

For those have problems with oxidation

- ✓ Antioxidant **precipitates as solid**
- ✓ Resin **changes color** by oxidation
- ✓ **Pigment fades** as time goes by
- ✓ Conventional combinations of antioxidants **do not provide sufficient performance.**

➔ New liquid-type antioxidant **DPNG** can solve !

Features

DPNG works good antioxidant with **different mechanism** from conventional antioxidant.

DPNG is **liquid-type antioxidant**.

It can be mixed with various materials. You won't have problem **with mixing process and precipitation of solid.**



Antioxidant for resin

No additive



With 1% DPNG



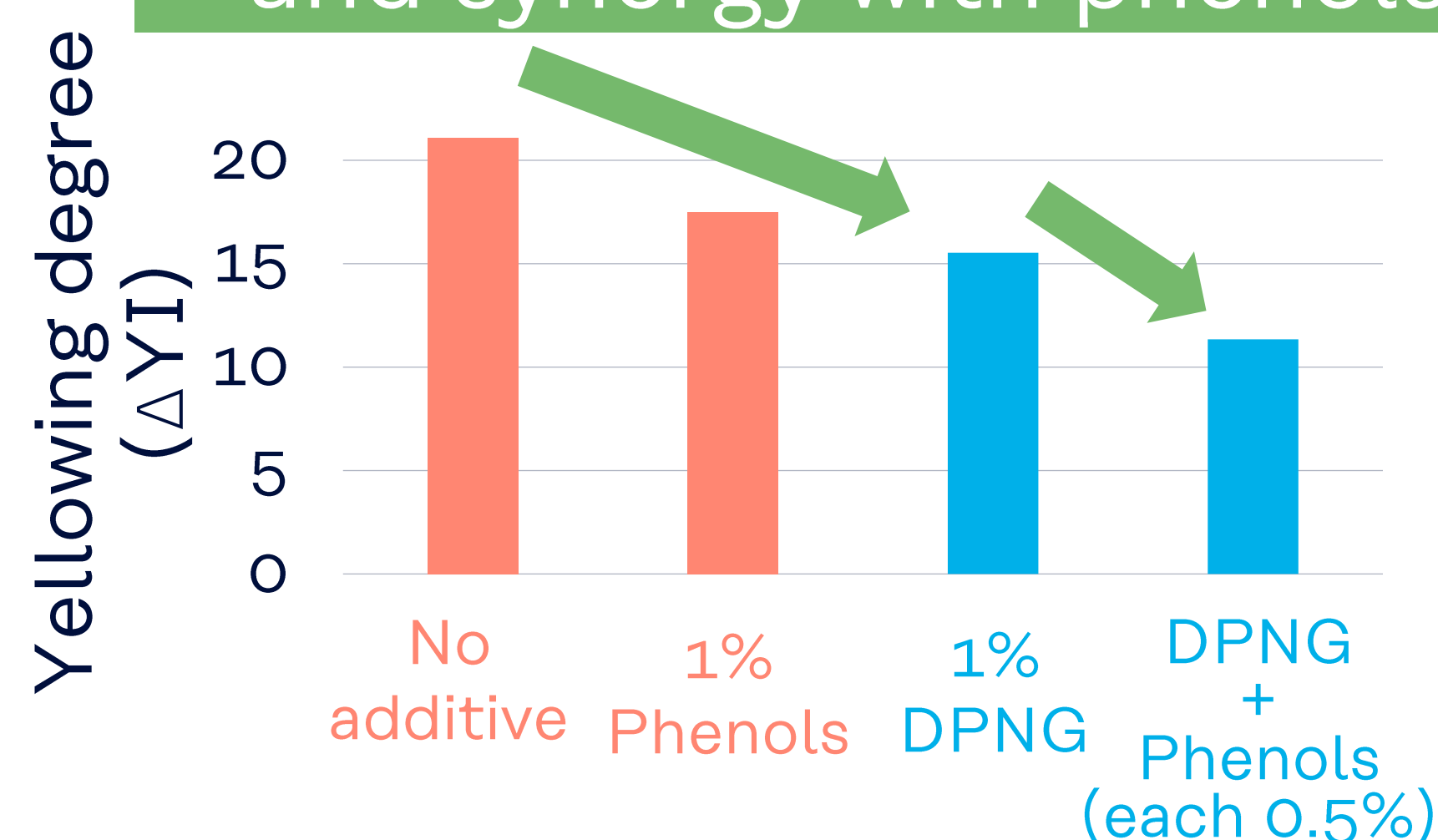
<Test condition>

Resin: Aromatic polyurethane

Weather resistance: UV irradiation 1000 W/m², 60°C, 72h

Phenols : Phenol-type antioxidant

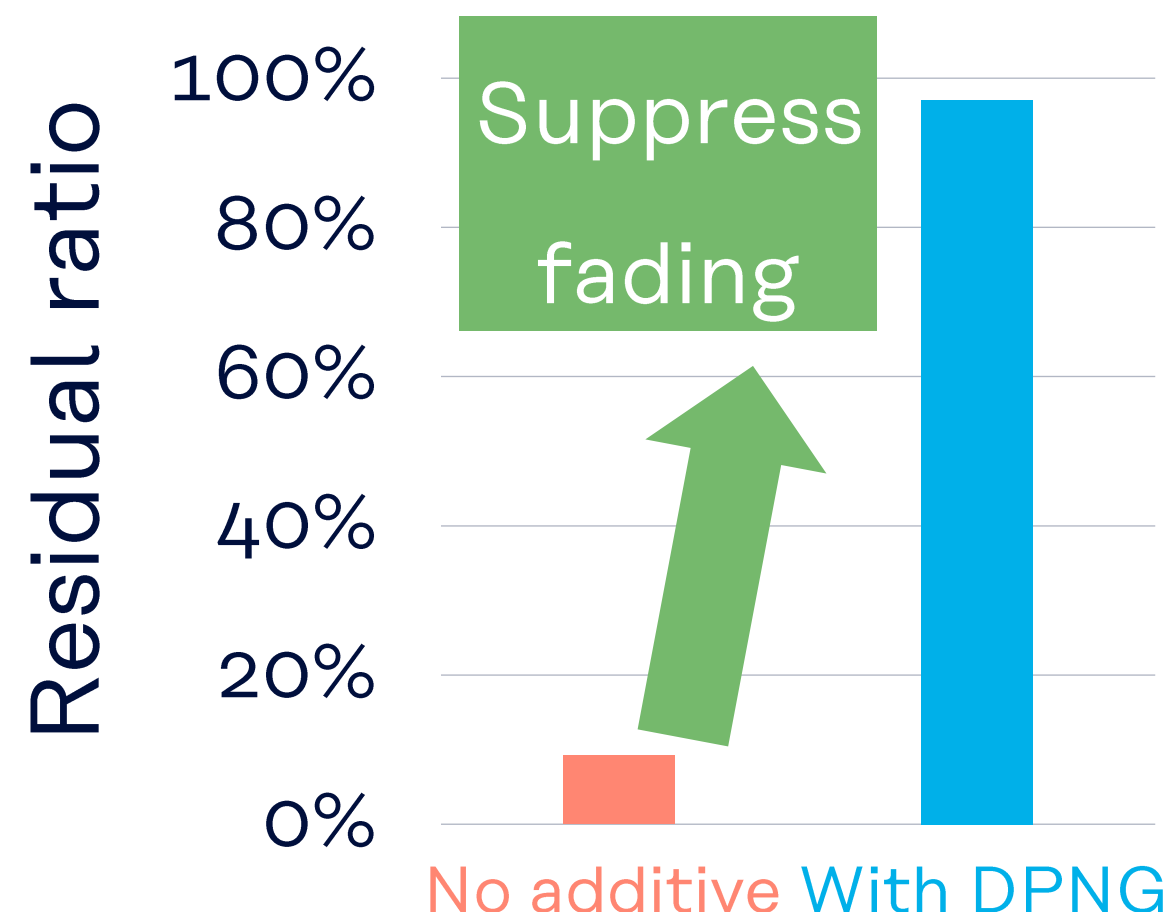
Suppress yellowing by DPNG and synergy with phenols



