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Your guide to better dishwashing



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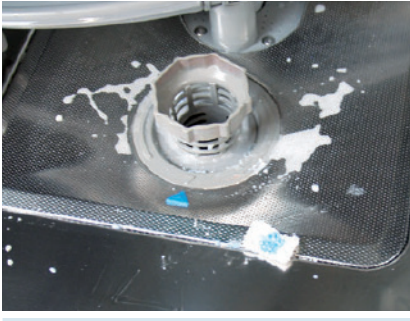
DISHWASHING SYMPTOM ANALYSIS

Achieving the Diamond Standard

This quick diagnostic tool is designed to help identify the typical problems that households experience when using their dishwasher. As dishwashing experts for over 60 years, Finish have compiled this booklet to help users achieve the Diamond Standard of dishwashing.

Visit our consumer website www.dishwashingexpert.co.uk to learn more about the advantages of automatic dishwashing and how to get the best possible dishwashing results.

Dishwasher

Observation / Detection	Interpretation / Cause	Solution / Answer
<p>Dishes not dry</p>  <p>Dishes are not dry at the end of a cycle</p>	<ul style="list-style-type: none"> Poor drying and/ or rinsing performance Formation of puddles due to shape of dishes Unloading of dishes too soon at the end of a cleaning cycle Insufficient temperature (defective heating element) 	<ul style="list-style-type: none"> Use Finish Rinse Aid, and increase dosage if necessary Load and position dishes securely so that they cannot turn over and water can run off completely Briefly open the machine at the end of the cycle to remove the steam and then close it again. Empty the machine at least 30 minutes after program ends and allow excess rinse water to dry/ evaporate before unloading Inform service technician!
<p>Foaming</p>  <p>Heavy foaming inside the dishwasher!</p>	<ul style="list-style-type: none"> Dishes are cleaned first with washing-up liquid (which leads to foaming!) Rinse aid was spilt during refilling, or rinse aid chamber is leaking (heavy foaming at temperatures < 40°C) Extremely high amount of protein based food e.g. yoghurt, cottage cheese etc. Temperature <40°C (broken heating element) 	<ul style="list-style-type: none"> Only use cutlery or a paper towel etc. to pre-clean dishes Rinse away rinse aid with cold water (will be pumped off when new cycle is started); in case of leaking rinse aid chamber inform the service technician Scrape off food using cutlery or a paper towel before loading Inform service technician! <p>In foam-flood emergency: Remove foam manually as much as possible and use a special defoaming agent; dose 2-3 table spoons of vegetable oil or use soap to clear suds!</p>
<p>Residues of detergent</p>  <p>Residues of powder or tablet inside the dishwasher or dosing chamber</p>	<ul style="list-style-type: none"> Tablet is not completely dissolved at the end of the cycle (e.g. short programmes) Flap of detergent dosing chamber is blocked by bulky dishes A damp detergent dosing chamber can cause tablets and powder to stick 	<ul style="list-style-type: none"> Use tablet which is best-suited for short programmes, e.g. Finish All-in-1; otherwise, use standard, normal or eco programmes instead Sort dishes in a way that the flap of the detergent dosing chamber can open freely Make sure that the detergent dosing chamber is dry when detergent is dosed

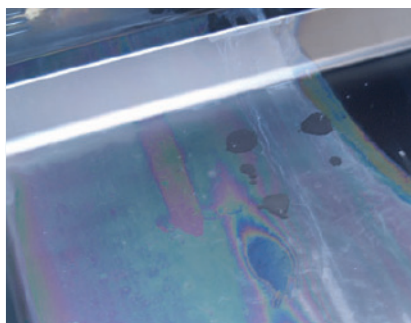
Dishwasher

Observation / Detection

Interpretation / Cause

Solution / Answer

Discolouration



Brownish-yellow/ blue-purple discolouration of metal (e.g. machine wall)

- Impurities in tap water such as iron or manganese oxide
- Use of detergent with a high alkalinity level (e.g. commercial or other products not tested and approved by your dishwasher manufacturer)

- Generally removable by running an acidic machine cleaner such as Finish Dishwasher Cleaner
- Only use detergent for household dishwashers

Deposits



Deposits of soils or grease in outlet areas, e.g. filters

- High concentration of soils, e.g. on filters, spray arms, basket parts (rollers, roller guides)
- Frequent use of short programmes (leading to poor emulsifying of fatty stains)
- Insufficient detergent is dosed
- Residues of fat or starch, e.g. on filters, spray arms, basket parts (rollers, roller guides)

