

STRUCTURIX Chemicals

Strategically designed to be compatible with our films and processing equipment, STRUCTURIX chemicals guarantee perfect film development.

The chemistry involved in the processing of radiographic film is a crucial part of the total cycle. Because the goal in processing is to control all factors that influence the intrinsic quality of the industrial X-ray film, the use of optimal chemicals is essential. Waygate Technologies is the exclusive provider of the complete line of advanced, high-quality STRUCTURIX processing chemicals. Specially designed for industrial X-ray applications, STRUCTURIX chemicals are an integral part of our total system approach. They are compatible with STRUCTURIX film types and equipment to guarantee perfect development every time.

Suited for all processors

All types of processors can be combined with STRUCTURIX chemicals. Best results, however, are obtained with the dedicated films and processors as they are designed to work together.

Handy packaging

STRUCTURIX chemicals come in shipping cartons made from 60 percent recycled cardboard. Where possible, the cartons are fitted with handles for easy tilting and transportation. The use of color is restricted and used only where the color is part of the product information. All boxes are color-coded with colored adhesive tape so that contents are easily identifiable. Red is used for boxes containing developer, blue for boxes containing fixer and brown for all other chemicals.

Uniform PE material use for easier recycling of bottles

STRUCTURIX chemicals are supplied in translucent bottles made from 100 percent polyethylene (PE). Labels on the bottles are made of polyethylene material and have a white background to make the printed text easier to read. To ensure each bottle is easily PE-recyclable, the colored components are only the screw cap and a stripe in the label for identification purposes (red for developer, blue for fixer and natural for other chemicals).

Safety seal for easy automatic mixing

All bottles feature a safety seal. This seal occurs during production. It is welded to the bottle by induction heating to form a perfectly airtight closure. When you remove the screw cap, a skin of polyethylene remains on the neck of the bottle. The skin allows the bottle to be placed upside down on a mixer. This feature is also one of our many environmentally safe practices.

Guaranteed quantity

STRUCTURIX chemicals are marked with an “e” sign on the front label after the quantity indication. This “e” marking guarantees that STRUCTURIX chemicals are delivered with the correct, authorized quantity limits according to EU legislation.

Expiration date

STRUCTURIX chemicals are marked with an “exp. date”, indicating product shelf life. The “exp date” is inkjet printed and includes the year and the month of expiration. The expiration information also appears on each shipping carton and each part of the concentrate bottles.

Safety measures

Information relating to safety, health and environmental aspects of the chemicals can be found in the Safety Data Sheets (SDS). We advise your careful adherence to all safety instructions provided for the use of our chemicals.

Process room conditions

We advise you ensure a well-ventilated processing room. An air exchange of 10 times the room volume per hour is recommended to prevent the build-up of too high a concentration of chemical fumes in the air.

A wide range of industrial X-ray chemicals for every application

- Manual Processing
- Automatic Processing
 - ECO' chemical range
 - Standard chemical range
- Cleaning Chemicals for Tanks and Racks

Manual Processing Chemicals

STRUCTURIX G 128 Developer

G 128 is a single part, liquid developer for manual processing of industrial X-ray films. Its main advantages include:

- Excellent stability during storage as concentrate
- Robust performance in high temperature and high humidity conditions
- Resistance to oxidation in normal use
- Excellent speed
- Exceptional contrast characteristics

The G 128 manual developer is available in boxes containing four sets of 5 litre bottles of concentrate. Each 4 x 5 litres box will make four sets of 25 litres of ready-for-use solution.

The recommended replenishment rate depends on the manual processing system used:

- 600 ml/m² or 90 ml/film of 35 x 43 cm is the average rate to preserve good processing condition (reference: STRUCTURIX D7 film with an average density of 2.50)
- The standard developing temperature is 20°C for five minutes developing time.
- 400 ml/m² with channel type hangers
- 300 ml/m² with clip type hangers

To obtain best results, the G 128 developer should be used in conjunction with the STRUCTURIX G 328 fixer.

