

Important

Windows 7 is no longer supported with this version. This version requires Windows 8.1 or higher. The installation might work, but an error message will appear when starting the software about missing dlls that are not available under Windows 7.

With this version a newer Dongle driver will be installed, that supports the latest Windows 10 2004 update. Please unplug the dongle prior to installation and plug it back in afterwards.

During startup of the software you might be asked for a database conversion (from version 6.32 and older). After that you will not be able to use the database with older versions anymore. We recommend making a backup of your database prior to that. All workstations that are connected to the same database need to be upgraded to the same software version.

Some new features and improvements in recipe formulation might change old recipes when using the functions recalculate or correction. These changes improve the recipe. Untouched recipes will not change.

New features and fixes in IFS 6.5 compared to 6.41

Additional colorant type Technical varnish

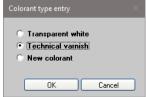
A new colorant type for assortments has been added for technical varnish. Technical varnish can have a viscosity curve and a color measurement like a colorant, and a certain concentration can be forced to be in every recipe like applications.

Setup Technical varnish

• Go to **Database -> Basic materials -> New** and set up a new basic material with **Type = Technical varnish**

Designatio			 	
XR Technica	l Varnish			
Created:	21.02.20	20 14:35:06		
ERP syster	n number:			_
Additional	description:	,		
	-			
Price 2:	[• • •		
Price 2: Type:	L	D € Technical varnish	-	

- Go to Database -> Assortments and select an assortment.
- Click on Modify -> New and select Technical varnish as Coloant type.





i

- Set up Colorant with
 - Price •
 - Specific Weight •
 - Basic materials = • 100% Technical varnish
 - Vis •
 - Def per
- Click OK .

.

 Viscosity 	ERP system number:		
Default concentration	Technical varnish 🔹		Concentration percentage in recipes:
percentage in recipes.	Price 1:	1 • €	15 🔹 %
	Colorant strength:	100 🔺 %	
Click OK	Specific weight:	0.9 g/cm³	
You will now be forced to	🗌 is leftover		
prepare the concentration			
samples with measurements,			
at least the 100% sample.	Basic materials V	iscosity	
Samples without measurements			OK Cancel
will be ignored.			

Using Technical varnish in Recipes

Before you calculate a recipe with Technical varnish go to Settings -> Formulation.

- For Recipe output select either Basic materials or Basic inks and solvent.
- With the selection for **Default** you define the Total mode if the technical varnish concentration • is based on Total or Total basic ink. Typical selection woul be Total basic ink so that the solvent has no influence on the technical varnish concentration. This setting is now saved for each recipe, so that you can always recalculate with the same settings

Define the colorant properties

Created: 21.02.2020 14:48

Designation:

XR Technical varnis

Formulation Settings		×
Addition mode	Maximum:	400 * %
Recipe output: Basic inks and solvent	Default: Total basic ink	
	Default quantity:	

To calculate a recipe with technical varnish you need to select an assortment with technical varnish included and select your target color, substrate, etc. as usual. There is now a new area in the formulation window to add the technical varnish to the recipe.

Move the relevant available technical varnish to the selected area on the right. If there is no default concentration defined in the setup you will be forced to enter a concentration. You can also amend the default concentration of the technical varnish by clicking Modify.

Formulation				
Please select the colorants f	or the formulation			
PANTONE 485 C	Substrate Transparent Film (M0)	Ink film thickness 100%	Applic From as	ation sortment
Selected transparent white:	1			
Available technical varnish	es Selected te	chnical varnishes		
	[15%]	KR Technical varnish	\$	Modify
Available colorants:	Selected c	olorants:	\Leftrightarrow	Measure
>\$ Leftover TURQUOISE >\$ Leftover VIOLET	🗾 👝 XB Ye	ellow green ellow ellow red		From database



• Continue as usual. The recipe will now be calculated taking the techical varnish and it's color and viscosity curve into account.

