



IDEAL CROSS-LINKING

# Initiators



Initiators

Working with reactive resins begins with the addition of initiators. Hardeners, accelerators as well as inhibitors must be exactly coordinated to each other if the desired effect and optimum polymerisation and curing are to be achieved. Our peroxides from United Initiators meet the highest possible quality and safety requirements. Combined with the right BÜFA accelerators and inhibitors, the user can individually adjust curing reactions to his working conditions as well as the requirements placed on the final product.

Our partner for organic peroxides, United Initiators, concentrates exclusively on the development and production of peroxides. The main office and production plant for the European market are located in Germany. United Initiators was the first company to produce 100 % phthalate-free peroxides in Europe, thus contributing to their goal of sustainability.

The products are distinguished by a high quality standard and product safety and their line of products is outstandingly coordinated to your applications.

**Important Note:**

Hardeners, accelerators and, if applicable, inhibitors must be exactly coordinated to each other if the desired effect is to be achieved. The selection of the optimum cold curing system depends on working conditions as well as the requirements placed on the finished product.

**Attention:**

It is exceedingly important that peroxides and accelerators are never stirred into the resin at the same time but one after the other to prevent fires or deflagration.

Let us to give you good advice.

Accelerators on a co-octoate base

- Accelerates curing
- For curing UP and VE resins
- For use with ketone peroxide

Product name	BÜFA®-Accelerator Co 1	BÜFA®-Accelerator Co 2	BÜFA®-Accelerator Co 4	BÜFA®-Accelerator Co 6	BÜFA®-Accelerator Co 10
Art. No.	742-0062	742-0042	742-0065	742-0600	742-0072
Chemical composition	cobalt-octoate, 1% dissolved in styrene and xylene	cobalt-octoate, 2% dissolved in styrene and xylene	cobalt-octoate, 4% dissolved in styrene and xylene	cobalt-octoate, 6% dissolved in xylene	cobalt-octoate, 10% dissolved in xylene
	Easy to meter because of the low concentration				

Accelerators on an amine base

- Optimises curing
- For curing UP and VE resins
- Improves curing in high humidity and at low temperatures
- For use with benzoyl peroxide
- Easy to meter because of the low concentration

Product name	BÜFA®-Accelerator DEA 10	BÜFA®-Accelerator DMA 10
Art. No.	742-0083	742-0060
Chemical composition	dimethyl aniline, 10% dissolved in styrene	dimethyl aniline, 10% dissolved in styrene



New accelerator series based on polymeric cobalt

Product name	BÜFA®-Accelerator Complex 0061	BÜFA®-Accelerator Complex 0071	BÜFA®-Accelerator Complex 0095	BÜFA®-Accelerator Complex 0096	BÜFA®-Accelerator Complex 0097
Art. No.	742-0061	742-0071	742-0095	742-0096	742-0097
Chemical composition	Polymeric cobalt 1%, dissolved in monomer-free resin	Polymeric cobalt 1%, dissolved in styrene and xylene	Polymeric cobalt 2%, dissolved in styrene and xylene	4% polymeric cobalt	cross accelerator polymeric cobalt/ dimethyl aniline dissolved in xylene

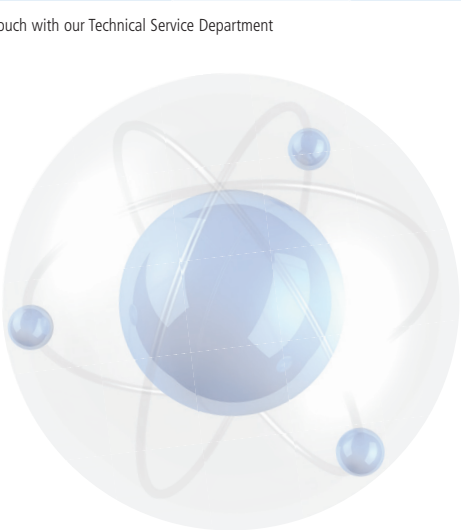
Product name	BÜFA®-Accelerator Complex 0098	BÜFA®-Accelerator Complex 0099	BÜFA®-Accelerator Complex 0397	BÜFA®-Accelerator Complex 9004	
Art. No.	742-0098	742-0099	742-0397	715-9004	
Chemical composition	Accelerator complex for curing VE resins	Accelerator complex for curing UP and VE resins with reduced Tmax	cross accelerator polymeric cobalt/DEAA dissolved in xylene	Accelerator complex for curing highly filled fire protection systems	



