Combination.Dat

Description

The Combination.Dat file defines the deliverability of subsequent processes per base lens and the combinability of processes.

Table structure

No	Field name	Pos	Length	Format	Comments
1*	Man. code base lens	1	6	T6	
2*	Deliverability	7	1	9	0=not deliverable 1 = deliverable (but no obligatory coating) 2=only deliverable (obligatory coating, also see 14.3.5, Notes on obligatory coating, page 42)
3*	Man. code coating 1	8	6	T6	
4*	Man. code coating 2	14	6	T6	
5*	Man. code coating 3	20	6	T6	
6*	Man. code tint	26	3	T3	

Rules of Combination.Dat

All coatings can be delivered

In general, all coatings can be delivered for every lens of the same material. This requires no entries in the Combination.Dat.

Exceptions: see "14.3.7 Required exclusions", page 43

Non-deliverable combinations must be specified

If a coating is not deliverable for a base lens, this combination must be specified in the Combination.Dat file.

Example:

```
12345678901234567890123456789 0
gggggg0aaaaaa***************
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this example, lens "gggggg" cannot be delivered with coating "aaaaaa". The fields "Man. code coating 2" and "Man. code coating 3" are wildcards which stand for all coatings.

Using wildcards "*"

Wildcards can be used to be able to define several exclusions with an entry in the Combination.Dat file. The asterisk ("*") stands for any character in the IT code. 6 blanks mean "no coating" or "no lens".

Important: 6 wildcards "*" stand for each lens or each deliverable (non-excluded) coating. In brief: wildcards enable exclusion of all coatings. A wildcard cannot be used to mark excluded coatings as deliverable again.

Partial masks (e.g. "120**"** or **"**123") are not permitted.

Example:

```
123456789012345678901234567890
******0bbbbbb**************
******0cccccc
gggggg0*******************
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this example, it is generally not possible to deliver a coating for lens "gggggg". The coating "bbbbbb" is not available for any lens. (Exceptions are specified in the next section). Coating "cccccc" cannot be delivered without a second coating. (Please mind the blanks for Coating2 and coating3. Their meaning: "no coating")

Value of the deliverability field

If, as in the above example, all coatings were excluded for a lens, single coatings can be admitted again subsequently. For this purpose, the values in the deliverability field are organized hierarchically. The hierarchy is defined according to the numerical value of the "deliverability" field. Value 1 (deliverable) has priority over value 0 (not deliverable).

Example:

```
123456789012345678901234567890
gggggg0*******************
gggggg1aaaaaa
gggggg1bbbbbb**************
gggggg1cccccc**************
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this example, it is generally not possible to deliver a coating for lens "gggggg". Exception: coating "aaaaaa", which can be delivered on its own, without any further coating. Coating "bbbbbb" can be delivered for this lens alone and with any other (deliverable) coating. The same applies to coating "cccccc".

Example:

```
12345678901234567890123456789
******0bbbbbb**************
gggggg1bbbbbb**************
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this example, coating "bbbbbb" is not available for any lens. Exception: lens "gggggg", for which coating "bbbbbb" can be delivered, also in combination with other coatings. If there were no asterisks beside coating "bbbbbb" in line 2, coating "bbbbbb" alone would be available for this lens.

Example:

```
12345678901234567890123456789
gggggg0*******************
gggggg1MDM    **************
gggggg2ET     **************
gggggg2MET    **************
gggggg2SET    **************
gggggg2Hart   **************
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

Lens "gggggg" is not available with any coating. Exception: ET, MET, SET or Hard are specified as compulsory coating. MDM is specified as possible coating.

Note on obligatory coatings

To simplify evaluation of the Combination.Dat file, the following rule applies to compulsory coatings: If the requirement for an entry with compulsory coating has been met, the following entries with compulsory coating can be ignored. This is basically an "OR" operation. In the previous example, ET, MET, SET or Hard must be selected for the lens. However, if only "Hard" is available, this must be saved as combination in a separate data set.

Example:

```
12345678901234567890123456789
gggggg0*******************
gggggg1MDM    **************
gggggg2ET     Hart *********
gggggg2MET    Hart *********
gggggg2SET    Hart *********
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this case, the lens is only available with one coating "and" Hard.

Exclusion of coating combinations

In the case of exclusions of coating combinations, the lens IT code field is filled with "*" (wildcards)

regardless of the lens. This exclusion applies to all lenses and need not be listed separately for each lens.

