

TECHNICAL DATA SHEET

POTASSIUM FERRICYANIDE

GELATION TIME EXTENDER

DESCRIPTION

Potassium ferricyanide (also known as **KFe**) is a chemical compound used in small quantities to extend gel times for Avanti International's Chemically Activated Gel systems. Only small quantities are required for effective results – 100 ppmw (parts per million by weight) can extend gelation times to nearly four minutes.

APPLICATION

- Extends gelation times for **acrylic and acrylate grouts**

FEATURES AND BENEFITS

- Small quantities produce effective results
- Does not affect cured gel characteristics

HOW IT WORKS

Avanti's Chemically Activated Gels react via a free radical vinyl polymerization via a *redox* (reduction/oxidation) reaction. The **potassium ferricyanide** acts as a reducing agent to prevent free radical generation in the solution, thereby retarding/slowing vinyl polymerization of the Chemically Activated Gel Systems.

ADDITIVE FOR

- AV-100** Chemical Grout[®]
- AV-118** Duriflex[®]
- AV-150** Acrylate Gel[™]
- AV-160** SuperGel[™]

MIX PROCEDURE

Do not add the **KFe** powder to the grout tank; instead dissolve the desired amount of **KFe** in 1 gallon of water. Add **KFe** solution to grout tank, mix thoroughly and then fill grout tank with water to desired volume. Use chart below to determine recommended amount of **potassium ferricyanide**.

Amount of KFe per 60-Gallon Batch†	
Gelation Time (Min:Sec) @ 65°F/20°C and 14.696 psi/1 atm	Potassium ferricyanide quantity per 60-gallon batch ≈ 500 lbs.
0:30	0.0 ounces (0.0 grams)
4:00	0.8 oz. (22.7 g)
8:00	1.6 oz. (45.4 g)
13:20	2.4 oz. (68.1 g)
18:10	3.2 oz. (90.8 g)
24:30	4.0 oz. (113.5 g)
32:30	4.8 oz. (136.2 g)
41:00	5.6 oz. (158.9 g)

†These numbers are from laboratory results in a controlled environment and are estimates only. They are not a guarantee of gelation times. Add KFe in small increments and test to ensure proper gelation times. Atmospheric conditions may effect gelation times.

PACKAGING

- Please contact Avanti for more information.

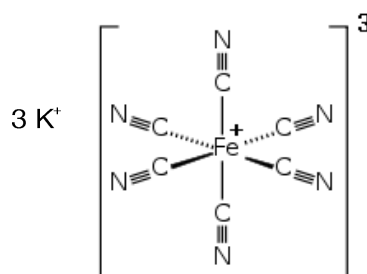
SHIPPING

- Motor Class 85
- Non-hazardous
- Air freight available

PROPERTIES*

Chemical Name:	Potassium hexacyanoferrate (III)
CAS Number:	13746-66-2
Molecular Formula:	Molecular Formula: $K_3[Fe(CN)_6]$
Molar Mass:	329.24 g/mol
Appearance:	Red crystals
Concentration:	>99%
Solubility:	488.4 g/L @ 77°F (25°C)
Bulk Density:	900 – 1100 kg/m ³
Specific Gravity:	1.89 g/mL

Laboratory Results



PERFORMANCE

Atmospheric conditions may alter effects of the **potassium ferricyanide** in the grout solution. Add **potassium ferricyanide** in small increments and perform a cup test with site water to determine the desired reaction time.

STORAGE

Store in temperatures below 80°F (27°C) in a dry atmosphere. Shelf-life is one year when stored accordingly.

SAFETY

Potassium ferricyanide is for use in Avanti's Chemically Activated Gel Systems only. Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com.

NOTICE

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