Flexo/gravure printing incl colorant elements and Technical Varnish (MO, Transparent Film)	From assortment 🔹	
Recipe 1: PANTONE 485 C	PASS	
⊙XR Extender 2	-> 42.06	Target color
XR Red	-> 22.07	L*= 49.
• XR Technical varnish	-> 15.00	a*= 69.
o XR Yellow green	-> 20.86	b*= 53. [D50, 2*
Total basic ink:	100.00	
Solvent	-> 26.39	Recipe: calculated
Total:	126.39	dL*= 0. da*= 0. db*= 0.
		Transparent film 30 mv: dE ₀₀ : 0
		M1 [A]: 0
		M1 [A]: 0 M2 [FL11/TL84]: 0
		Price: 1.14
		Ink film thickness:
		100 🚔 :
al basic ink	100	Viscosity: 15.00 s

With a mouse over the icons on the bottom left you can see which total mode is used for the recipe. This is saved with the recipe and used for the technical varnish calculation every time the recipe is edited or recalculated.

Technical varnish in specific workflows

- Recipe editor and Recipe new with Technical varnish in Basic material mode: Recipe editing with Technical varnish and Applications in Modify proportionally mode is not recommended as two different rules are working against each other. For the same reason the function Recipe new in combination with Technical varnish in Basic material mode is only possible in Free modification mode.
- Leftover handling is not restricted with Technical varnish: As InkFormulation does not always know what components are used in a leftover, it expects that it has the same amount of technical varnish already included. It should be assumed the operator knows what leftovers to select when working with technical varnish.
- Restrictions when working with palette formulation: Next to the usual requirements for palette formulation, only recipe that have the same technical varnish concentration will be shown as palette recipes.
- Batch processing with Technical varnish:

If you select **Use colorants of respective recipe** within the batch processing setup, then the technical varnish will be used according to the original recipe in the same concentration and based on the same total mode.

Improvements in Recipe Formulation

• Improved recipe prediction when the target viscosity in the formulation settings is different to the viscosity of colorant calibrations in the assortments.

X-rite PANTONE®

- Improved recalculations when the viscosity has changed. The colorants are now kept constant in relation to the total ink. Only transparent white and solvent are leveled out to amend the viscosity.
- Included new formulation metrics Spectral Shape Sorting, to ensure best suited pigmentation in the best ranked recipe.
- Fixed a problem with leftover restrictions in corrections and recalculations.
- New optional sorting criterion for dE (white/black) has been added to take the match for bot measurements over black and over white into account for sorting the list of recipes.

Sorting criterion edito					
Designation:					
dE [white/black]			• 0	A	x
+					_
Sorted according 0.00 * dE [white/I	to: black]				
		ОК		Cancel	

Improvements with PantoneLIVE references

- When importing from cxf or from ColorCert, PantoneLIVE references are now shown with correct color icons and measurement conditions.
- If a PantoneLIVE reference cannot be found, for example because the relevant palette has not been subscribed, it shows a message in the request view.

Name	Status
PANTONE 181 C	No valid measurement data

- A PantoneLIVE search button is now also available in the function Define Target Color -> Get.
- When searching PantoneLIVE references based on a measurement you can now also see the Delta E value in the list of search results. The formula is based on the display setting for Delta E formula.

rmulatio	n					
elect Pa	antoneLIVE standard					_
PANTO	NE Solid Coated-V4 M0,M1,I	мз				
	NE Solid Coated-V4 M0,M1,I	M3				_
PANTO Name:	NE Solid Coated-V4 M0,M1,I	M3	2140 / 2140	\Leftrightarrow	Measure	
Name:				¢		
	Standard	dE 2000	Master standard	¢	Measure Printing condition	
Name:	Standard PANTONE 485 C	dE2000 0.28	Master standard PANTONE 485 C	¢		
Name:	Standard	dE 2000	Master standard	\$		
Name:	Standard PANTONE 485 C	dE2000 0.28	Master standard PANTONE 485 C	0		
Name:	Standard PANTONE 495 C PANTONE 7597 C	dE2000 0.28 3.22	Master standard PANTONE 485 C PANTONE 7597 C	\$		
Name:	Standard PANTONE 485 C PANTONE 7597 C PANTONE 2035 C	dE 2000 0.28 3.22 3.73 3.87	Master standard PANTONE 485 C PANTONE 7597 C PANTONE 2035 C	\$		



Additional objects for the Print Layout

There is a new layout "Recipe A4 - 2" where the following items have been improved and added

- color patches for target and recipe
- the Spectral graph is now colored
- the CIE-Lab graph has been added.
- the recipe result is now labeled if it is measured or calculated.

