

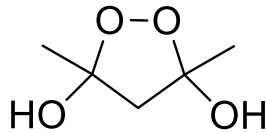
# Technical Data Sheet (TDS)

CUROX® A-300  
Thermoset (TS)

## CUROX® A-300

Acetylacetone peroxide  
CAS#13784-51-5  
Colourless liquid

### Structural Formula



### Description

Colorless liquid consisting of acetylacetone peroxides, phlegmatized with diacetone alcohol. This ketone peroxide is suitable as a radical initiator for curing unsaturated polyester resins.

**Main application:** Curing of thin-walled molded parts at ambient temperature in combination with a cobalt accelerator.

### Technical Data

|  |                                    |
|--|------------------------------------|
| Appearance                                 | colourless liquid                  |
| Desensitising agent                        | glycols, diacetone alcohol         |
| Active oxygen (AO)                         | ca. 4.1 % w/w                      |
| Density at 20 °C                           | ca. 1.1 g/cm <sup>3</sup>          |
| Viscosity at 20 °C                         | ca. 37 mPa·s                       |
| Miscibility                                | miscible with alcohols, phthalates |
| Critical temperature (SADT)                | ca. 60 °C                          |
| Cold storage stability                     | can crystallize below 10 °C        |
| Recommended storage temperature            | 10 °C to 25 °C ●                   |
| Storage stability as from date of delivery | 6 months                           |

### Standard Packaging

25 kg in HDPE canisters

# Technical Data Sheet (TDS)

CUROX® A-300  
Thermoset (TS)

## Application

### **CURING OF UNSATURATED POLYESTER RESINS:**

Curing agent for UP resins (e.g. *ortho*- and *iso*-phthalic acid resins) at ambient temperature in combination with cobalt accelerators. The "storage time" (gel time of resin + peroxide) is usually only a few hours and depends on temperature and resin type. The "pot life" (gel time of resin + peroxide + accelerator) is relatively short, but can be extended by adding an inhibitor (e.g. Inhibitor TC 510).

### **CURING CHARACTERISTICS:**

This initiator introduces a strong evolution of heat into the curing system. This results in short demoulding times and a very good demoulding factor. Even at temperatures below 20 °C, curing is still relatively quick, especially in combination with Accelerator CA 12 X. Some fillers, color pigments or stabilizers can interfere the curing or prevent it entirely.  
CUROX®A-300 is not suitable for vinylester resins.

### **PROCESSING METHODS:**

The product can be used for curing of thin-wall moulded parts using various processes, such as hand lay-up, spray lay-up, vacuum and injection moulding (RTM), wet press moulding, centrifugal casting (pipes) and continuous impregnating (corrugated sheets).

## Decomposition Products

Possible detectable decomposition products: acetylacetone, carbon dioxide, aliphatic acids