STRUCTURIX G 328 Fixer

G 328 fixer is a single part, liquid fixer for manual processing of industrial X-ray films. The G 328 fixer contains no hardening agent.

It is available in shipping cartons containing four sets of 5 litres concentrate for four sets of 25 litres ready-for-use bath.

The recommended replenishment rate is independent of the used manual processing system and is applicable for both clip type hangers and channel type hangers:

- 600 ml/m² is the average rate or 90 ml/film of 35 x 43 cm
- Keep the solution level constant and replace after 1.5 m² film per litre original solution has been fixed

In the event an automatic dryer such as the dryer unit is used, a hardening fixer, preferably G 335 (part A & B) or ecoFIX (part A & B), is recommended. When using the STRUCTURIX G 328 fixer, we strongly advise you add a hardening agent to the G 328 fixer.



Automatic Processing Chemicals

The new STRUCTURIX ECO Chemicals are an important link in the total STRUCTURIX ECO Film System.

Thanks to the intelligent composition of the chemicals, ecoDEV and ecoFIX, it is possible to reduce chemistry consumption up to 60%, compared to the present reference levels while maintaining excellent sensitometric and physical characteristics. This significant reduction in chemistry consumption translates into cost savings, as the smaller volume of developer and fixer required leads to less waste volume and lower disposal costs.

The ECO chemicals, ecoDEV and ecoFIX, have the intrinsic qualities and benefits of standard STRUCTURIX chemicals and, therefore, provide excellent results in combination with any STRUCTURIX processor.

EcoDEV and ecoFIX have the same dilution as G 135 and G 335, allowing use of the current NDT MIXER without modification.



Recommended use of ecoSTART

Processing Time	Immersion Time	Quantity To Be Added
5 min. cycle	62.5 sec.	25 ml per Litre Fresh ecoDEV Solution
8 min. cycle	100 sec.	20 ml per Litre Fresh ecoDEV Solution

Recommended use of ecoDEV

Processing Time	Immersion Time	Temp. (°C)	Replenishment Rate
5 min. cycle	62.5 sec.	29° C	550 ml/m ²
8 min. cycle	100 sec.	27° C	900 ml/m ²

Recommended use of ecoFIX

Processing Time	Processor	Replenishment Rate
5 min. cycle	S ECO	700 ml/m ²
8 min. cycle	S ECO, M ECO	700 ml/m ²
8 min. cycle	U, NOVA	1200 ml/m ²

STRUCTURIX ecoDEV

The STRUCTURIX ecoDEV is a new two-part developer suitable for standard processing in the 8 minute cycle but specifically designed for super fast 5 minute processing.

EcoDEV is glutaraldehyde-free and boron-free, reducing its impact on the environment. This is especially true when processing is in the 5 minute cycle in combination with the NDT S ECO processor. This combination has the lowest possible replenishment rate while delivering optimal developing capabilities.

EcoDEV is packed in a shipping carton containing two sets of part A (5 litres) and part B (0.5 liters) concentrate. One set is sufficient for preparing 20 litres of ready-to-use developer. Each carton contains four bottles.

The ecoDEV developer enables you to develop your films at a lower temperature in the standard 8 minute processing cycle, resulting in less evaporation of the chemicals.

STRUCTURIX ecoSTART

STRUCTURIX ecoSTART is a new one-part starter solution to be added to ecoDEV ready-for-use solution. Whenever you replace the ecoDEV developer, we recommend use of ecoSTART starter solution to ensure film images with optimal sensitometric results right from the start. EcoSTART is packed in a shipping carton containing 4 sets of 1 litre bottles.

STRUCTURIX ecoFIX

The STRUCTURIX ecoFIX is a new two-part fixer for universal use but specially designed for super fast processing, with the lowest possible replenishment rates while rendering improved archiving results.

