defined in this part of ISO 12642. Patch IDs 1 to 1485 of this data set have the same ink value combinations as the comparable patch IDs of the ECI 2002 (DIN 16614:2004) data set.

4.3   Layouts for printing

The 1 617 ink value sets may be printed in any arrangement desired. For any specific arrangement, a table defining the relationship between row-column position and ID number shall be provided.

Although there is no requirement that any particular arrangement of these data be used for printing characterization targets, it was felt that default layouts were desirable to facilitate use of the target in many applications. Accordingly, two default layouts are defined in Annex A. One is for "visual" use where the patches are arranged in logical groups. In a second layout, the patches are randomized to minimize the influence of the target arrangement itself on the final results. Figures A.1 and A.2 illustrate the appearance of the default visual and random layouts.

NOTE   The data file 12642-2_default.csv provides the relationship between row-column position and ID number for the two default layouts included in Annex A.

4.4   Data set identification

It is recommended that where data derived from this target is exchanged, that data representing:

— the full 1 617 data values of ISO 12642-2 be designated by: **ISO12642-2**

— the first 1 485 data values of ISO 12642-2 be designated by: **ECI2002**

— the ISO 12642-1 data created from ISO 12642-2 be designated by: **ISO12642-1**

— the flesh tone data of Annex B be designated by: **ISO12642-2AnnexB**

Table 2 — Ink value combinations versus identification number (ID No.)

ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K
1	0	0	0	0	45	40	100	0	0	89	0	85	10	0
2	0	10	0	0	46	55	0	0	0	90	0	100	10	0
3	0	20	0	0	47	55	10	0	0	91	10	0	10	0
4	0	30	0	0	48	55	20	0	0	92	10	10	10	0
5	0	40	0	0	49	55	30	0	0	93	10	20	10	0
6	0	55	0	0	50	55	40	0	0	94	10	30	10	0
7	0	70	0	0	51	55	55	0	0	95	10	40	10	0
8	0	85	0	0	52	55	70	0	0	96	10	55	10	0
9	0	100	0	0	53	55	85	0	0	97	10	70	10	0
10	10	0	0	0	54	55	100	0	0	98	10	85	10	0
11	10	10	0	0	55	70	0	0	0	99	10	100	10	0
12	10	20	0	0	56	70	10	0	0	100	20	0	10	0
13	10	30	0	0	57	70	20	0	0	101	20	10	10	0
14	10	40	0	0	58	70	30	0	0	102	20	20	10	0
15	10	55	0	0	59	70	40	0	0	103	20	30	10	0
16	10	70	0	0	60	70	55	0	0	104	20	40	10	0
17	10	85	0	0	61	70	70	0	0	105	20	55	10	0
18	10	100	0	0	62	70	85	0	0	106	20	70	10	0
19	20	0	0	0	63	70	100	0	0	107	20	85	10	0
20	20	10	0	0	64	85	0	0	0	108	20	100	10	0
21	20	20	0	0	65	85	10	0	0	109	30	0	10	0
22	20	30	0	0	66	85	20	0	0	110	30	10	10	0
23	20	40	0	0	67	85	30	0	0	111	30	20	10	0
24	20	55	0	0	68	85	40	0	0	112	30	30	10	0
25	20	70	0	0	69	85	55	0	0	113	30	40	10	0
26	20	85	0	0	70	85	70	0	0	114	30	55	10	0
27	20	100	0	0	71	85	85	0	0	115	30	70	10	0
28	30	0	0	0	72	85	100	0	0	116	30	85	10	0
29	30	10	0	0	73	100	0	0	0	117	30	100	10	0
30	30	20	0	0	74	100	10	0	0	118	40	0	10	0
31	30	30	0	0	75	100	20	0	0	119	40	10	10	0
32	30	40	0	0	76	100	30	0	0	120	40	20	10	0
33	30	55	0	0	77	100	40	0	0	121	40	30	10	0
34	30	70	0	0	78	100	55	0	0	122	40	40	10	0
35	30	85	0	0	79	100	70	0	0	123	40	55	10	0
36	30	100	0	0	80	100	85	0	0	124	40	70	10	0
37	40	0	0	0	81	100	100	0	0	125	40	85	10	0
38	40	10	0	0	82	0	0	10	0	126	40	100	10	0
39	40	20	0	0	83	0	10	10	0	127	55	0	10	0
40	40	30	0	0	84	0	20	10	0	128	55	10	10	0
41	40	40	0	0	85	0	30	10	0	129	55	20	10	0
42	40	55	0	0	86	0	40	10	0	130	55	30	10	0
43	40	70	0	0	87	0	55	10	0	131	55	40	10	0
44	40	85	0	0	88	0	70	10	0	132	55	55	10	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
133	55	70	10	0
134	55	85	10	0
135	55	100	10	0
136	70	0	10	0
137	70	10	10	0
138	70	20	10	0
139	70	30	10	0
140	70	40	10	0
141	70	55	10	0
142	70	70	10	0
143	70	85	10	0
144	70	100	10	0
145	85	0	10	0
146	85	10	10	0
147	85	20	10	0
148	85	30	10	0
149	85	40	10	0
150	85	55	10	0
151	85	70	10	0
152	85	85	10	0
153	85	100	10	0
154	100	0	10	0
155	100	10	10	0
156	100	20	10	0
157	100	30	10	0
158	100	40	10	0
159	100	55	10	0
160	100	70	10	0
161	100	85	10	0
162	100	100	10	0
163	0	0	20	0
164	0	10	20	0
165	0	20	20	0
166	0	30	20	0
167	0	40	20	0
168	0	55	20	0
169	0	70	20	0
170	0	85	20	0
171	0	100	20	0
172	10	0	20	0
173	10	10	20	0
174	10	20	20	0
175	10	30	20	0
176	10	40	20	0

ID No.	% C	% M	% Y	% K
177	10	55	20	0
178	10	70	20	0
179	10	85	20	0
180	10	100	20	0
181	20	0	20	0
182	20	10	20	0
183	20	20	20	0
184	20	30	20	0
185	20	40	20	0
186	20	55	20	0
187	20	70	20	0
188	20	85	20	0
189	20	100	20	0
190	30	0	20	0
191	30	10	20	0
192	30	20	20	0
193	30	30	20	0
194	30	40	20	0
195	30	55	20	0
196	30	70	20	0
197	30	85	20	0
198	30	100	20	0
199	40	0	20	0
200	40	10	20	0
201	40	20	20	0
202	40	30	20	0
203	40	40	20	0
204	40	55	20	0
205	40	70	20	0
206	40	85	20	0
207	40	100	20	0
208	55	0	20	0
209	55	10	20	0
210	55	20	20	0
211	55	30	20	0
212	55	40	20	0
213	55	55	20	0
214	55	70	20	0
215	55	85	20	0
216	55	100	20	0
217	70	0	20	0
218	70	10	20	0
219	70	20	20	0
220	70	30	20	0