- Scrap off food before loading dishes by using cutlery or a paper towel; remove filters and spray arms regularly to clean them manually; check roller and roller guides; use Finish Machine Cleaner regularly to remove and prevent further blockages
- Use standard, normal or eco programmes
- Dose detergent as recommended
- Remove filter, spray arms, baskets; clear the blockage and rinse properly; use Finish Machine Cleaner regularly to prevent further blockages

Blockage

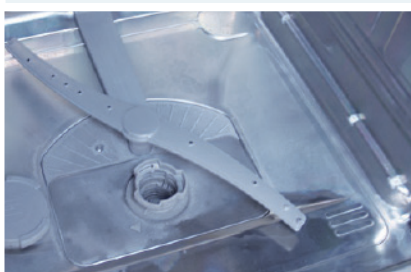


Residues block nozzles and sieves

- Water-insoluble solids present in wash (e.g. foil, paper)
- No or under dosage of detergent leads to insufficient hydration of water hardness, and depending on water hardness to formation of mineral residues, e.g. limescale on nozzles, spray arms

- Scrap off food before loading dishes by using cutlery or a paper towel; remove paper labels from jars etc.; clear the blockage and rinse properly
- Dose detergent as recommended (no half tablets); if necessary remove functional parts; clear the blockage and rinse properly; use Finish Machine Cleaner regularly to prevent further blockages

White film

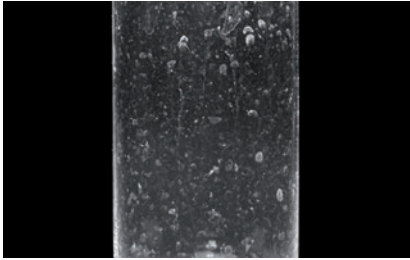





Milky, white layer of film on dishwasher (limescale); detection: hydrochloric acid solution (RB test kit) or vinegar; removable with Finish Machine Cleaner

- No use of special salt in salt chamber if:
 - a) single-function 'classic' detergent is used
 - b) Multi-Benefit tablets are used but water hardness is $> 26^{\circ}e$
- Wrongly adjusted water hardness control on dishwasher
- Insufficient detergent is dosed
- Ion-exchanger blocked or defective

- Use/ refill Finish Special Salt into salt chamber; determine water hardness and adjust the appliance control accordingly; switch to Multi-Benefit tablets if hardness $< 26^{\circ}e$
- Determine water hardness and adjust the appliance control accordingly
- Dose detergent as recommended
- Check water hardness and if insufficient softening, inform service technician

Glass, Porcelain & Ceramics

Observation / Detection	Interpretation / Cause	Solution / Answer
<p style="text-align: center;">Drop-marks</p> 	<ul style="list-style-type: none"> ● Poor drying and/ or rinsing performance ● High salt concentration in water 	<ul style="list-style-type: none"> ● Use/ refill rinse aid, and if necessary increase dosage ● a) If water hardness is < 26°e: use Multi-Benefit tablets without additional special salt ● b) If water hardness is > 26°e: use Multi-Benefit tablets with additional special salt and rinse aid
<p style="text-align: center;">Smears, streaks</p>  <p style="font-size: small; margin-top: 5px;">Water-soluble smears, streaks (alkaline); detection: Phenolphthalein (RB test kit); removable with water</p>	<ul style="list-style-type: none"> ● Carry over of alkalinity, caused by: <ul style="list-style-type: none"> a) Poor loading and sorting of dishes b) Formation of puddles due to shape of dishes c) Tablets still dissolving during rinse cycle (due to using short programmes) d) Over dosage of detergent e) Insufficient intermediate and rinse cycle; can be caused by calcified valves ● Alkaline salt chamber; detergent was refilled instead of special salt 	<ul style="list-style-type: none"> a) Ensure that cleaning solution can completely run off the dishes b) Load and position dishes securely so that they cannot turn over and the cleaner solution can run off c) Use tablet which is more suited for short programmes, e.g. Finish All-in-1; otherwise, use standard, normal or eco programmes; or use powder or gel for short programmes d) Dose detergent as recommended e) Check reason, replace affected parts or inform the service technician <ul style="list-style-type: none"> ● Rinse out the salt chamber properly with tap water; if possible, measure the water hardness and if softening is insufficient inform the service technician
<p style="text-align: center;">Milky layer</p>  <p style="font-size: small; margin-top: 5px;">Milky layer of limescale; detection: hydrochloric acid solution (RB test kit) or vinegar; removable with vinegar/ lemon juice</p>	<ul style="list-style-type: none"> ● No use of special salt in salt chamber if: <ul style="list-style-type: none"> a) Single-function 'classic' detergent is used b) Multi-Benefit tablets are used but water hardness is > 26°e ● Wrongly adjusted water hardness control on dishwasher ● Blocked or defective ion-exchanger 	<ul style="list-style-type: none"> ● Use/ refill Finish Special Salt into salt chamber; determine water hardness and adjust the appliance control accordingly; switch to Multi-Benefit tablets if hardness < 26°e ● Determine water hardness and set the control accordingly ● If possible measure the water hardness and if softening is insufficient inform service technician
<p style="text-align: center;">Surface corrosion</p>  <p style="font-size: small; margin-top: 5px;">Partial to complete turbidity; irreversible</p>	<ul style="list-style-type: none"> ● Glass corrosion can occur when the surface of the glass has imperfections (caused by manufacturing process); these weak areas become visible after several cleaning cycles 	<ul style="list-style-type: none"> ● a) Use Multi-Benefit tablets with glass protection function or specialist Finish Protector. ● b) If available, adjust the bypass system of the ion-exchanger to a water hardness of 4-5°e. ● c) Use short, low-temperature or special glass programmes ● d) Open the machine at the end of the cycle to remove the steam