EcoFIX is boron-free. Due to the lower level of aluminum sulfate, the risk of precipitation is reduced drastically, ensuring good film quality and consistent repeatability.

EcoFIX is packed in a shipping carton containing two sets of part A (5 litres bottle) and part B (1.25 litre bottle) concentrate. One set of part A & B is sufficient for preparing 20 liters of ready-for-use fixer.

STRUCTURIX ecoFIX can be used for manual processing. For manual usage, one set of concentrate is enough to prepare 25 litres of ready-for-use solution.

Automatic Processing Chemicals

The standard STRUCTURIX chemicals are recognized worldwide and have been used successfully in industrial X-ray labs for years, thanks to their high quality.



STRUCTURIX G 135 Developer

STRUCTURIX G 135 is a three-part developer for use with automatic processing.

STRUCTURIX G 135 is known for its stability, long shelf life and self-cleaning characteristics. The self-cleaning feature means that rather than leaving solids floating to the bottom of the processor tank, they sink through the drains. This feature keeps the chemistry very clean and results in better film quality.

STRUCTURIX is packed in a shipping carton containing two sets of part A (5 litres), part B & C (2x 0.5 litres) concentrate. One set is sufficient for preparing 20 litres of ready-for-use developer, if used for automatic processing.



STRUCTURIX G 135 s Starter

STRUCTURIX G 135 s starter is a one-part, ready-for-use starter solution to be added to fresh G135 developer ready-for-use solution. G 135 s Starter is supplied in quantities of four sets of 1 litre bottles per box.

When preparing fresh G 135 developer, an additional quantity of 25 ml starter solution per litre ready-for-use developer is added in the processor tank. Thus, a bottle of 1 litre G 135 s Starter matches 40 litres of G 135 ready-for-use developer.

The use of starter solution is recommended whenever the developer is replaced, ensuring film images with optimal sensitometric results right from the start.

STRUCTURIX G 335 Fixer

The STRUCTURIX G 335 Fixer is a two-part fixer for universal use. The G335 fixer is universally applicable for automatic and manual processing. G 335 is known for:

- excellent archival permanence
- low maintenance requirements
- minimal odor level

It is available in a box of two sets of 5 litres part A and 1.25 litres part B concentrate. One set of part A & B provides 20 litres of ready-for-use fixing bath for automatic processing. When using G 335 for manual processing, one set of concentrate should be diluted for up to 25 litres of ready-for-use solution.



Cleaning Products

State-of-the-art film system technology and regular maintenance of the film processor are the best guarantees of outstanding film image quality.

Two innovative products help assure the intrinsic quality of the film processing. They are DEVCLEAN and FIXCLEAN, components of a universal cleaning solution for a clean processing system.

The use of DEVCLEAN and FIXCLEAN will:

- extend the useful life of the STRUCTURIX developer and fixer solutions
- improve the developer system performance and reliability
- ensure consistent, high quality images
- reduce costs by extending your maintenance interval

STRUCTURIX DEVCLEAN

DEVCLEAN is a highly efficient, two-part maintenance product for the thorough cleaning of the developing area of both processors and tanks along with the accessories used for manual development. Silver deposits and sludge on all parts dissolve effortlessly, completely and rapidly.

DEVCLEAN

- is a one-step maintenance that needs no neutralizing
- rinses away easily and quickly

DEVCLEAN is offered as a one processor service set. Each box contains one set of 5 litres part A and 5 litres part B to be diluted to 30 litres ready-for-use cleaning solution.



STRUCTURIX FIXCLEAN

FIXCLEAN is a one-part, liquid cleaning product for regular maintenance of fixer, intermediate rinsing and wash water areas of processors. It can also be used to clean fixer tanks of chemical mixers such as the NDT MIXER, as well as manual film processing systems.

The FIXCLEAN cleaning compound is based on sodium hydroxide. It is highly efficient and contains no chlorine based substances.