ID No.	% C	% M	% Y	% K
221	70	40	20	0
222	70	55	20	0
223	70	70	20	0
224	70	85	20	0
225	70	100	20	0
226	85	0	20	0
227	85	10	20	0
228	85	20	20	0
229	85	30	20	0
230	85	40	20	0
231	85	55	20	0
232	85	70	20	0
233	85	85	20	0
234	85	100	20	0
235	100	0	20	0
236	100	10	20	0
237	100	20	20	0
238	100	30	20	0
239	100	40	20	0
240	100	55	20	0
241	100	70	20	0
242	100	85	20	0
243	100	100	20	0
244	0	0	30	0
245	0	10	30	0
246	0	20	30	0
247	0	30	30	0
248	0	40	30	0
249	0	55	30	0
250	0	70	30	0
251	0	85	30	0
252	0	100	30	0
253	10	0	30	0
254	10	10	30	0
255	10	20	30	0
256	10	30	30	0
257	10	40	30	0
258	10	55	30	0
259	10	70	30	0
260	10	85	30	0
261	10	100	30	0
262	20	0	30	0
263	20	10	30	0
264	20	20	30	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
265	20	30	30	0
266	20	40	30	0
267	20	55	30	0
268	20	70	30	0
269	20	85	30	0
270	20	100	30	0
271	30	0	30	0
272	30	10	30	0
273	30	20	30	0
274	30	30	30	0
275	30	40	30	0
276	30	55	30	0
277	30	70	30	0
278	30	85	30	0
279	30	100	30	0
280	40	0	30	0
281	40	10	30	0
282	40	20	30	0
283	40	30	30	0
284	40	40	30	0
285	40	55	30	0
286	40	70	30	0
287	40	85	30	0
288	40	100	30	0
289	55	0	30	0
290	55	10	30	0
291	55	20	30	0
292	55	30	30	0
293	55	40	30	0
294	55	55	30	0
295	55	70	30	0
296	55	85	30	0
297	55	100	30	0
298	70	0	30	0
299	70	10	30	0
300	70	20	30	0
301	70	30	30	0
302	70	40	30	0
303	70	55	30	0
304	70	70	30	0
305	70	85	30	0
306	70	100	30	0
307	85	0	30	0
308	85	10	30	0

ID No.	% C	% M	% Y	% K
309	85	20	30	0
310	85	30	30	0
311	85	40	30	0
312	85	55	30	0
313	85	70	30	0
314	85	85	30	0
315	85	100	30	0
316	100	0	30	0
317	100	10	30	0
318	100	20	30	0
319	100	30	30	0
320	100	40	30	0
321	100	55	30	0
322	100	70	30	0
323	100	85	30	0
324	100	100	30	0
325	0	0	40	0
326	0	10	40	0
327	0	20	40	0
328	0	30	40	0
329	0	40	40	0
330	0	55	40	0
331	0	70	40	0
332	0	85	40	0
333	0	100	40	0
334	10	0	40	0
335	10	10	40	0
336	10	20	40	0
337	10	30	40	0
338	10	40	40	0
339	10	55	40	0
340	10	70	40	0
341	10	85	40	0
342	10	100	40	0
343	20	0	40	0
344	20	10	40	0
345	20	20	40	0
346	20	30	40	0
347	20	40	40	0
348	20	55	40	0
349	20	70	40	0
350	20	85	40	0
351	20	100	40	0
352	30	0	40	0

ID No.	% C	% M	% Y	% K
353	30	10	40	0
354	30	20	40	0
355	30	30	40	0
356	30	40	40	0
357	30	55	40	0
358	30	70	40	0
359	30	85	40	0
360	30	100	40	0
361	40	0	40	0
362	40	10	40	0
363	40	20	40	0
364	40	30	40	0
365	40	40	40	0
366	40	55	40	0
367	40	70	40	0
368	40	85	40	0
369	40	100	40	0
370	55	0	40	0
371	55	10	40	0
372	55	20	40	0
373	55	30	40	0
374	55	40	40	0
375	55	55	40	0
376	55	70	40	0
377	55	85	40	0
378	55	100	40	0
379	70	0	40	0
380	70	10	40	0
381	70	20	40	0
382	70	30	40	0
383	70	40	40	0
384	70	55	40	0
385	70	70	40	0
386	70	85	40	0
387	70	100	40	0
388	85	0	40	0
389	85	10	40	0
390	85	20	40	0
391	85	30	40	0
392	85	40	40	0
393	85	55	40	0
394	85	70	40	0
395	85	85	40	0
396	85	100	40	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K
397	100	0	40	0	441	30	100	55	0	485	100	85	55	0
398	100	10	40	0	442	40	0	55	0	486	100	100	55	0
399	100	20	40	0	443	40	10	55	0	487	0	0	70	0
400	100	30	40	0	444	40	20	55	0	488	0	10	70	0
401	100	40	40	0	445	40	30	55	0	489	0	20	70	0
402	100	55	40	0	446	40	40	55	0	490	0	30	70	0
403	100	70	40	0	447	40	55	55	0	491	0	40	70	0
404	100	85	40	0	448	40	70	55	0	492	0	55	70	0
405	100	100	40	0	449	40	85	55	0	493	0	70	70	0
406	0	0	55	0	450	40	100	55	0	494	0	85	70	0
407	0	10	55	0	451	55	0	55	0	495	0	100	70	0
408	0	20	55	0	452	55	10	55	0	496	10	0	70	0
409	0	30	55	0	453	55	20	55	0	497	10	10	70	0
410	0	40	55	0	454	55	30	55	0	498	10	20	70	0
411	0	55	55	0	455	55	40	55	0	499	10	30	70	0
412	0	70	55	0	456	55	55	55	0	500	10	40	70	0
413	0	85	55	0	457	55	70	55	0	501	10	55	70	0
414	0	100	55	0	458	55	85	55	0	502	10	70	70	0
415	10	0	55	0	459	55	100	55	0	503	10	85	70	0
416	10	10	55	0	460	70	0	55	0	504	10	100	70	0
417	10	20	55	0	461	70	10	55	0	505	20	0	70	0
418	10	30	55	0	462	70	20	55	0	506	20	10	70	0
419	10	40	55	0	463	70	30	55	0	507	20	20	70	0
420	10	55	55	0	464	70	40	55	0	508	20	30	70	0
421	10	70	55	0	465	70	55	55	0	509	20	40	70	0
422	10	85	55	0	466	70	70	55	0	510	20	55	70	0
423	10	100	55	0	467	70	85	55	0	511	20	70	70	0
424	20	0	55	0	468	70	100	55	0	512	20	85	70	0
425	20	10	55	0	469	85	0	55	0	513	20	100	70	0
426	20	20	55	0	470	85	10	55	0	514	30	0	70	0
427	20	30	55	0	471	85	20	55	0	515	30	10	70	0
428	20	40	55	0	472	85	30	55	0	516	30	20	70	0
429	20	55	55	0	473	85	40	55	0	517	30	30	70	0
430	20	70	55	0	474	85	55	55	0	518	30	40	70	0
431	20	85	55	0	475	85	70	55	0	519	30	55	70	0
432	20	100	55	0	476	85	85	55	0	520	30	70	70	0
433	30	0	55	0	477	85	100	55	0	521	30	85	70	0
434	30	10	55	0	478	100	0	55	0	522	30	100	70	0
435	30	20	55	0	479	100	10	55	0	523	40	0	70	0
436	30	30	55	0	480	100	20	55	0	524	40	10	70	0
437	30	40	55	0	481	100	30	55	0	525	40	20	70	0
438	30	55	55	0	482	100	40	55	0	526	40	30	70	0
439	30	70	55	0	483	100	55	55	0	527	40	40	70	0
440	30	85	55	0	484	100	70	55	0	528	40	55	70	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
529	40	70	70	0
530	40	85	70	0
531	40	100	70	0
532	55	0	70	0
533	55	10	70	0
534	55	20	70	0
535	55	30	70	0
536	55	40	70	0
537	55	55	70	0
538	55	70	70	0
539	55	85	70	0
540	55	100	70	0
541	70	0	70	0
542	70	10	70	0
543	70	20	70	0
544	70	30	70	0
545	70	40	70	0
546	70	55	70	0
547	70	70	70	0
548	70	85	70	0
549	70	100	70	0
550	85	0	70	0
551	85	10	70	0
552	85	20	70	0
553	85	30	70	0
554	85	40	70	0
555	85	55	70	0
556	85	70	70	0
557	85	85	70	0
558	85	100	70	0
559	100	0	70	0
560	100	10	70	0
561	100	20	70	0
562	100	30	70	0
563	100	40	70	0
564	100	55	70	0
565	100	70	70	0
566	100	85	70	0
567	100	100	70	0
568	0	0	85	0
569	0	10	85	0
570	0	20	85	0
571	0	30	85	0
572	0	40	85	0