Glass, Porcelain & Ceramics

Observation / Detection

Interpretation / Cause

Solution / Answer

Bleachable stains



Yellow-brown residues (e.g. tea, coffee); removable; detection: chlorine bleach (RB test kit)

- Poorly sorted and loaded dishes

- Short and/ or low-temperature programmes used

- Insufficient detergent dosage level used

- Damp detergent (reduced bleach function; especially for powder)

- Insufficient spraying action due to blocked spray arms

- Ineffective spraying action due to low water level (e.g. calcified valve)

- Use of low quality detergent

- Ensure that cleaning solution can completely run off the dishes

- Use standard, normal or eco programmes

- Dose detergent as recommended

- Replace damp detergent and repeat the cleaning cycle

- Remove spray arms; clear the blockage and rinse properly; use Finish Machine Cleaner regularly to prevent further blockages

- Check reason, replace affected parts or inform the service technician

- Use of Finish detergent, as recommended by machine manufacturer

Starch stains



Dull residues (e.g. rice, potatoes); detection: iodine solution (RB test kit); removable with water or scouring agent

- Poorly sorted and loaded dishes

- Over-use of short programmes

- Insufficient detergent is used

- Insufficient spraying action due to blocked spray arms

- Ineffective spraying action due to low water level (e.g. calcified valve)

- Use of low quality detergent

- Ensure that cleaning solution can completely run off the dishes

- Use standard, normal or eco programmes

- Dose detergent as recommended

- Remove spray arms; clear the blockage and rinse properly; use Finish Machine Cleaner regularly to prevent further blockages

- Check reason, replace affected parts or inform the service technician

- Use of Finish detergent, as recommended by machine manufacturer

Redeposition



Granular residues

- High concentration of soils, e.g. on filters, spray arms, basket parts (rollers, roller guides)

- Frequent use of short programmes (leading to poor emulsifying of fatty deposits)

- Insufficient detergent is dosed

- Poorly sorted and loaded dishes

- Use of low quality detergent

- Scrape off food before loading dishes by using cutlery or a paper towel; remove filters and spray arms regularly to clean them manually; check roller and roller guides; use Finish Machine Cleaner regularly to prevent further blockages


- Use standard, normal or eco programmes

- Dose detergent as recommended

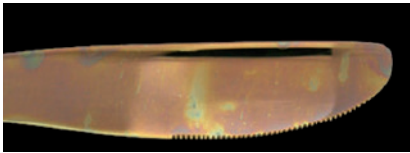

- Ensure that cleaning solution can completely run off the dishes

- Use of Finish detergent, as recommended by machine manufacturer


Glass, Porcelain & Ceramics

Observation / Detection	Interpretation / Cause	Solution / Answer
Fading decoration 	<ul style="list-style-type: none"> ● Use of detergent that does not contain décor protection ● Quality and susceptibility of dishes (and finish of décor) 	<ul style="list-style-type: none"> ● Use separate product for décor protection (e.g. Finish Protector) ● Purchase dishwasher-safe dishes (e.g. in-glaze, under-glaze décors); alternatively, wash dishes by hand
<p>Fading decoration on dishes</p>		

