



PRODUCT DATA SHEET

WAVE SOLDERING FLUX PRO 334, PRO 342, PRO SELECTIVE

No-Clean, Halogen-Free Wave Soldering Fluxes

General Data

PRO 334, **PRO 342**, and **PRO SELECTIVE** are advanced, no-clean, halogen-free fluxes designed for high-efficiency soldering processes in electronic manufacturing. They are engineered to meet stringent international standards including ISO 9454-1:2016 and IPC J-STD-004, ensuring superior performance across various soldering applications.

Product Specifications

• PRO 334

- **Best Used When:** Lowest possible post-soldering residues are desired.
- **Applications:** Suitable for all automatic soldering processes in electronic manufacturing, including dual-wave and single-wave soldering for tin-lead and lead-free processes.
- **Features:** Excellent activation properties, produces high-gloss tin surfaces, and offers high tin penetration especially in multi-pin components.
- **Benefits:** High efficiency with very low application amounts, thermally stable during the soldering process.

• PRO 342

- **Best Used When:** The combination of best soldering performance and low post-soldering residues is desired. Also best for applications where higher activity fluxes are required due to higher corrosion levels of the materials being soldered
- **Applications:** Suitable for spray flux and foaming applications. Ideal for machine soldering of populated electronic assemblies, standard, and SMT applications.
- **Features:** Excellent activation properties, exceptional solder penetration, highly effective in lead-free soldering processes, and produces very low residue and no solder ball formation.
- **Benefits:** High efficiency with minimal usage amounts, suitable for inert gas soldering environments.

• PRO Selective

- **Best Used When:** Applying in a selective soldering application. Higher solids content creates more thermally stable flux which allows for wider process window.
- **Applications:** Designed for modern machine soldering including standard assembly, SMT application, and selective soldering.
- **Features:** Effective activation properties, suitable for moderately wettable solder joints, and offers a wide process window.
- **Benefits:** High efficiency with minimal usage, ideal for all automatic soldering procedures in electronics manufacturing, thermally stable.



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Combined Features

- **Activation Performance:** All three fluxes demonstrate excellent activation on wetting surfaces of solder patterns and PCB solder zones.
- **Efficiency and Economy:** Each flux offers economic benefits due to high efficiency and reduced quantities required for effective soldering, leading to cost savings in large-scale production.
- **Thermal Stability:** Suitable for lead-free solder baths, maintaining stability throughout the soldering process.
- **Application Flexibility:** Each flux can be applied using all known flux application methods and is compatible with both traditional and modern soldering equipment.

Environmental and Safety

- **Halogen-Free:** All fluxes conform to halogen-free requirements per J-STD-004, minimizing environmental and health impacts.
- **Residue and Cleaning:** Low-residue formation, with **PRO 334** and **PRO 342** offering no-clean properties after soldering.

Compliance

- Complies with ISO 9454/1-2.2.3 A and IPC J-STD-004, ensuring reliability and quality in international markets.

Physical Data

Physical Properties	PRO 334	PRO 342	PRO SELECTIVE
J-STD-004	ORL0	REL0	REL0
Colour	Water/clear	Lightly colored	Amber-colored
Flash Point	13°C	<21°C	<21°C
Density @ 20°C (g/cm ³)	0,825	0,810	0,815
Solids Content	2,20%	3,5%	4,0%
Halide Content	None	None	None
Acid Number	16±1,5	16±2	19±1,5
Solvent	PRO SOLVENT I	PRO SOLVENT	PRO SOLVENT I
Shelf Life	2 years	2 years	2 years

Application Parameters

Parameter	PRO 334	PRO 342	PRO SELECTIVE
Pre-Heating	Between 90°C and 120°C on the component side of the PCB	Between 90°C and 120°C on the component side of the PCB	Between 110°C and 135°C on the component side of the PCB
Soldering Speed	1.0–2.0m/mim	1.0–2.0m/mim	1.0–2.0m/mim
Bath Temperature	Max 260°C for standard alloys	Max 260°C for standard alloys	Max 260°C for standard alloys
Compatible with Both Common Lead and Lead-Free Alloys	Y	Y	Y



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Packaging

Available in 10-liter and 25-liter plastic canisters. **PRO Selective** additionally offers a 5-liter option.

Special Notes (Applicable to All Fluxes)

All fluxes have been tested for compatibility with common materials in electronics manufacturing. A compatibility test with plastics, paints, and markings used by the manufacturer is recommended.

The user should verify the suitability of flux residues for the operational reliability of assemblies under high-temperature and humidity conditions (e.g., >90% relative humidity).

Ensure compliance with legal regulations (Chemicals Act), particularly the Hazardous Substances Ordinance in its current version. The packaging and labeling comply with these regulations and traffic laws. For disposal, refer to the safety data sheet.

Safety Regulations:

- Refer to the corresponding safety data sheet for each flux.

Contact Information for Solder Chemistry:

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About Us

Solder Chemistry is a leading provider of soldering solutions, including solder pastes, wires, bars, fluxes, cleaners and adhesives for a wide variety of SMT applications. Founded in 1994, and headquartered in Germany, Solder Chemistry has set new standards in quality, innovation, and customer satisfaction, powered by its knowledgeable R&D and technical support staff. Utilizing a robust European supply chain, and its flexible, customer-oriented structure allows it to serve large, international companies as well as small businesses in a fast, reliable manner. In 2021, Solder Chemistry became an Indium Corporation company, operating as a brand under Indium Advanced Materials GmbH, while maintaining quality service and reliable products to its customers with its own formulations and service. For more information about Solder Chemistry, visit www.solderchemistry.com.