ID No.	% C	% M	% Y	% K
573	0	55	85	0
574	0	70	85	0
575	0	85	85	0
576	0	100	85	0
577	10	0	85	0
578	10	10	85	0
579	10	20	85	0
580	10	30	85	0
581	10	40	85	0
582	10	55	85	0
583	10	70	85	0
584	10	85	85	0
585	10	100	85	0
586	20	0	85	0
587	20	10	85	0
588	20	20	85	0
589	20	30	85	0
590	20	40	85	0
591	20	55	85	0
592	20	70	85	0
593	20	85	85	0
594	20	100	85	0
595	30	0	85	0
596	30	10	85	0
597	30	20	85	0
598	30	30	85	0
599	30	40	85	0
600	30	55	85	0
601	30	70	85	0
602	30	85	85	0
603	30	100	85	0
604	40	0	85	0
605	40	10	85	0
606	40	20	85	0
607	40	30	85	0
608	40	40	85	0
609	40	55	85	0
610	40	70	85	0
611	40	85	85	0
612	40	100	85	0
613	55	0	85	0
614	55	10	85	0
615	55	20	85	0
616	55	30	85	0

ID No.	% C	% M	% Y	% K
617	55	40	85	0
618	55	55	85	0
619	55	70	85	0
620	55	85	85	0
621	55	100	85	0
622	70	0	85	0
623	70	10	85	0
624	70	20	85	0
625	70	30	85	0
626	70	40	85	0
627	70	55	85	0
628	70	70	85	0
629	70	85	85	0
630	70	100	85	0
631	85	0	85	0
632	85	10	85	0
633	85	20	85	0
634	85	30	85	0
635	85	40	85	0
636	85	55	85	0
637	85	70	85	0
638	85	85	85	0
639	85	100	85	0
640	100	0	85	0
641	100	10	85	0
642	100	20	85	0
643	100	30	85	0
644	100	40	85	0
645	100	55	85	0
646	100	70	85	0
647	100	85	85	0
648	100	100	85	0
649	0	0	100	0
650	0	10	100	0
651	0	20	100	0
652	0	30	100	0
653	0	40	100	0
654	0	55	100	0
655	0	70	100	0
656	0	85	100	0
657	0	100	100	0
658	10	0	100	0
659	10	10	100	0
660	10	20	100	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
661	10	30	100	0
662	10	40	100	0
663	10	55	100	0
664	10	70	100	0
665	10	85	100	0
666	10	100	100	0
667	20	0	100	0
668	20	10	100	0
669	20	20	100	0
670	20	30	100	0
671	20	40	100	0
672	20	55	100	0
673	20	70	100	0
674	20	85	100	0
675	20	100	100	0
676	30	0	100	0
677	30	10	100	0
678	30	20	100	0
679	30	30	100	0
680	30	40	100	0
681	30	55	100	0
682	30	70	100	0
683	30	85	100	0
684	30	100	100	0
685	40	0	100	0
686	40	10	100	0
687	40	20	100	0
688	40	30	100	0
689	40	40	100	0
690	40	55	100	0
691	40	70	100	0
692	40	85	100	0
693	40	100	100	0
694	55	0	100	0
695	55	10	100	0
696	55	20	100	0
697	55	30	100	0
698	55	40	100	0
699	55	55	100	0
700	55	70	100	0
701	55	85	100	0
702	55	100	100	0
703	70	0	100	0
704	70	10	100	0

ID No.	% C	% M	% Y	% K
705	70	20	100	0
706	70	30	100	0
707	70	40	100	0
708	70	55	100	0
709	70	70	100	0
710	70	85	100	0
711	70	100	100	0
712	85	0	100	0
713	85	10	100	0
714	85	20	100	0
715	85	30	100	0
716	85	40	100	0
717	85	55	100	0
718	85	70	100	0
719	85	85	100	0
720	85	100	100	0
721	100	0	100	0
722	100	10	100	0
723	100	20	100	0
724	100	30	100	0
725	100	40	100	0
726	100	55	100	0
727	100	70	100	0
728	100	85	100	0
729	100	100	100	0
730	0	0	0	20
731	0	10	0	20
732	0	20	0	20
733	0	40	0	20
734	0	70	0	20
735	0	100	0	20
736	10	0	0	20
737	10	10	0	20
738	10	20	0	20
739	10	40	0	20
740	10	70	0	20
741	10	100	0	20
742	20	0	0	20
743	20	10	0	20
744	20	20	0	20
745	20	40	0	20
746	20	70	0	20
747	20	100	0	20
748	40	0	0	20