FIXCLEAN advantages include:

- speed and efficiency
- dissolves lime
- cleans all sediment and deposits

FIXCLEAN is conveniently delivered in a quantity appropriate for one processor service. Each box contains one cleaning set or one 5 litre bottle of concentrate to be diluted to 50 litres of ready-for-use solution. Most fixer and wash water areas can be cleaned with one set of FIXCLEAN.



STRUCTURIX Eco Film System

The STRUCTURIX ECO Film System combines both economy in use and ecological responsibility. This advanced film system minimizes its impact on the environment with less chemistry consumption, higher film throughput and lower energy usage.

Choose from the STRUCTURIX Film System in 5 minute cycle (NDT S ECO) or the STRUCTURIX Film System in 8 minute cycle (NDT S ECO/M ECO).

Both are specially designed to meet the strictest standards for silver content in the wash water. The secret lies in the double fixing tank with which the system is equipped. This cascade fixing system ensures that the amount of silver in the wash water remains within the limit of <math>< 50 \text{ mg/m}^2</math>. Additionally the STRUCTURIX S ECO allows significant reduction in the chemistry replenishment rate.

STRUCTURIX Chemicals

Thanks to the intelligent composition of the chemicals, STRUCTURIX ecoDEV and ecoFIX, it is possible to reduce the chemistry consumption to less than 60 percent of the present reference levels while maintaining excellent sensitometric and physical characteristics. This drastic reduction in chemistry consumption translates into lower purchasing costs, while the smaller volume of developer and fixer waste leads to lower disposal costs. In fact, the higher concentration of silver in the fixer waste actually turns an expenditure item to an income item, thanks to silver recovery.

STRUCTURIX ecoDEV

The ecoDEV is a new two-part developer for universal use but specially designed for super fast processing, with the lowest possible replenishment rates while maintaining optimum developing capabilities. The hardener-free and boron-free ecoDEV has a minimal impact on the environment.

Replenishment rate 5 min. cycle: 550 ml/m^2 (S ECO)

Replenishment rate 8 min. cycle: 900 ml/m^2 (S ECO/M ECO).

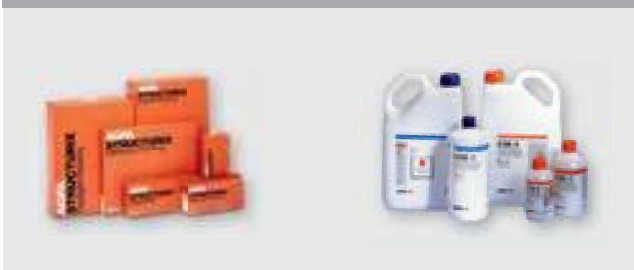
The use of the starter solution, ecoSTART, is highly recommended when filling the developer tank. In this way, optimal sensitometric results are ensured from the start.

STRUCTURIX ecoFIX

The ecoFIX is a new boron-free, two-part fixer specially designed for super fast processing, with the lowest possible replenishment rates while rendering improved archiving results.

Replenishment rate: 700 ml/m^2 (S ECO and M ECO).

STRUCTURIX Ims D2 to D8 STRUCTURIX Eco Chemicals



STRUCTURIX M ECO



STRUCTURIX S ECO





Waygate Technologies provides safety and environment information on all film System products in your language and according to the legislation in your country. Safety Data Sheets (SDS) contain data about the composition of chemical substances and preparations and the relevant health, safety and environmental information. Article Information Sheets (AIS) contain data about STRUCTURIX Films. Equipment Information Sheets (EIS) contain relevant health, safety and environmental data about equipment. Recycling Passes (RP) give information to customers and specialized waste collectors about hazardous components and valuable materials in end-of-life equipment.