Example:

```
12345678901234567890123456789 0
******0aaaaaabbbbbb*********
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

In this example, coating "aaaaaa" cannot be delivered with coating "bbbbbb". This excluded coating can be made available again for certain lenses with "1=deliverable".

Evident exclusions

Exclusions of material A coatings from material B lenses need not be specified because they are evident.

Coatings of the same type (ET, multiple ET and Super ET) are not combinable. The following combination exclusions need therefore not be specified because they are evident:

- AR coatings with other AR coatings or mirror coatings
- Hard coatings with other hard coatings
- Clean coatings with other clean coatings
- UV coatings with other UV coatings.
- Insurance options with other insurance options

In other words: it is not possible to supply a lens with two coatings with the same features (listed above).

The exclusion also applies if a feature for a lens has been defined in the LensType.Dat file. Example: If "1" is specified in field 19 "Clean incl." of the LensType.Dat file, all coatings with the "Clean" feature are automatically excluded. Exclusion in the Combination.Dat file is no longer required for this combination.

Note: two color coatings are possible. Furthermore, coatings defined as coating for the lens in the LensType.Dat file are generally not deliverable. (If, for example, "ET incl." was specified in the LensType.Dat file, all ETs from Options.Dat are generally not deliverable.

Combinations and coating range (Man. code coatings 1-5) in LensRange.Dat.

If coatings (man. code coatings 1-5) are specified in LensRange.Dat which were excluded in Combination.Dat, the coatings for the power range specified in LensRange.Dat are deliverable nonetheless, and precisely for this power range. For all other power ranges, the coating remains unavailable.

Example:

Lens xxx is available between –10.00D and +10.00D with diameters 60, 65 and 70. The "SET" option

is not available for this lens, except for diameter 60 in the power range between –2.00D and +2.00D.

Here, the "SET" option would be completely excluded for this lens in Combination.Dat.

```
ManCode lens     : xyz
Availability     : Nicht Lieferbar
ManCode coating 1: SET
ManCode coating 2: ******
ManCode coating 3: ******
```

Furthermore, a new power range is added to the LensRange.Dat in which the "SET" option is specified under "ManCode coating 1".

```
...
ManCode base lens: xyz
...
Princ. mer. from: -2.00
Princ. mer. to: +2.00
...
ManCode coating 1: SET
...
```

Further examples for Combination.Dat

From the forum: There are coatings in the Rupp + Hubrach line which must under all circumstances be combined with other coatings and can otherwise not be selected. For example, the hydrophobic "PL" coating must be combined with a 2-side AR coating. The customer decides which AR coating is used. Similarly, the back surface multi AR coating makes the combination with any color absolutely necessary. The following solution is possible:

```
123456789012345678901234567890
******0PL     **************
******1PL     ET    *********
******1PL     MET   *********
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

Explanation: In the first line, PL is excluded for each lens, no matter whether no coating or a further coating is available. The second and third lines indicate that PL with ET or MET is available for all lenses.

From the forum: Myoplast from Rupp + Hubrach. This lens is available without hard coating. As soon as an AR coating is selected, however, this is only possible in combination with hard coating.

The following solution is possible:

```
123456789012345678901234567890
MYOPLA0Hart   **************
MYOPLA0ET     **************
MYOPLA0MET    **************
```

```
MYOPLA1Hart  ET    *********
MYOPLA1Hart  MET   *********
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

Explanation: In the first three lines, Hard, ET and MET are excluded for the MYOPLA lens. The fourth and fifth lines indicate that MYOPLA is available with ET or MET and Hard.

From the forum: There are coatings (extras) that are available for a lens only in combination with a further coating for the lens.

Example Essilor: XPress (entered as coating) is only available for "Varilux Comfort Min 1.6" in combination with "Super-Diafal"; further extras, e.g. color, are not permitted. Without "Super-Diafal", "XPress" is not available for this lens.

The following solution is possible:

```
123456789012345678901234567890
******0Xpress***************
4801001XpressSupDia
```

(Note: The first, underlined line merely serves for a better overview and is not available in the file).

Explanation: In the first line, XPress is excluded for each lens, no matter whether no coating or a further coating is available. The second line indicates that XPress is available with SuperDiafal, but with no further coating (because there are blanks for coating code 3 and no wildcards)

Colors

Various colors can be excluded for certain lenses.

Example:

```
123456789012345678901234567890
ABCDEF0*****************123
```

(Note: The first underlined line merely serves for a better overview and is not available in the file).

In this example, color "123" is not available for lens "ABCDEF".

Colors can be excluded for certain coatings/options.

Example:

```
123456789012345678901234567890
******0EEEEEE************123
```

(Note: The first underlined line merely serves for a better overview and is not available in the file).

In this example, color "123" is not available for option "EEEEEE". This applies to all lenses. Individual

colors can be specified as available after exclusion of a complete color group.

Example:

```
123456789012345678901234567890
ABCDEF0FFFFFF**************
ABCDEF1*****************123
```

(Note: The first underlined line merely serves for a better overview and is not available in the file).

In this example, it is assumed that option "FFFFFF" is a color group containing color "123". The option/color group "FFFFFF" with all the appertaining colors is not available for lens ABCDEF. In the second step, color "123" is specified as available for lens ABCDEF.

Prisms and Cylinders

The availability of prisms and cylinders is not stated in the Combination.Dat file. The availability is exclusively stated in the LensRange.Dat file.

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