Ketone peroxides

Product name	Curox M-102	Curox M-103	Curox M-303	Curox M-303 R	Curox M-312	Curox M-312 R	Curox M-402	Curox M-402 R	Curox M-403	Curox M-503	Curox A-300	Curox A-300 R	Curox I-200	Curox I-300
Art. No.	021-0033	021-0023	021-0053	021-0056	021-0034	021-0037	021-0035	021-0036	021-0021	021-0025	021-0030	021-0020	021-0031	021-0061
Properties	Low reactive MEKP, phthalate-free	Low reactive MEKP	Standard, medium reactive MEKP	Standard, medium reactive MEKP with red indicator,	Standard, medium reactive MEKP phthalate-free	Standard, medium reactive MEKP with red indicator, phthalate-free	High reactive MEKP phthalate-free	High reactive MEKP with red indicator phthalate-free	High reactive MEKP	High reactive MEKP	Standard AAP	Standard AAP with red indicator	Standard MIKP	High reactive MEKP
Active oxygen content [%]	8.6	8.9	9.1	9.1	8.9	8.9	9.8	9.8	9.7	9.5	4.1	4.1	10.7	10.5
Packaged form	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid
Hand lay-up and spray-up	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RTM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Polymer concrete & marble			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gelcoats	✓	✓	✓		✓		✓		✓	✓				
Filling compounds			✓	✓	✓	✓			✓					
Chemical dowels & anchor bolts														
Coatings	✓	✓											✓	✓
Buttons	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
Elevated temperature														
Centrifugal casting			✓	✓	✓	✓	✓	✓	✓	✓				
Filament winding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
Continuous sheet production	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
High temperature														
Pultrusion													✓	✓
Hot press moulding														
Vinylester														
Special resins	✓	✓											(✓)	(✓)
Acrylic resins														

(✓): Please get in touch with our Technical Service Department



Ketone peroxides

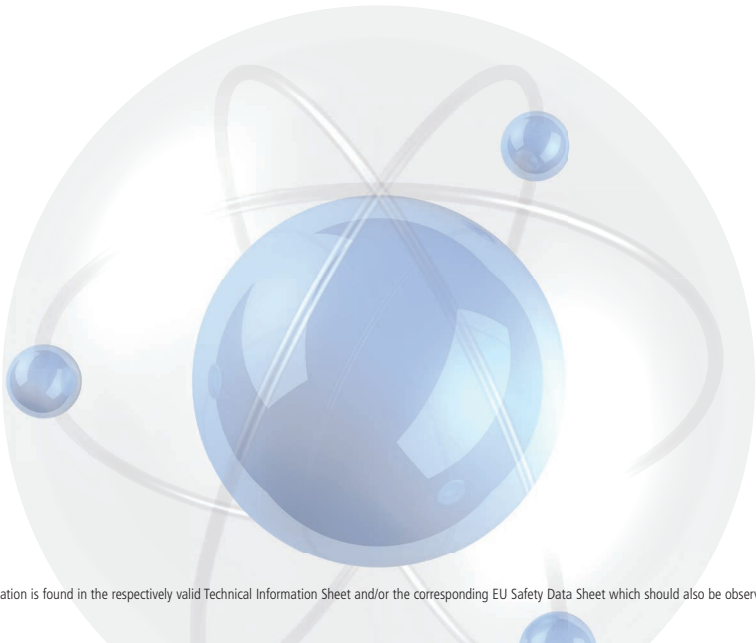
Product name	Curox M-102	Curox M-103	Curox M-303	Curox M-303 R	Curox M-312	Curox M-312 R	Curox M-402	Curox M-402 R	Curox M-403	Curox M-503	Curox A-300	Curox A-300 R	Curox I-200	Curox I-300
Art. No.	021-0033	021-0023	021-0053	021-0056	021-0034	021-0037	021-0035	021-0036	021-0021	021-0025	021-0030	021-0020	021-0031	021-0061
Properties	Low reactive MEKP, phthalate-free	Low reactive MEKP	Standard, medium reactive MEKP	Standard, medium reactive MEKP with red indicator,	Standard, medium reactive MEKP phthalate-free	Standard, medium reactive MEKP with red indicator, phthalate-free	High reactive MEKP phthalate-free	High reactive MEKP with red indicator phthalate-free	High reactive MEKP	High reactive MEKP	Standard AAP	Standard AAP with red indicator	Standard MIKP	High reactive MEKP
Active oxygen content [%]	8.6	8.9	9.1	9.1	8.9	8.9	9.8	9.8	9.7	9.5	4.1	4.1	10.7	10.5
Packaged form	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid
Hand lay-up and spray-up	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RTM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Polymer concrete & marble			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gelcoats	✓	✓	✓		✓		✓		✓	✓				
Filling compounds			✓	✓	✓	✓			✓					
Chemical dowels & anchor bolts														
Coatings	✓	✓											✓	✓
Buttons	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
Elevated temperature														
Centrifugal casting			✓	✓	✓	✓	✓	✓	✓	✓				
Filament winding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
Continuous sheet production	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
High temperature														
Pultrusion													✓	✓
Hot press moulding														
Vinylester														
Special resins	✓	✓											(✓)	(✓)
Acrylic resins														