Suppression of pigment fading



No additive With DPNG

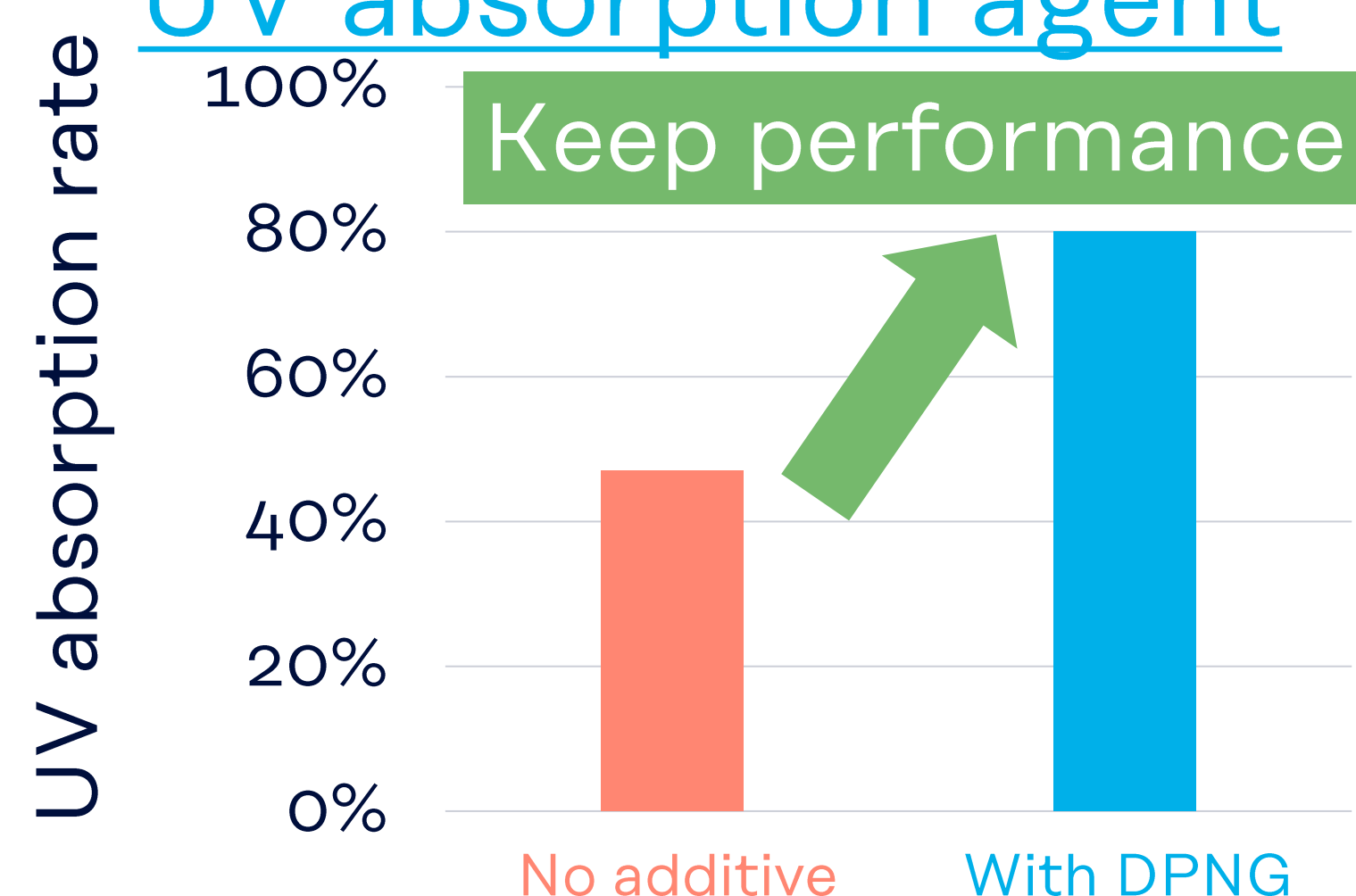


<Test condition>

Dosage: DPNG 10wt% to pigment Pigment: Indigo

Fading test: 80 °C, 176h

Suppression of degrading UV absorption agent



<Test condition>

Composition: Acrylics, UV absorption agent 1wt%, DPNG 0.4wt%

Weather resistance: 60°C, 60%RH, 300h

Liquid-type antioxidant **DPNG** can **suppress oxidation easily** by adding to resin, pigment, functional additive and so on.

Sample

For free up to 1 liter. Please contact us.

