

Processing Auxiliaries for Cleaning, Surface Treatment and Finishing of VPP Parts

Eighteen workflow products requiring material compatibility, residue control and final-part validation

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Highlights

- Eighteen auxiliaries are listed across cleaning, aqueous removal, smoothing, surface and finishing routes.
- Purification or residue reduction is not described as detoxification or regulatory release.
- Each protocol requires resin compatibility, concentration, time, temperature, agitation, rinse and drying controls.
- Antimicrobial functions can change composition and may bring separate product-status requirements.
- Final treated parts require residue, surface, dimensional, mechanical and application-specific evaluation.

Abstract

The Processing Auxiliaries portfolio contains products for cleaning, aqueous removal, smoothing, surface treatment, purification and finishing.

Claims for removal of residual reactive species require analytical evidence for the exact resin and treatment protocol. Purification is not translated into detoxification, biological safety or regulatory release.

The final printed and treated part must be validated for residues, surface condition, dimensions, mechanics and applicable chemical or biological requirements. Supplier evidence and user responsibilities are both stated.

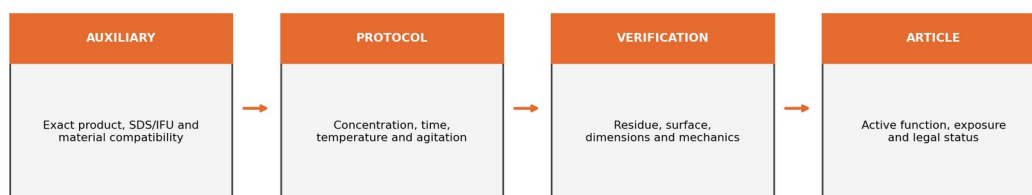
Keywords processing auxiliary · cleaning · smoothing · surface treatment · residue · VPP post-processing

Source use. Product and residue evidence is controlled in [1–2]; chemical/biological and dental scope in [3–5]; photopolymer context in [6].

1. Controlled treatment protocol

Compatibility is established for the named cured resin and exact auxiliary. The protocol records concentration, contact time, temperature, agitation, solution renewal, rinse, drying and change limits.

- Define before/after analytical targets.
- Monitor dimensional and surface effects.
- Retain SDS/IFU disposal and handling controls.



Release requires traceable evidence at every gate; a catalogue label cannot bypass the chain.

Figure 1. WP-26 evidence gates from controlled material description to final acceptance.

2. Residue and surface acceptance

Claims for monomer, photoinitiator or leachable reduction require a named analytical method, specimen, detection/quantification basis and report. Smoothing or coating also requires adhesion, thickness and function checks.

- Do not use detoxification without toxicological endpoints.
- Define residue acceptance for the final application.
- Assess recontamination and rinse effectiveness.

3. Additive and regulatory boundary

An antimicrobial or other active treatment does not inherit or combine regulatory classes. Applicable biocidal, food-contact, medical or other product status must be evaluated for the final treated article.

4. Minimum controlled evidence before release

Control field	Required record	Release interpretation
Auxiliary	Exact product, SDS/IFU and material compatibility	Catalogue description only until evidence is linked
Protocol	Concentration, time, temperature and agitation	Control process variables and change triggers
Verification	Residue, surface, dimensions and mechanics	Report method, result, uncertainty and limits
Article	Active function, exposure and legal status	Apply final acceptance and responsibility boundary



Description ≠ measured result ≠ certification or finished-device approval

Figure 2. WP-26 separates catalogue positioning, measured evidence and final application decisions.

KEY INSIGHT

Precise product or application language is retained only when the exact formulation, method, processed specimen and controlled evidence can be traced.

5. Limitations

- Purification is not detoxification.
- Treatment effectiveness is resin- and protocol-specific.
- Listed auxiliaries are not universally verified.
- Regulatory classes are not inherited by additives.
- Final-part acceptance remains application-specific.

6. Conclusions

- Eighteen auxiliaries are listed across cleaning, aqueous removal, smoothing, surface and finishing routes.
- Purification or residue reduction is not described as detoxification or regulatory release.
- Final treated parts require residue, surface, dimensional, mechanical and application-specific evaluation.
- This corrected candidate remains local and on HOLD until series-wide scientific, metadata and visual release checks are complete.

Revision note

Version 5.3 replaces detoxification with controlled residue-reduction assessment, removes regulatory-class inheritance, restricts ISO 4049 and adds supplier-side evidence and final-part controls.

Acknowledgements. The author acknowledges the 3Dresyns technical team and users whose manufacturing experience informed this correction.

Disclosure. Dr. Juan Segurola is founder and Scientific Director of 3Dresyns by Resyner Technologies S.L., the supplier of the materials discussed.

References

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