

# HA CUT™ CAT F/XF/SXF AF

Next generation, phthalate free Fast, eXtra-Fast and Super eXtra-Fast catalysts for use with HA Cut AF and HA Cut CFL AF closed cell 1-component polyurethane injection resins

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## Product Description

HA CUT™ CAT F/XF/SXF AF are red non-flammable, phthalate free liquids. HA CUT™ CAT F/XF/SXF AF are catalysts for HA CUT™ AF and HA CUT™ CFL AF water cutting resin for applications in cold temperatures or when use of the standard catalyst does not give a fast enough reaction. HA CUT™ CAT F/XF/SXF AF are used in 10% mixing ratio.

## Product Advantages

- ADR free transport.
- Next generation phthalate free catalysts, REACH compliant. • Improved performance at temperatures below 5 °C, no crystallisation of HA CUT™ CAT F/XF/SXF AF.
- Non-flammable, solvent free.
- Final foam is resistant to most organic solvents, mild acids, alkaloids and microorganisms.
- Very fast reaction: as fast as less than 60" in salt water at -3 °C, still giving 20V expansion (HA CUT™ CAT SXF AF) (\*). (\*) For chemical resistances please contact your local GCP representative.

## Field of Application

- HA CUT™ AF / HA CUT™ CFL AF catalyst for cutting off gushing leaks with a high to very high flow rate and/or high to very high pressure, where use of the standard catalyst does not result in a fast enough reaction.
- HA CUT™ AF / HA CUT™ CFL AF catalyst for use in cold to very cold temperatures where fast reaction times are needed.

## Application

Before commencing the injection, consult the consult the Technical Data Sheets and Material Safety Data Sheet (MSDS) in order to be familiar with the materials at hand. Always shake the catalyst well before use.

## 1. Resin and equipment preparation

- Prepare the resin with the predetermined amount of catalyst. Shake HA CUT™ CAT F/XF/SXF AF well before use. No reaction with the resin will occur until the resin comes into contact with water.
- Keep the resin protected from water, since this will trigger a reaction in the container used and might cause the resin to harden or foam prematurely within the injection equipment.
- Due to the high reactivity of HA CUT™ CAT F/XF/SXF AF, it is highly recommended to remove filters from the pumps and maintain full pump reservoirs when working with HA CUT™ CAT F/XF/SXF AF to prevent blockage of the pump.
- It is highly recommended to use separate pumps for the water and the resin injection to prevent cross contamination and blockages.

## 2. Injection

- Please refer to the HA CUT™ AF / HA CUT™ CFL AF Technical Data Sheet for further information.

## 3. Reactivity

### Reactivity for HA CUT™ AF

#### 10% HA CUT™ CAT F AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 30"	Approx. 1'40"	Approx. 20V
5°C	Approx. 28"	Approx. 1'25"	Approx. 26V
10°C	Approx. 26"	Approx. 1'23"	Approx. 26V
15°C	Approx. 23"	Approx. 1'20"	Approx. 28V
20°C	Approx. 23"	Approx. 1'20"	Approx. 30V
25°C	Approx. 20"	Approx. 1'20"	Approx. 32V

#### 10% HA CUT™ CAT XF AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 25"	Approx. 1'15"	Approx. 24V
5°C	Approx. 23"	Approx. 1'10"	Approx. 28V
10°C	Approx. 23"	Approx. 1'10"	Approx. 28V
15°C	Approx. 23"	Approx. 1'05"	Approx. 30V
20°C	Approx. 20"	Approx. 1'05"	Approx. 30V

25°C	Approx. 18"	Approx. 1'05"	Approx. 32V
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### 10% HA CUT™ CAT SXF AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 22"	Approx. 1'05"	Approx. 30V
5°C	Approx. 20"	Approx. 1'00"	Approx. 30V
10°C	Approx. 20"	Approx. 1'00"	Approx. 30V
15°C	Approx. 20"	Approx. 55"	Approx. 32V
20°C	Approx. 20"	Approx. 50"	Approx. 32V
25°C	Approx. 15"	Approx. 45"	Approx. 35V

### Reactivity for HA CUT™ CFL AF

#### 10% HA CUT™ CAT F AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 28"	Approx. 2'00"	Approx. 24V
5°C	Approx. 25"	Approx. 1'40"	Approx. 26V
10°C	Approx. 25"	Approx. 1'35"	Approx. 26V
15°C	Approx. 25"	Approx. 1'30"	Approx. 28V
20°C	Approx. 25"	Approx. 1'20"	Approx. 28V
25°C	Approx. 20"	Approx. 1'15"	Approx. 30V

#### 10% HA CUT™ CAT XF AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 25"	Approx. 1'30"	Approx. 24V
5°C	Approx. 20"	Approx. 1'10"	Approx. 26V
10°C	Approx. 20"	Approx. 1'10"	Approx. 26V
15°C	Approx. 20"	Approx. 1'05"	Approx. 28V
20°C	Approx. 20"	Approx. 1'00"	Approx. 30V
25°C	Approx. 15"	Approx. 1'00"	Approx. 30V

### 10% HA CUT™ CAT SXF AF

	START REACTION	END REACTION	EXPANSION
-3°C	Approx. 20"	Approx. 1'00"	Approx. 28V
5°C	Approx. 18"	Approx. 55"	Approx. 30V
10°C	Approx. 18"	Approx. 55"	Approx. 30V
15°C	Approx. 17"	Approx. 55"	Approx. 30V
20°C	Approx. 15"	Approx. 45"	Approx. 30V
25°C	Approx. 10"	Approx. 40"	Approx. 30V

### Technical Data/Properties

PROPERTY	VALUE			NORM
Uncured	HA CUT™ CAT F AF	HA CUT™ CAT XF AF	HA CUT™ CAT SXF AF	
Viscosity (mPas)	Approx. 20	Approx. 20	Approx. 25	EN ISO 3251
Density (kg/dm <sup>3</sup> )	Approx. 0.973	Approx. 1.000	Approx. 1.044	EN ISO 2811
Flash pint (°C)	125	125	125	EN ISO 2719
<b>Cured with HA CUT™ AF</b>				
Density (kg/dm <sup>3</sup> )	Approx. 1.000	Approx. 1.000	Approx. 1.000	EN ISO 1183
Compressive strength (MPa)		>23		EN 12190
<b>Cured with HA CUT™ CFL AF</b>				
Density (kg/dm <sup>3</sup> )	Approx. 1.000	Approx. 1.000	Approx. 1.000	EN ISO 1183
Compressive strength (MPa)		>5		EN 12190
Flexural strength (MPa)		>7		EN 12190

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Last Updated: 2018-08-24

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