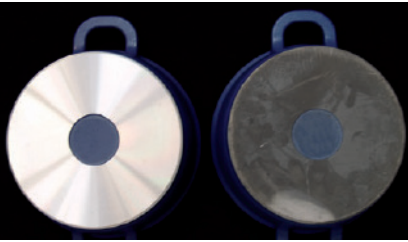
Metal: Stainless Steel

Observation / Detection	Interpretation / Cause	Solution / Answer
Discolouration 	<ul style="list-style-type: none"> ● Caused by food such as vegetables (e.g. cauliflower, potatoes); harmless 	<ul style="list-style-type: none"> ● Easily removable using surface cleaners for stainless steel, glass or ceramics
<p>Iridescent discolouration (brownish-yellow/ black-purple); removable</p>		
Rusting 	<ul style="list-style-type: none"> ● Critical acidic or salty foodstuff like mustard or ketchup left on metal surfaces for too long before cleaning ● Spillage of special salt when refilling the salt chamber ● Lower grade stainless steel being less resistant to corrosion in damp dishwasher environment ● Steel and silver cutlery items in contact and reacting 	<ul style="list-style-type: none"> ● Avoid prolong contact with such acidic and/ or salty food residues ● To remove spilled salt activate a pre-cleaning cycle without dishes ● Use high grade quality stainless steel; empty dishwasher straight after wash cycle ● Separate silver from steel items in cutlery basket
<p>Brownish-red spots (rust); detection: rhodanide (RB test kit); removable with metal polish</p>		

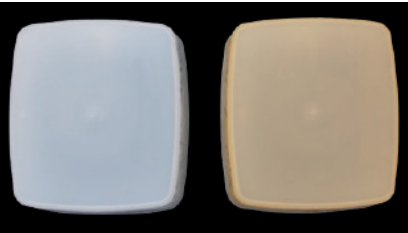

Metal: Silver

Observation / Detection	Interpretation / Cause	Solution / Answer
Tarnishing 	<ul style="list-style-type: none"> ● Formation of silver sulphide due to sulphur-containing food residues like mustard, eggs, mayonnaise ● Formation of silver oxide due to bleaching agents (oxidation) 	<ul style="list-style-type: none"> ● Avoid prolong contact with sulphur-containing food; pre-rinse ● Use high-quality detergent with integrated silver protection; tarnishing is removed by applying a silver polish
<p>Discolouration due to silver tarnishing (yellowish/ brownish-black/ black)</p>		


Metal: Aluminium

Observation / Detection	Interpretation / Cause	Solution / Answer
<p style="text-align: center;">Corrosion</p>  <p style="font-size: small;">Discolouration on metal surface due to corrosion (brightening or blackening - permanent)</p>	<ul style="list-style-type: none"> ● Brightening: e.g. of unsealed base of layered pans ● Blackening: black marks on kitchen utensils (e.g. garlic press) 	<ul style="list-style-type: none"> ● Wash by hand unless aesthetic changes to the material are acceptable to the user

Plastics

Observation / Detection	Interpretation / Cause	Solution / Answer
<p style="text-align: center;">Staining</p>  <p style="font-size: small;">Sometimes removable with chlorine bleach or by exposing to strong sunlight</p>	<ul style="list-style-type: none"> ● Staining caused by colour-intensive food such as tomato sauce or gravy, plus either: <ul style="list-style-type: none"> a) Use of short or low-temperature programmes b) Damp detergent used (leading to loss of bleaching performance; typically with powder) 	<ul style="list-style-type: none"> ● Prevent by scraping or rinsing off sauce before loading, plus: <ul style="list-style-type: none"> a) Use standard, normal or eco programme b) Replace damp detergent and repeat the cleaning cycle
<p style="text-align: center;">Water drops</p>  <p style="font-size: small;">Plastic is still wet and small puddles of water visible; plastics dry inferior to other dishes due to their lower heat capacity (lower mass)</p>	<ul style="list-style-type: none"> ● Poor drying/ or rinsing performance ● Formation of puddles due to shape of dishes ● Unloading of dishes too soon at the end of a cleaning cycle ● Insufficient temperature (defective heating element) 	<ul style="list-style-type: none"> ● Use/ refill rinse aid, and if necessary increase dosage ● Load and position dishes securely so that they cannot turn over and water can run off completely ● Briefly open the machine at the end of the cycle to remove the steam and then close it again. Empty the machine at least 30 minutes after program ends and allow excess rinse water to dry/ evaporate before unloading ● Inform service technician!