Dibenzoyl peroxides

Product name	BP-50-FT1	Hardener BPO White	Benox L-40LV	BP-40SAQ
Art. No.	021-7001	021-2326	021-0062	021-0047
Properties	BPO powder for standard applications, "free flowing"	Standard BPO-Paste	BPO-dispension 40%	BPO-suspension 40%
Active oxygen content [%]	3.3	3.3	2.6	2.6
Packaged form	powder	paste	dispension	suspension
Hand lay-up and spray-up	✓	✓	✓	✓
RTM	✓		✓	✓
Polymer concrete & marble	✓		✓	✓
Gelcoats				
Filling compounds		✓	✓	✓
Chemical dowels & anchor bolts	✓	✓	✓	✓
Coatings			✓	✓
Buttons				
Elevated temperature				
Centrifugal casting				
Filament winding				
Continuous sheet production				
High temperature				
Pultrusion	✓			
Hot press moulding				
Vinylester				
Special resins	✓		✓	✓
Acrylic resins			✓	✓

(✓): Please get in touch with our Technical Service Department



Perester

Product name	TBPB	TBPB-HA-M1	TBPEH	TBPIN
Art. No.	021-0048	021-0049	021-0043	021-0042
Properties	>98 % tert. butyl peroxybenzoate	tert. butylperoxyben- zoate/ promotor	tert.-Butyl-2- ethylperoxyhexanoat	tert.-Butylperoxy-3,5,5- trimethylhexanoat
Active oxygen content [%]	8.1	7.4	7.3	6.9
Packaged form	liquid	liquid	liquid	liquid
Hand lay-up and spray-up				
RTM	✓	✓		
Polymer concrete & marble				
Gelcoats				
Filling compounds				
Chemical dowels & anchor bolts				
Coatings				
Buttons				
Elevated temperature				
Centrifugal casting				
Filament winding				
Continuous sheet production				
High temperature				
Pultrusion	✓	✓	✓	✓
Hot press moulding	✓	✓	✓	✓
Vinylester				
Special resins	✓	✓		✓
Acrylic resins				

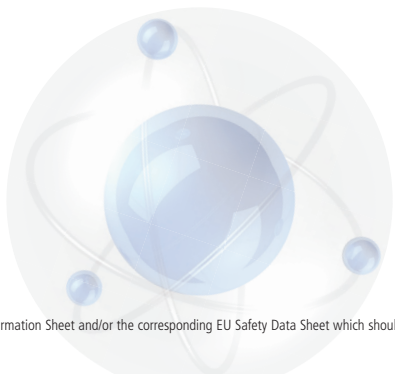






Peroxide Mixtures

Product name	Curox M-372	Curox CM-75	Curox CM-75 R	
Art. No.	021-0038	021-0070	021-0071	MEKP=
Properties	MEKP/AAP-mixture, phthalate-free	CuHP + MEKP	CuHP + MEKP	Methylethylketonperoxid
Active oxygen content [%]	7.4	8.9	8.9	AAP=
Packaged form	liquid	liquid	liquid	Acetylacetonperoxid
Hand lay-up and spray-up	✓	✓	✓	
RTM	✓	✓	✓	COX=
Polymer concrete & marble	✓			Cyclohexanonperoxid
Gelcoats				
Filling compounds				MIKP=
Chemical dowels & anchor bolts				Methylisobutylketonperoxid
Coatings	✓			
Buttons				BPO=
Elevated temperature				Dibenzoylperoxid
Centrifugal casting	✓			
Filament winding	✓	✓	✓	CuHP=
Continuous sheet production	✓			Cumolhydroperoxid
High temperature				
Pultrusion				
Hot press moulding				
Vinylester				
Special resins		✓	✓	
Acrylic resins				