ID No.	% C	% M	% Y	% K
749	40	10	0	20
750	40	20	0	20
751	40	40	0	20
752	40	70	0	20
753	40	100	0	20
754	70	0	0	20
755	70	10	0	20
756	70	20	0	20
757	70	40	0	20
758	70	70	0	20
759	70	100	0	20
760	100	0	0	20
761	100	10	0	20
762	100	20	0	20
763	100	40	0	20
764	100	70	0	20
765	100	100	0	20
766	0	0	10	20
767	0	10	10	20
768	0	20	10	20
769	0	40	10	20
770	0	70	10	20
771	0	100	10	20
772	10	0	10	20
773	10	10	10	20
774	10	20	10	20
775	10	40	10	20
776	10	70	10	20
777	10	100	10	20
778	20	0	10	20
779	20	10	10	20
780	20	20	10	20
781	20	40	10	20
782	20	70	10	20
783	20	100	10	20
784	40	0	10	20
785	40	10	10	20
786	40	20	10	20
787	40	40	10	20
788	40	70	10	20
789	40	100	10	20
790	70	0	10	20
791	70	10	10	20
792	70	20	10	20

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
793	70	40	10	20
794	70	70	10	20
795	70	100	10	20
796	100	0	10	20
797	100	10	10	20
798	100	20	10	20
799	100	40	10	20
800	100	70	10	20
801	100	100	10	20
802	0	0	20	20
803	0	10	20	20
804	0	20	20	20
805	0	40	20	20
806	0	70	20	20
807	0	100	20	20
808	10	0	20	20
809	10	10	20	20
810	10	20	20	20
811	10	40	20	20
812	10	70	20	20
813	10	100	20	20
814	20	0	20	20
815	20	10	20	20
816	20	20	20	20
817	20	40	20	20
818	20	70	20	20
819	20	100	20	20
820	40	0	20	20
821	40	10	20	20
822	40	20	20	20
823	40	40	20	20
824	40	70	20	20
825	40	100	20	20
826	70	0	20	20
827	70	10	20	20
828	70	20	20	20
829	70	40	20	20
830	70	70	20	20
831	70	100	20	20
832	100	0	20	20
833	100	10	20	20
834	100	20	20	20
835	100	40	20	20
836	100	70	20	20

ID No.	% C	% M	% Y	% K
837	100	100	20	20
838	0	0	40	20
839	0	10	40	20
840	0	20	40	20
841	0	40	40	20
842	0	70	40	20
843	0	100	40	20
844	10	0	40	20
845	10	10	40	20
846	10	20	40	20
847	10	40	40	20
848	10	70	40	20
849	10	100	40	20
850	20	0	40	20
851	20	10	40	20
852	20	20	40	20
853	20	40	40	20
854	20	70	40	20
855	20	100	40	20
856	40	0	40	20
857	40	10	40	20
858	40	20	40	20
859	40	40	40	20
860	40	70	40	20
861	40	100	40	20
862	70	0	40	20
863	70	10	40	20
864	70	20	40	20
865	70	40	40	20
866	70	70	40	20
867	70	100	40	20
868	100	0	40	20
869	100	10	40	20
870	100	20	40	20
871	100	40	40	20
872	100	70	40	20
873	100	100	40	20
874	0	0	70	20
875	0	10	70	20
876	0	20	70	20
877	0	40	70	20
878	0	70	70	20
879	0	100	70	20
880	10	0	70	20

ID No.	% C	% M	% Y	% K
881	10	10	70	20
882	10	20	70	20
883	10	40	70	20
884	10	70	70	20
885	10	100	70	20
886	20	0	70	20
887	20	10	70	20
888	20	20	70	20
889	20	40	70	20
890	20	70	70	20
891	20	100	70	20
892	40	0	70	20
893	40	10	70	20
894	40	20	70	20
895	40	40	70	20
896	40	70	70	20
897	40	100	70	20
898	70	0	70	20
899	70	10	70	20
900	70	20	70	20
901	70	40	70	20
902	70	70	70	20
903	70	100	70	20
904	100	0	70	20
905	100	10	70	20
906	100	20	70	20
907	100	40	70	20
908	100	70	70	20
909	100	100	70	20
910	0	0	100	20
911	0	10	100	20
912	0	20	100	20
913	0	40	100	20
914	0	70	100	20
915	0	100	100	20
916	10	0	100	20
917	10	10	100	20
918	10	20	100	20
919	10	40	100	20
920	10	70	100	20
921	10	100	100	20
922	20	0	100	20
923	20	10	100	20
924	20	20	100	20

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
925	20	40	100	20
926	20	70	100	20
927	20	100	100	20
928	40	0	100	20
929	40	10	100	20
930	40	20	100	20
931	40	40	100	20
932	40	70	100	20
933	40	100	100	20
934	70	0	100	20
935	70	10	100	20
936	70	20	100	20
937	70	40	100	20
938	70	70	100	20
939	70	100	100	20
940	100	0	100	20
941	100	10	100	20
942	100	20	100	20
943	100	40	100	20
944	100	70	100	20
945	100	100	100	20
946	0	0	0	40
947	0	20	0	40
948	0	40	0	40
949	0	70	0	40
950	0	100	0	40
951	20	0	0	40
952	20	20	0	40
953	20	40	0	40
954	20	70	0	40
955	20	100	0	40
956	40	0	0	40
957	40	20	0	40
958	40	40	0	40
959	40	70	0	40
960	40	100	0	40
961	70	0	0	40
962	70	20	0	40
963	70	40	0	40
964	70	70	0	40
965	70	100	0	40
966	100	0	0	40
967	100	20	0	40
968	100	40	0	40

ID No.	% C	% M	% Y	% K
969	100	70	0	40
970	100	100	0	40
971	0	0	20	40
972	0	20	20	40
973	0	40	20	40
974	0	70	20	40
975	0	100	20	40
976	20	0	20	40
977	20	20	20	40
978	20	40	20	40
979	20	70	20	40
980	20	100	20	40
981	40	0	20	40
982	40	20	20	40
983	40	40	20	40
984	40	70	20	40
985	40	100	20	40
986	70	0	20	40
987	70	20	20	40
988	70	40	20	40
989	70	70	20	40
990	70	100	20	40
991	100	0	20	40
992	100	20	20	40
993	100	40	20	40
994	100	70	20	40
995	100	100	20	40
996	0	0	40	40
997	0	20	40	40
998	0	40	40	40
999	0	70	40	40
1000	0	100	40	40
1001	20	0	40	40
1002	20	20	40	40
1003	20	40	40	40
1004	20	70	40	40
1005	20	100	40	40
1006	40	0	40	40
1007	40	20	40	40
1008	40	40	40	40
1009	40	70	40	40
1010	40	100	40	40
1011	70	0	40	40
1012	70	20	40	40