STRUCTURIX Eco Film Systems

The STRUCTURIX ECO Film System in 5 minute cycle

This STRUCTURIX ECO Film System has all possible economical advantages and features to minimize its impact on the environment, including:

- Up to 60 percent higher film throughput capacity
- Up to 40 percent less chemistry
- Up to 40 percent less chemistry and packaging waste
- A considerable decrease in wash water replenishment rates
- Lower silver freights in the wash water
- Less energy consumption

A certified system

The STRUCTURIX ECO Film System is perfectly suited to applications that demand the highest image quality. It is certified according to the Industrial Film Systems Classification Standards ASTM E-1815, ISO 11699-1 and JIS-K7627. The German Federal Institute, BAM, awarded the STRUCTURIX ECO Film System in 5 minute cycle the certificate of compliance to International Classification Standards.

STRUCTURIX films

The radiographic films D2, D3, D4, D5, D7, D8 can be used in this system. Adaptations have been made to harmonize the drying characteristics of this assortment.

Outstanding performance

When set to the 5 minute cycle, the STRUCTURIX S ECO processes no less than 51 cm of film per minute or 78 films (35 x 43 cm) per hour! ecoDEV immersion time: 62.5 sec. (5 min. cycle) at temperature 29°C.

The STRUCTURIX ECO Film System in 8 minute cycle

Compared to the STRUCTURIX ECO Film System with the S ECO installed in a 5 minute cycle, this system operates with the S ECO or M ECO in an 8 minute cycle.

This system also provides important ecological advantages, including:

- Reduction of the fixer replenishment
- Reduction of wash water
- Reduction of silver content in the waste water
- Less packaging waste
- Low energy consumption

A certified system

This STRUCTURIX ECO Film System is perfectly suited to applications that demand the highest image quality. It is certified according to the Industrial Film Systems Classification Standards ASTM E-1815, ISO 11699-1 and JIS-K7627.

STRUCTURIX films

The STRUCTURIX films D2, D3, D4, D5, D7, D8 can be used in this system.

Superior performance

The STRUCTURIX ECO Film System in 8 minute cycle has a film throughput capacity of 32 cm/min., or 48 films (35 x 43 cm) per hour for the S ECO and 20 cm/min., or 30 films (35 x 43 cm) per hour for the M ECO.

STRUCTURIX Eco Film Systems Versus STRUCTURIX Standard Film Systems

STRUCTURIX Eco Film Systems Versus STRUCTURIX Standard Film Systems		STRUCTURIX ECO Film Systems		STRUCTURIX Standard Film Systems
		5 Minute Cycle	8 Minute Cycle	8 Minute Cycle
STRUCTURIX Equipment		S ECO	S ECO, M ECO	U, NOVA
STRUCTURIX Films		All	All	All
Film Throughput	<ul style="list-style-type: none"> • cm/min. • 35 x 43 cm Films/Hour 	51 78	32 (S ECO) / 20 (M ECO) 48 / 30	Depending on Processor Type Depending on Processor Type
STRUCTURIX Chemistry	<ul style="list-style-type: none"> • cm/min. Developer Replenishment • Fixer Replenishment • Starter 	ecoDEV: 550 ml/m ² ecoFIX: 700 ml/m ² ecoSTART: 25 l/l*	ecoDEV: 900 ml/m ² ecoFIX: 700 ml/m ² ecoSTART: 20 ml/l*	G135: 900 ml/m ² G335: 1200 ml/m ² G135S: 25 ml/l*
Developer Immersion Time (sec)		62.5	100	100
Temperature (°C)		29°	27°	28°
Water Consumption Between		13 l/m ²	13 l/m ²	Depending on Processor Type 13 l/m ² and more
Silver Freight**		< 50 mg/m ²	< 50 mg/m ²	300 - 600 mg/m ²
Silver Concentration	<ul style="list-style-type: none"> • At Fixer Rate 700 ml/m². • At Fixer Rate 1200 ml/m² 	4 ppm 1 ppm	4 ppm 1 ppm	Between 25 & 50 ppm

* l ready to use ** Values based on average radiographic densities