Perketals

Product name	CH-50-AL	CH-80-AL	TMCH-50-AL	BCHPC
Art. No.	021-0039	021-0040	021-0045	021-0041
Properties	Standard perketal for long storage stability of the mixture 50% solution	Standard perketal for long storage stability of the mixture 80% solution	Standard perketal for long storage stability of the mixture 50% solution	High reaktive percarbonate
Active oxygen content [%]	6.1	9.7	5.3	3.8
Packaged form	liquid	liquid	liquid	powder
Hand lay-up and spray-up				
RTM				
Polymer concrete & marble				
Gelcoats				
Filling compounds				
Chemical dowels & anchor bolts				
Coatings				✓
Buttons				
Elevated temperature				
Centrifugal casting				
Filament winding				
Continuous sheet production				
High temperature				
Pultrusion	✓	✓	✓	✓
Hot press moulding	✓	✓	✓	✓
Vinylester				
Special resins				
Acrylic resins				✓



Instructions for Handling and Storing Initiators safety

Storage

Unless stated otherwise on the label, organic peroxides should be stored in the original container at a temperature of max. 25 °C. Protect organic peroxide from all sources of heat, including direct sunlight. Peroxides may never be stored together with other chemicals, especially accelerators as well as reducing agents and combustible products.

Measures against the Risk of Fire

Do not smoke, no open light, no sparks or other sources of ignition.

Risk of Explosion

Avoid direct contact of organic peroxides with accelerators; each component should be added to the resin separately. Prevent contamination from dust, heavy metals and their compounds as well as chemicals.

Eye and Skin Injuries

Always wear protective glasses and protective gloves since organic peroxides can burn skin and eyes.

# Initiators

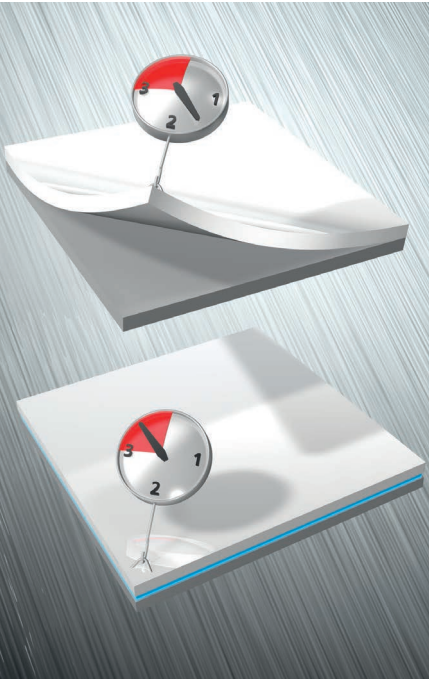


For your notes:

## Inhibitors

- For UP and VE resins
- Lengthens gel time
- Ready-to-use solution
- For cobalt-accelerated systems

Product name	BÜFA®-Inhibitor 1	BÜFA®-Inhibitor 10	BÜFA®-Inhibitor 112
Art. No.	742-0100	742-0110	742-0112
Chemical composition	p-tert-butylcatechol 1% dissolved in aliphatic esters and styrene	p-tert-butylcatechol 10% dissolved in aliphatic esters and styrene	p-tert-butylcatechol 10% dissolved in TXIB



## Promotors and other Accelerators

Product name	BÜFA®-Promotor DEAA	BÜFA®-Additive Tmax. Reduction	BÜFA®-Accelerator Cu 0,4
Art. No.	742-0090	742-0008	742-0003
Chemical composition	Promotor based on DEAA dissolved in styrene	Additive dissolved in styrene	Cu-accelerator dissolved in styrene

## Accelerator complexes

- Accelerates and optimises curing
- For curing UP and VE resins
- Used with ketone peroxide
- Easy to meter due to low concentration

Product name	BÜFA®-Accelerator Complex 0064	BÜFA®-Accelerator Complex 0070	BÜFA®-Accelerator Complex 0399	BÜFA®-Accelerator Complex 9003	BÜFA®-Accelerator Complex 0005
Art. No.	742-0064	742-0070	742-0399	715-9003	742-0005
Chemical composition	Cross curving accelerator cobalt/dimethyl aniline dissolved in xylene	Accelerator complex for curing VE resins and gelcoats	Cross curving accelerator cobalt/DEAA dissolved in xylene	Accelerator complex for curing highly filled fire protection systems	Accelerator complex for curing UP and VE resins with reduced Tmax.