ID No.	% C	% M	% Y	% K
1013	70	40	40	40
1014	70	70	40	40
1015	70	100	40	40
1016	100	0	40	40
1017	100	20	40	40
1018	100	40	40	40
1019	100	70	40	40
1020	100	100	40	40
1021	0	0	70	40
1022	0	20	70	40
1023	0	40	70	40
1024	0	70	70	40
1025	0	100	70	40
1026	20	0	70	40
1027	20	20	70	40
1028	20	40	70	40
1029	20	70	70	40
1030	20	100	70	40
1031	40	0	70	40
1032	40	20	70	40
1033	40	40	70	40
1034	40	70	70	40
1035	40	100	70	40
1036	70	0	70	40
1037	70	20	70	40
1038	70	40	70	40
1039	70	70	70	40
1040	70	100	70	40
1041	100	0	70	40
1042	100	20	70	40
1043	100	40	70	40
1044	100	70	70	40
1045	100	100	70	40
1046	0	0	100	40
1047	0	20	100	40
1048	0	40	100	40
1049	0	70	100	40
1050	0	100	100	40
1051	20	0	100	40
1052	20	20	100	40
1053	20	40	100	40
1054	20	70	100	40
1055	20	100	100	40
1056	40	0	100	40

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K
1057	40	20	100	40	1101	20	0	20	60	1145	100	100	40	60
1058	40	40	100	40	1102	20	20	20	60	1146	0	0	70	60
1059	40	70	100	40	1103	20	40	20	60	1147	0	20	70	60
1060	40	100	100	40	1104	20	70	20	60	1148	0	40	70	60
1061	70	0	100	40	1105	20	100	20	60	1149	0	70	70	60
1062	70	20	100	40	1106	40	0	20	60	1150	0	100	70	60
1063	70	40	100	40	1107	40	20	20	60	1151	20	0	70	60
1064	70	70	100	40	1108	40	40	20	60	1152	20	20	70	60
1065	70	100	100	40	1109	40	70	20	60	1153	20	40	70	60
1066	100	0	100	40	1110	40	100	20	60	1154	20	70	70	60
1067	100	20	100	40	1111	70	0	20	60	1155	20	100	70	60
1068	100	40	100	40	1112	70	20	20	60	1156	40	0	70	60
1069	100	70	100	40	1113	70	40	20	60	1157	40	20	70	60
1070	100	100	100	40	1114	70	70	20	60	1158	40	40	70	60
1071	0	0	0	60	1115	70	100	20	60	1159	40	70	70	60
1072	0	20	0	60	1116	100	0	20	60	1160	40	100	70	60
1073	0	40	0	60	1117	100	20	20	60	1161	70	0	70	60
1074	0	70	0	60	1118	100	40	20	60	1162	70	20	70	60
1075	0	100	0	60	1119	100	70	20	60	1163	70	40	70	60
1076	20	0	0	60	1120	100	100	20	60	1164	70	70	70	60
1077	20	20	0	60	1121	0	0	40	60	1165	70	100	70	60
1078	20	40	0	60	1122	0	20	40	60	1166	100	0	70	60
1079	20	70	0	60	1123	0	40	40	60	1167	100	20	70	60
1080	20	100	0	60	1124	0	70	40	60	1168	100	40	70	60
1081	40	0	0	60	1125	0	100	40	60	1169	100	70	70	60
1082	40	20	0	60	1126	20	0	40	60	1170	100	100	70	60
1083	40	40	0	60	1127	20	20	40	60	1171	0	0	100	60
1084	40	70	0	60	1128	20	40	40	60	1172	0	20	100	60
1085	40	100	0	60	1129	20	70	40	60	1173	0	40	100	60
1086	70	0	0	60	1130	20	100	40	60	1174	0	70	100	60
1087	70	20	0	60	1131	40	0	40	60	1175	0	100	100	60
1088	70	40	0	60	1132	40	20	40	60	1176	20	0	100	60
1089	70	70	0	60	1133	40	40	40	60	1177	20	20	100	60
1090	70	100	0	60	1134	40	70	40	60	1178	20	40	100	60
1091	100	0	0	60	1135	40	100	40	60	1179	20	70	100	60
1092	100	20	0	60	1136	70	0	40	60	1180	20	100	100	60
1093	100	40	0	60	1137	70	20	40	60	1181	40	0	100	60
1094	100	70	0	60	1138	70	40	40	60	1182	40	20	100	60
1095	100	100	0	60	1139	70	70	40	60	1183	40	40	100	60
1096	0	0	20	60	1140	70	100	40	60	1184	40	70	100	60
1097	0	20	20	60	1141	100	0	40	60	1185	40	100	100	60
1098	0	40	20	60	1142	100	20	40	60	1186	70	0	100	60
1099	0	70	20	60	1143	100	40	40	60	1187	70	20	100	60
1100	0	100	20	60	1144	100	70	40	60	1188	70	40	100	60