Wood

Observation / Detection	Interpretation / Cause	Solution / Answer
<p style="text-align: center;">Cracking and fading</p>  <p style="font-size: small;">Greying (fading) of the surface; cracking</p>	<ul style="list-style-type: none"> ● The changing conditions - swelling of wooden dishes in an aqueous-alkaline cleaning process followed by complete searing outside the appliance can lead to cracking, e.g. cutlery boards 	<ul style="list-style-type: none"> ● Dishes made of wood, e.g. cutlery with wooden grips should not be cleaned in a dishwasher. Recommendation: use cutting boards made of plastic, or clean wooden pieces by hand or replace them regularly

Finish Range: What to use, how, where and why



Detergent Range		Additives Range (Dishes)			Additives Range (Dishwasher)		
CLEANING FUNCTION 	Quantum 	RINSE, DRY & SHINE 	WATER SOFTENING/ SALT FUNCTION 	GLASS & DECOR PROTECTION 	MACHINE CLEANING 	ODOUR NEUTRALISING 	MACHINE FRESHENING 
	All-In-1 		Special Salt Salt function is included in the detergent. However, Finish Special Salt is highly recommended and essential for water hardness >26°e, preventing limescale deposits/ damage.	Protector Use of Finish Protector is recommended to reduce the risk of glass corrosion and decor fading on susceptible tableware.	Dishwasher Cleaner Grease cutting action and machine limescale protection are included in the detergent. However, to maintain the performance of your dishwasher monthly to bimonthly use of Finish Dishwasher Cleaner is recommended.	Odour Stop Use Finish Odour Stop to eliminate malodours.	Dishwasher Freshener Use Finish Dishwasher Freshener for a refreshing scent in the dishwasher.
	Classic 	Rinse Aid Rinse aid function is included in the detergent. However, specialist Finish Rinse Aid will deliver the complete Diamond Standard shine.	Protector Use of Finish Protector is recommended to reduce the risk of glass corrosion and decor fading on susceptible tableware.	Dishwasher Cleaner Grease cutting action and machine limescale protection are included in the detergent. However, to maintain the performance of your dishwasher monthly to bimonthly use of Finish Dishwasher Cleaner is recommended.	Odour Stop Use Finish Odour Stop to eliminate malodours.	Dishwasher Freshener Use Finish Dishwasher Freshener for a refreshing scent in the dishwasher.	
	Classic Powder 	Addition of Finish Rinse Aid is essential to prevent drops and marks and wet dishes. For all programmes; dosage: into the rinse aid chamber	Protector Use of Finish Protector is recommended to reduce the risk of glass corrosion and decor fading on susceptible tableware.	Dishwasher Cleaner Grease cutting action and machine limescale protection are included in the detergent. However, to maintain the performance of your dishwasher monthly to bimonthly use of Finish Dishwasher Cleaner is recommended.	Odour Stop Use Finish Odour Stop to eliminate malodours.	Dishwasher Freshener Use Finish Dishwasher Freshener for a refreshing scent in the dishwasher.	
Classic Gel 	Addition of Finish Special Salt is essential to prevent limescale deposits/ damage. For all programmes; dosage: into the salt chamber	Protector Use of Finish Protector is recommended to reduce the risk of glass corrosion and decor fading on susceptible tableware.	Dishwasher Cleaner Grease cutting action and machine limescale protection are included in the detergent. However, to maintain the performance of your dishwasher monthly to bimonthly use of Finish Dishwasher Cleaner is recommended.	Odour Stop Use Finish Odour Stop to eliminate malodours.	Dishwasher Freshener Use Finish Dishwasher Freshener for a refreshing scent in the dishwasher.		
Function included in the detergent.	Function included in the detergent, but additives recommended to maximise performance.	Function not included in the detergent - use of additives is essential.	Function not included in the detergent - use of additives is essential.	Function not included in the detergent - use of additives is essential.	Function not included in the detergent - use of additives is essential.	Function not included in the detergent - use of additives is essential.	