If you want to use these new parameters in your selfcreated print layouts here are the necessary items, you need to include:

For the color patches and the Lab graph

- Go to Settings -> Set up printer.
- Modify the layout you want to amend.
- Click **Insert -> Image** and define where and in what size the new objects should appear.
- Amend the following parameters depending on what image you want to include

arget color:				(
Designation:	PANTONE 48	B5 C wTV			
Folder:	Default	1000			_
Created:	13/08/2020		-		
L*a*b*:	{49.88, 69.05				
L*C*h*:	{49.88, 87.58	, 37.96} (MO	(No),Abs,E	050,2°)	
ssortment:					
Flexo/gravure printing	incl colorant el	ements and T	echnical Va	arnish	
ubstrate:					
Designation: Transparent film Thickness object:	Transparent	film 30 my			
Recipe:					1
XR Extender 2	->	21.867			L
XR Red	->	21.974			1
XR Technical varnish	->	15.000			
XR Yellow green	->	20.772			
Solvent	->	20.387			
Total ink quantity	->	100.000			
ERP numbe					
L*a*b*:	{48.46, 50.77				
L*C*h*:	{48.46, 71.29	, 44.58}			
dE2000[1:1:1]:	6.3		Visual:	6.3	
M1[A]:	2.8		Visual:	2.8	
M2[FL11/TL84]:	1.3		Visual:	1.3	
Price:	1.25 £				
Ink film thickness:	100 70			-	
Viscosity	15 s		_		_
			db		1
1.0					
0.8					i.
0.6		/			1
0.4					
					ta
0.2					1
0.0 400 500 60	0 700 [nm]	1			
Target color	Recip				
					-

Image resource:	File
Image file:	%TEMP%\RecipeReport\Target.bmp for the target patch
	%TEMP%\RecipeReport\Recipe.bmp for the recipe patch
	%TEMP%\RecipeReport\LabGraph.bmp for the Lab Graph
Transformation:	Smooth

For recipe measured/calculated

- Click Insert -> Field and define where and in what size the new objects should appear.
- Amend the following parameters

Field source type:	Datasource
Field:	colorData_Measured
Word wrapping:	ticked

• Amend font size, color and weight as required.

🔓 Image properties ? 🗙	Field properties ? X
Image Image resource: File Datasource column: Image file: %TEMP%\RecipeReport\LabGraph.bmp Format: Native Scaling options Preview	Field source type: Data source Data type: Text Field colorData_Measured
Aspect ratio Keep aspect ratio Keep aspect ratio by expanding Ignore aspect ratio Transformation Off (fast) Smooth transformation (slow)	General Numeric Date/Time Other Description / title:
Print only when expression is true:	Zone ID: 0



Additional options for Recipe export as csv file

When exporting a recipe as csv file you can now select, if you would like to add LabCh° values from the target and the recipe and/or the result in the relevant Delta E formula.

CSV file	
Select the options that should be exported with trecipe	he
LabCh*	
☐ dE 2000	
Cancel	

Fixed issues with Thickness objects

- Thickness objects are now linked to assortments after import correctly again.
- Thickness objects can now be assigned to assortments in databases that were empty or didn't had any calibrated thickness object applied.
- Creators of a thickness objects are now saved in the database.

Further fixes and improvements

- Changes of the substrate and thickness object in the recipe editor are now saved correctly.
- Improved handling of cxf files with multiple measurement modes as recipe requests.
- Fixed an issue in User Administrator where the Delta E formula was changeable without user permission.
- Fixed an issue with external command interface.
- Fixed an issue with the search options in the function Define target color -> get.
- Improved Chinese translations.
- Improved Italian translations.