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K	ID No.	% C	% M	% Y	% K
1189	70	70	100	60	1233	40	40	70	80	1277	100	100	40	100
1190	70	100	100	60	1234	40	70	70	80	1278	0	0	100	100
1191	100	0	100	60	1235	40	100	70	80	1279	0	40	100	100
1192	100	20	100	60	1236	70	0	70	80	1280	0	100	100	100
1193	100	40	100	60	1237	70	40	70	80	1281	40	0	100	100
1194	100	70	100	60	1238	70	70	70	80	1282	40	40	100	100
1195	100	100	100	60	1239	70	100	70	80	1283	40	100	100	100
1196	0	0	0	80	1240	100	0	70	80	1284	100	0	100	100
1197	0	40	0	80	1241	100	40	70	80	1285	100	40	100	100
1198	0	70	0	80	1242	100	70	70	80	1286	100	100	100	100
1199	0	100	0	80	1243	100	100	70	80	1287	100	0	0	0
1200	40	0	0	80	1244	0	0	100	80	1288	98	0	0	0
1201	40	40	0	80	1245	0	40	100	80	1289	95	0	0	0
1202	40	70	0	80	1246	0	70	100	80	1290	90	0	0	0
1203	40	100	0	80	1247	0	100	100	80	1291	85	0	0	0
1204	70	0	0	80	1248	40	0	100	80	1292	80	0	0	0
1205	70	40	0	80	1249	40	40	100	80	1293	75	0	0	0
1206	70	70	0	80	1250	40	70	100	80	1294	70	0	0	0
1207	70	100	0	80	1251	40	100	100	80	1295	60	0	0	0
1208	100	0	0	80	1252	70	0	100	80	1296	50	0	0	0
1209	100	40	0	80	1253	70	40	100	80	1297	40	0	0	0
1210	100	70	0	80	1254	70	70	100	80	1298	30	0	0	0
1211	100	100	0	80	1255	70	100	100	80	1299	25	0	0	0
1212	0	0	40	80	1256	100	0	100	80	1300	20	0	0	0
1213	0	40	40	80	1257	100	40	100	80	1301	15	0	0	0
1214	0	70	40	80	1258	100	70	100	80	1302	10	0	0	0
1215	0	100	40	80	1259	100	100	100	80	1303	7	0	0	0
1216	40	0	40	80	1260	0	0	0	100	1304	5	0	0	0
1217	40	40	40	80	1261	0	40	0	100	1305	3	0	0	0
1218	40	70	40	80	1262	0	100	0	100	1306	2	0	0	0
1219	40	100	40	80	1263	40	0	0	100	1307	0	100	0	0
1220	70	0	40	80	1264	40	40	0	100	1308	0	98	0	0
1221	70	40	40	80	1265	40	100	0	100	1309	0	95	0	0
1222	70	70	40	80	1266	100	0	0	100	1310	0	90	0	0
1223	70	100	40	80	1267	100	40	0	100	1311	0	85	0	0
1224	100	0	40	80	1268	100	100	0	100	1312	0	80	0	0
1225	100	40	40	80	1269	0	0	40	100	1313	0	75	0	0
1226	100	70	40	80	1270	0	40	40	100	1314	0	70	0	0
1227	100	100	40	80	1271	0	100	40	100	1315	0	60	0	0
1228	0	0	70	80	1272	40	0	40	100	1316	0	50	0	0
1229	0	40	70	80	1273	40	40	40	100	1317	0	40	0	0
1230	0	70	70	80	1274	40	100	40	100	1318	0	30	0	0
1231	0	100	70	80	1275	100	0	40	100	1319	0	25	0	0
1232	40	0	70	80	1276	100	40	40	100	1320	0	20	0	0

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
1321	0	15	0	0
1322	0	10	0	0
1323	0	7	0	0
1324	0	5	0	0
1325	0	3	0	0
1326	0	2	0	0
1327	0	0	100	0
1328	0	0	98	0
1329	0	0	95	0
1330	0	0	90	0
1331	0	0	85	0
1332	0	0	80	0
1333	0	0	75	0
1334	0	0	70	0
1335	0	0	60	0
1336	0	0	50	0
1337	0	0	40	0
1338	0	0	30	0
1339	0	0	25	0
1340	0	0	20	0
1341	0	0	15	0
1342	0	0	10	0
1343	0	0	7	0
1344	0	0	5	0
1345	0	0	3	0
1346	0	0	2	0
1347	0	0	0	100
1348	0	0	0	98
1349	0	0	0	95
1350	0	0	0	90
1351	0	0	0	85
1352	0	0	0	80
1353	0	0	0	75
1354	0	0	0	70
1355	0	0	0	60
1356	0	0	0	50
1357	0	0	0	40
1358	0	0	0	30
1359	0	0	0	25
1360	0	0	0	20
1361	0	0	0	15
1362	0	0	0	10
1363	0	0	0	7
1364	0	0	0	5

ID No.	% C	% M	% Y	% K
1365	0	0	0	3
1366	0	0	0	2
1367	0	0	0	0
1368	100	85	85	0
1369	80	65	65	0
1370	60	45	45	0
1371	40	27	27	0
1372	20	12	12	0
1373	10	6	6	0
1374	5	3	3	0
1375	40	27	27	10
1376	20	12	12	10
1377	10	6	6	10
1378	60	45	45	20
1379	40	27	27	20
1380	20	12	12	20
1381	10	6	6	20
1382	80	65	65	40
1383	60	45	45	40
1384	40	27	27	40
1385	20	12	12	40
1386	10	6	6	40
1387	100	85	85	60
1388	80	65	65	60
1389	60	45	45	60
1390	40	27	27	60
1391	20	12	12	60
1392	10	6	6	60
1393	100	85	85	80
1394	80	65	65	80
1395	60	45	45	80
1396	40	27	27	80
1397	20	12	12	80
1398	10	6	6	80
1399	100	85	85	100
1400	80	65	65	100
1401	60	45	45	100
1402	40	27	27	100
1403	20	12	12	100
1404	10	6	6	100
1405	100	0	0	70
1406	0	100	0	70
1407	0	0	100	70
1408	100	100	0	70

ID No.	% C	% M	% Y	% K
1409	100	0	100	70
1410	0	100	100	70
1411	40	40	0	70
1412	40	0	40	70
1413	0	40	40	70
1414	3	3	0	0
1415	3	0	3	0
1416	0	3	3	0
1417	3	3	3	0
1418	3	0	0	3
1419	0	3	0	3
1420	3	3	0	3
1421	0	0	3	3
1422	3	0	3	3
1423	0	3	3	3
1424	3	3	3	3
1425	7	7	0	0
1426	7	0	7	0
1427	0	7	7	0
1428	7	7	7	0
1429	7	0	0	7
1430	0	7	0	7
1431	7	7	0	7
1432	0	0	7	7
1433	7	0	7	7
1434	0	7	7	7
1435	7	7	7	7
1436	40	3	0	0
1437	3	40	0	0
1438	40	0	3	0
1439	40	3	3	0
1440	0	40	3	0
1441	3	40	3	0
1442	40	40	3	0
1443	3	0	40	0
1444	0	3	40	0
1445	3	3	40	0
1446	40	3	40	0
1447	3	40	40	0
1448	40	0	0	3
1449	40	3	0	3
1450	0	40	0	3
1451	3	40	0	3
1452	40	40	0	3