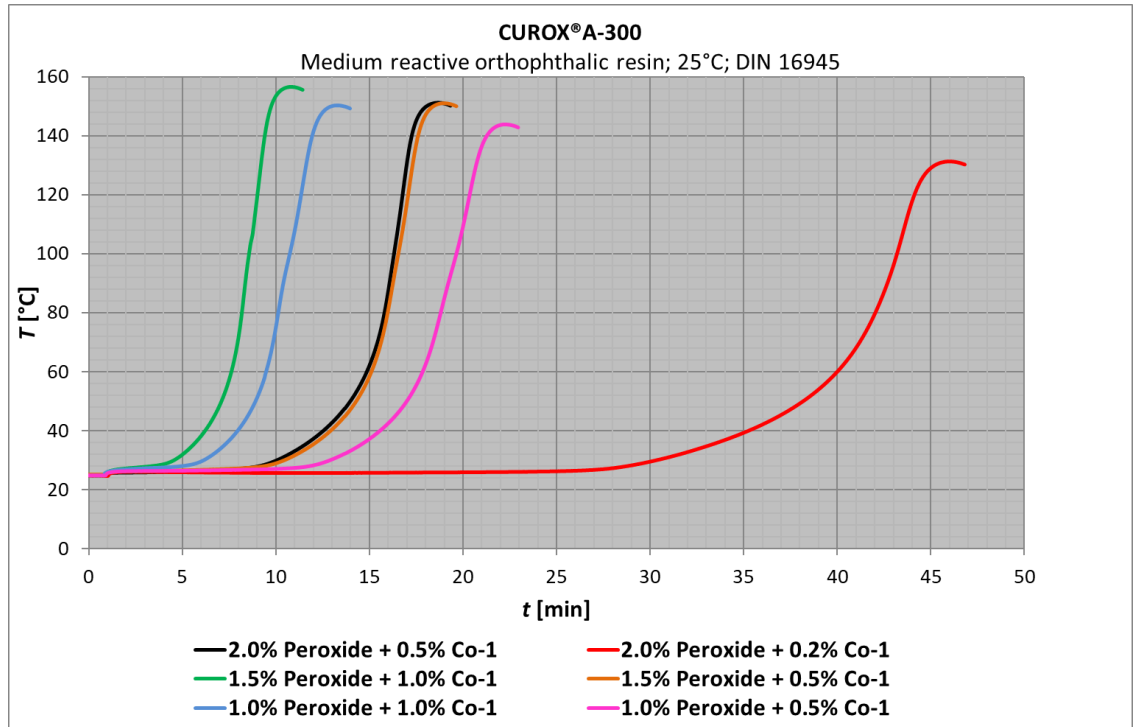
## Storage

Avoid any source of heat, light, humidity and protect the product from impurities. Keep within safe temperature limits.

# Technical Data Sheet (TDS)

CUROX® A-300  
Thermoset (TS)

## Measurements



### Formulation (parts per weight)

|                               |         |      |      |      |      |      |      |
|-------------------------------|---------|------|------|------|------|------|------|
| Resin                         |         | 100  | 100  | 100  | 100  | 100  | 100  |
| <b>CUROX® A-300</b>           | [Vol-%] | 2.0  | 2.0  | 1.5  | 1.5  | 1.0  | 1.0  |
| Co-1                          | [Vol-%] | 0.5  | 0.2  | 1.0  | 0.5  | 1.0  | 0.5  |
| <b>Curing data</b>            |         |      |      |      |      |      |      |
| Gel time 25 - 30 °C $t_{gel}$ | [min]   | 10.1 | 30.3 | 4.6  | 10.5 | 6.2  | 12.9 |
| Gel time 25 - 35 °C $t_{gel}$ | [min]   | 11.5 | 33.1 | 5.6  | 11.9 | 7.2  | 14.4 |
| Curing time $t_{max}$         | [min]   | 18.7 | 46.0 | 10.8 | 18.9 | 13.3 | 22.2 |
| Peak temperature $T_{max}$    | [°C]    | 151  | 131  | 157  | 151  | 150  | 144  |

### Disclaimer:

The information contained herein and all further technical advice that may be provided by United Initiators reflects our current knowledge and experience based on our internal research and development as to our products and applications. United Initiators does not make any warranties about the information provided as to specific properties of products described their suitability for a particular application and representing complete instructions for use. Additionally, United Initiators does not make any warranties in respect of product and shelf-life properties. We are not legally responsible and liable for the use of any information provided, including with regard to existing third-party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

Application and usage of our products based on our technical advice is out of our control, strictly at your own risk and is the sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming products in order to verify their suitability for the intended application.

United Initiators  
**Europe**  
T: +49 89 74422 237  
F: +49 89 74422 6237  
[cs-initiators.eu@united-in.com](mailto:cs-initiators.eu@united-in.com)

United Initiators  
**Nafta**  
T: +1 800 231 2702  
F: +1 440 323 0898  
[cs-initiators.nafta@united-in.com](mailto:cs-initiators.nafta@united-in.com)

United Initiators  
**China**  
T: +86 20 6131 1370  
F: +86 139 2503 8952  
[cs-initiators.cn@united-in.com](mailto:cs-initiators.cn@united-in.com)

United Initiators  
**Australia**  
T: +61 2 9316 0046  
F: +61 2 9316 0034  
[cs-initiators.au@united-in.com](mailto:cs-initiators.au@united-in.com)

[www.united-initiators.com](http://www.united-initiators.com)