For those who have problems with poor UV-curing

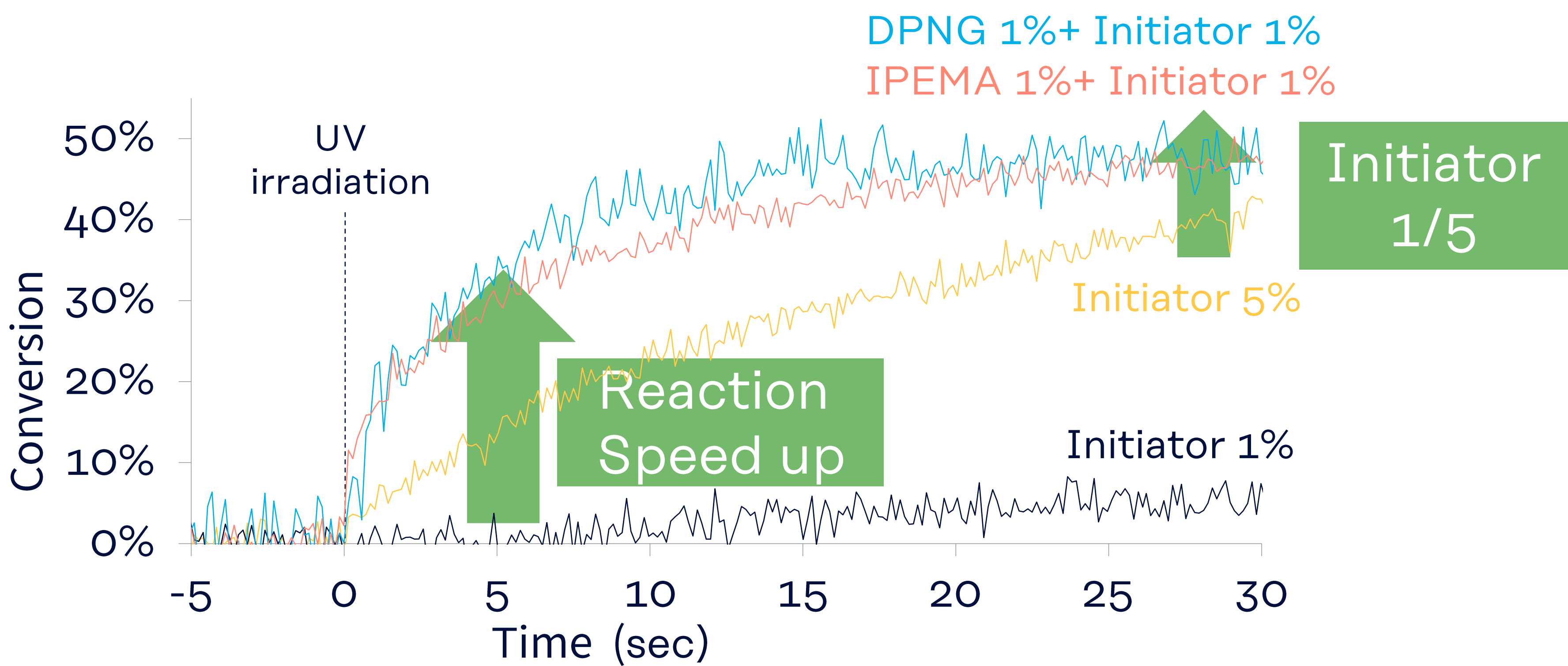
- ✓ Non cured parts occur by oxygen inhibition while UV-curing.
- ✓ Costly due to large amounts of expensive initiators to cure the product
- ✓ UV curing requires large amounts of irradiation energy and time.

➡ UV-curing accelerator **DPNG • IPEMA** can solve!

Features

DPNG has high oxygen absorption capability and IPEMA has and specific radical reactivity.

UV-curing acceleration under air



Monomer: Pentaerythritol triacrylate Initiator: 1-Hydroxy-1-cyclohexyl phenyl ketone Thickness : 5μm
UV irradiation: 73mW/cm2, high-pressure Hg lamp Atmosphere: Under air Detection: Real-time IR measurement

New UV-curing accelerator **DPNG • IPEMA** can solve poor UV-curing under air by suppressing oxygen inhibition.

Basic data

Product name	DPNG	IPEMA
Chemical structure	<chem>CC(=C)COCC(O)COCC(=C)C</chem>	<chem>CC(=C)COCC(=O)C</chem>
Appearance	Colorless liquid	Colorless liquid
Boiling point	292 °C	180 °C
Flash point	141 °C	67 °C
Density (25°C)	0.95 g/mL	0.92 g/mL
Viscosity (25°C)	9.18 mPa · s	1.06 mPa · s

Sample

For free up to 1 liter. Please contact us.