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
1453	40	0	3	3
1454	40	3	3	3
1455	0	40	3	3
1456	3	40	3	3
1457	40	40	3	3
1458	0	0	40	3
1459	3	0	40	3
1460	40	0	40	3
1461	0	3	40	3
1462	3	3	40	3
1463	40	3	40	3
1464	0	40	40	3
1465	3	40	40	3
1466	40	40	40	3
1467	3	0	0	40
1468	0	3	0	40
1469	3	3	0	40
1470	40	3	0	40
1471	3	40	0	40
1472	0	0	3	40
1473	3	0	3	40
1474	40	0	3	40
1475	0	3	3	40
1476	3	3	3	40
1477	40	3	3	40
1478	0	40	3	40
1479	3	40	3	40
1480	40	40	3	40
1481	3	0	40	40
1482	0	3	40	40
1483	3	3	40	40
1484	40	3	40	40
1485	3	40	40	40
1486	0	0	0	10
1487	0	0	10	10
1488	0	0	20	10
1489	0	0	40	10
1490	0	0	70	10
1491	0	10	0	10
1492	0	10	10	10
1493	0	10	20	10
1494	0	10	40	10
1495	0	10	70	10
1496	0	20	0	10

ID No.	% C	% M	% Y	% K
1497	0	20	10	10
1498	0	20	20	10
1499	0	20	40	10
1500	0	20	70	10
1501	0	40	0	10
1502	0	40	10	10
1503	0	40	20	10
1504	0	40	40	10
1505	0	40	70	10
1506	0	70	0	10
1507	0	70	10	10
1508	0	70	20	10
1509	0	70	40	10
1510	0	70	70	10
1511	10	0	0	10
1512	10	0	10	10
1513	10	0	20	10
1514	10	0	40	10
1515	10	0	70	10
1516	10	10	0	10
1517	10	10	10	10
1518	10	10	20	10
1519	10	10	40	10
1520	10	10	70	10
1521	10	20	0	10
1522	10	20	10	10
1523	10	20	20	10
1524	10	20	40	10
1525	10	20	70	10
1526	10	40	0	10
1527	10	40	10	10
1528	10	40	20	10
1529	10	40	40	10
1530	10	40	70	10
1531	10	70	0	10
1532	10	70	10	10
1533	10	70	20	10
1534	10	70	40	10
1535	10	70	70	10
1536	20	0	0	10
1537	20	0	10	10
1538	20	0	20	10
1539	20	0	40	10
1540	20	0	70	10

ID No.	% C	% M	% Y	% K
1541	20	10	0	10
1542	20	10	10	10
1543	20	10	20	10
1544	20	10	40	10
1545	20	10	70	10
1546	20	20	0	10
1547	20	20	10	10
1548	20	20	20	10
1549	20	20	40	10
1550	20	20	70	10
1551	20	40	0	10
1552	20	40	10	10
1553	20	40	20	10
1554	20	40	40	10
1555	20	40	70	10
1556	20	70	0	10
1557	20	70	10	10
1558	20	70	20	10
1559	20	70	40	10
1560	20	70	70	10
1561	40	0	0	10
1562	40	0	10	10
1563	40	0	20	10
1564	40	0	40	10
1565	40	0	70	10
1566	40	10	0	10
1567	40	10	10	10
1568	40	10	20	10
1569	40	10	40	10
1570	40	10	70	10
1571	40	20	0	10
1572	40	20	10	10
1573	40	20	20	10
1574	40	20	40	10
1575	40	20	70	10
1576	40	40	0	10
1577	40	40	10	10
1578	40	40	20	10
1579	40	40	40	10
1580	40	40	70	10
1581	40	70	0	10
1582	40	70	10	10
1583	40	70	20	10
1584	40	70	40	10

Table 2 (*continued*)

ID No.	% C	% M	% Y	% K
1585	40	70	70	10
1586	70	0	0	10
1587	70	0	10	10
1588	70	0	20	10
1589	70	0	40	10
1590	70	0	70	10
1591	70	10	0	10
1592	70	10	10	10
1593	70	10	20	10
1594	70	10	40	10
1595	70	10	70	10

ID No.	% C	% M	% Y	% K
1596	70	20	0	10
1597	70	20	10	10
1598	70	20	20	10
1599	70	20	40	10
1600	70	20	70	10
1601	70	40	0	10
1602	70	40	10	10
1603	70	40	20	10
1604	70	40	40	10
1605	70	40	70	10
1606	70	70	0	10

ID No.	% C	% M	% Y	% K
1607	70	70	10	10
1608	70	70	20	10
1609	70	70	40	10
1610	70	70	70	10
1611	50	40	40	0
1612	100	0	0	10
1613	0	100	0	10
1614	0	0	100	10
1615	0	100	100	10
1616	100	0	100	10
1617	100	100	0	10

Table 3 — Mapping of ISO 12642-1 ink value combinations from ISO 12642-2 data

ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2
1	73	46	4	91	405
2	9	47	1319	92	225
3	649	48	3	93	187
4	81	49	1321	94	349
5	721	50	2	95	513
6	657	51	1323	96	511
7	729	52	1325	97	673
8	61	53	1330	98	507
9	541	54	1332	99	705
10	493	55	487	100	543
11	41	56	1335	101	561
12	329	57	1336	102	219
13	365	58	325	103	241
14	361	59	244	104	223
15	21	60	1339	105	549
16	181	61	163	106	367
17	165	62	1341	107	185
18	1266	63	82	108	711
19	1262	64	1343	109	347
20	1278	65	1345	110	709
21	1268	66	1350	111	527
22	1284	67	1196	112	345
23	1280	68	1354	113	183
24	1286	69	1071	114	727
25	1260	70	1356	115	545
26	1	71	946	116	363
27	1290	72	1358	117	565
28	1292	73	1359	118	203
29	55	74	730	119	567
30	1295	75	1361	120	201
31	1296	76	1362	121	383
32	37	77	1363	122	1399
33	28	78	1365	123	1393
34	1299	79	45	124	1387
35	19	80	369	125	1400
36	1301	81	333	126	1394
37	10	82	693	127	1388
38	1303	83	653	128	1382
39	1305	84	689	129	1401
40	1310	85	547	130	1395
41	1312	86	685	131	1389
42	7	87	725	132	1383
43	1315	88	397	133	1378
44	1316	89	401	134	1402
45	5	90	77	135	1396

Table 3 (*continued*)

ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2
136	1390	181	1412	226	92
137	1384	182	1413	227	93
138	1379	183	1	228	95
139	1375	184	2	229	97
140	1403	185	3	230	99
141	1397	186	5	231	100
142	1391	187	7	232	101
143	1385	188	9	233	102
144	1380	189	10	234	104
145	1376	190	11	235	106
146	1404	191	12	236	108
147	1398	192	14	237	118
148	1392	193	16	238	119
149	1386	194	18	239	120
150	1381	195	19	240	122
151	1377	196	20	241	124
152	1368	197	21	242	126
153	1369	198	23	243	136
154	1370	199	25	244	137
155	1371	200	27	245	138
156	1372	201	37	246	140
157	1373	202	38	247	142
158	1374	203	39	248	144
159	760	204	41	249	154
160	735	205	43	250	155
161	910	206	45	251	156
162	765	207	55	252	158
163	940	208	56	253	160
164	915	209	57	254	162
165	751	210	59	255	163
166	856	211	61	256	164
167	841	212	63	257	165
168	970	213	1287	258	167
169	1066	214	74	259	169
170	1050	215	75	260	171
171	958	216	77	261	172
172	1006	217	79	262	173
173	998	218	81	263	174
174	1405	219	82	264	176
175	1406	220	83	265	178
176	1407	221	84	266	180
177	1408	222	86	267	181
178	1409	223	88	268	182
179	1410	224	90	269	183
180	1411	225	91	270	185

Table 3 (*continued*)

ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2
271	187	316	380	361	565
272	189	317	381	362	567
273	199	318	383	363	649
274	200	319	385	364	650
275	201	320	387	365	651
276	203	321	397	366	653
277	205	322	398	367	655
278	207	323	399	368	657
279	217	324	401	369	658
280	218	325	403	370	659
281	219	326	405	371	660
282	221	327	487	372	662
283	223	328	488	373	664
284	225	329	489	374	666
285	235	330	491	375	667
286	236	331	493	376	668
287	237	332	495	377	669
288	239	333	496	378	671
289	241	334	497	379	673
290	243	335	498	380	675
291	325	336	500	381	685
292	326	337	502	382	686
293	327	338	504	383	687
294	329	339	505	384	689
295	331	340	506	385	691
296	333	341	507	386	693
297	334	342	509	387	703
298	335	343	511	388	704
299	336	344	513	389	705
300	338	345	523	390	707
301	340	346	524	391	709
302	342	347	525	392	711
303	343	348	527	393	721
304	344	349	529	394	722
305	345	350	531	395	723
306	347	351	541	396	725
307	349	352	542	397	727
308	351	353	543	398	729
309	361	354	545	399	730
310	362	355	547	400	731
311	363	356	549	401	732
312	365	357	559	402	733
313	367	358	560	403	734
314	369	359	561	404	735
315	379	360	563	405	736

Table 3 (*continued*)

ISO 12642-1	ISO 12642-2		ISO 12642-1	ISO 12642-2		ISO 12642-1	ISO 12642-2
406	737		451	782		496	827
407	738		452	783		497	828
408	739		453	784		498	829
409	740		454	785		499	830
410	741		455	786		500	831
411	742		456	787		501	832
412	743		457	788		502	833
413	744		458	789		503	834
414	745		459	790		504	835
415	746		460	791		505	836
416	747		461	792		506	837
417	748		462	793		507	838
418	749		463	794		508	839
419	750		464	795		509	840
420	751		465	796		510	841
421	752		466	797		511	842
422	753		467	798		512	843
423	754		468	799		513	844
424	755		469	800		514	845
425	756		470	801		515	846
426	757		471	802		516	847
427	758		472	803		517	848
428	759		473	804		518	849
429	760		474	805		519	850
430	761		475	806		520	851
431	762		476	807		521	852
432	763		477	808		522	853
433	764		478	809		523	854
434	765		479	810		524	855
435	766		480	811		525	856
436	767		481	812		526	857
437	768		482	813		527	858
438	769		483	814		528	859
439	770		484	815		529	860
440	771		485	816		530	861
441	772		486	817		531	862
442	773		487	818		532	863
443	774		488	819		533	864
444	775		489	820		534	865
445	776		490	821		535	866
446	777		491	822		536	867
447	778		492	823		537	868
448	779		493	824		538	869
449	780		494	825		539	870
450	781		495	826		540	871

Table 3 (*continued*)

ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2
541	872	586	917	631	962
542	873	587	918	632	963
543	874	588	919	633	964
544	875	589	920	634	965
545	876	590	921	635	966
546	877	591	922	636	967
547	878	592	923	637	968
548	879	593	924	638	969
549	880	594	925	639	970
550	881	595	926	640	971
551	882	596	927	641	972
552	883	597	928	642	973
553	884	598	929	643	974
554	885	599	930	644	975
555	886	600	931	645	976
556	887	601	932	646	977
557	888	602	933	647	978
558	889	603	934	648	979
559	890	604	935	649	980
560	891	605	936	650	981
561	892	606	937	651	982
562	893	607	938	652	983
563	894	608	939	653	984
564	895	609	940	654	985
565	896	610	941	655	986
566	897	611	942	656	987
567	898	612	943	657	988
568	899	613	944	658	989
569	900	614	945	659	990
570	901	615	946	660	991
571	902	616	947	661	992
572	903	617	948	662	993
573	904	618	949	663	994
574	905	619	950	664	995
575	906	620	951	665	996
576	907	621	952	666	997
577	908	622	953	667	998
578	909	623	954	668	999
579	910	624	955	669	1000
580	911	625	956	670	1001
581	912	626	957	671	1002
582	913	627	958	672	1003
583	914	628	959	673	1004
584	915	629	960	674	1005
585	916	630	961	675	1006

Table 3 (*continued*)

ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2	ISO 12642-1	ISO 12642-2
676	1007	721	1052	766	1097
677	1008	722	1053	767	1098
678	1009	723	1054	768	1099
679	1010	724	1055	769	1100
680	1011	725	1056	770	1101
681	1012	726	1057	771	1102
682	1013	727	1058	772	1103
683	1014	728	1059	773	1104
684	1015	729	1060	774	1105
685	1016	730	1061	775	1106
686	1017	731	1062	776	1107
687	1018	732	1063	777	1108
688	1019	733	1064	778	1109
689	1020	734	1065	779	1110
690	1021	735	1066	780	1111
691	1022	736	1067	781	1112
692	1023	737	1068	782	1113
693	1024	738	1069	783	1114
694	1025	739	1070	784	1115
695	1026	740	1071	785	1116
696	1027	741	1072	786	1117
697	1028	742	1073	787	1118
698	1029	743	1074	788	1119
699	1030	744	1075	789	1120
700	1031	745	1076	790	1121
701	1032	746	1077	791	1122
702	1033	747	1078	792	1123
703	1034	748	1079	793	1124
704	1035	749	1080	794	1125
705	1036	750	1081	795	1126
706	1037	751	1082	796	1127
707	1038	752	1083	797	1128
708	1039	753	1084	798	1129
709	1040	754	1085	799	1130
710	1041	755	1086	800	1131
711	1042	756	1087	801	1132
712	1043	757	1088	802	1133
713	1044	758	1089	803	1134
714	1045	759	1090	804	1135
715	1046	760	1091	805	1136
716	1047	761	1092	806	1137
717	1048	762	1093	807	1138
718	1049	763	1094	808	1139
719	1050	764	1095	809	1140
720	1051	765	1096	810	1141