

## 交联剂 Crosslinker

### 产品概述

本品外观一般呈无色、黄红色、蓝紫色均匀流动液体。压裂用交联剂的种类很多，基本可分为有机交联剂、无机交联剂和复合交联剂等，每种交联剂都有其独特的化学性质和应用特点，在实际压裂作业中，应根据具体情况选择适合的交联剂类型和配比，以达到最佳的压裂效果和工程效率。

### 性能特点

- 1、具有交联范围宽，过交联不析水；
- 2、低温冻胶不发脆，水化彻底；
- 3、低温不返胶及冻胶抗温抗剪切性强；
- 4、携砂性能好；

### 技术指标

项目	指标					
	60℃	90℃	120℃	140℃	160℃	180℃
外观	液: 均匀液体/乳液 ; 固: 自由流动颗粒					
固含量, %	60℃	120℃	30℃-300℃			
PH 值 (1%水溶液)	能以玻璃棒进行挑挂					
闭口闪点, °C	≥50					
凝点, °C	≤5.0					

### 产品用途

压裂用交联剂在油气开采中具有多种用途。首先，交联剂通过化学反应增加水基液体的黏度，从而提高压裂液的黏度和分子粘度，有利于在高压下推动液体的流动。其次，交联剂能够改善流体的流变特性，包括拐点的转化、剪切速率的变化以及黏弹性的增加，这使得流体在复杂地层中表现出更好的流动性和稳定性。此外，交联剂还能增强液体在岩石裂隙中的压力，提高破裂能力，从而促进石油和天然气的释放。

### 包装与贮存

1. 本产品一般吨桶、桶包装，吨桶净重 1000KG、桶装 200kg/桶、25kg/桶；可根据客户要求提供定制包装，运输过程中应轻装轻放，切勿倒置。
2. 本产品在贮存时必须旋紧桶盖，置于阴凉通风处，搬运及使用时应避免接触皮肤，溅入眼中，一旦接触应立即用大量清水冲洗。



### Product Overview

The product generally appears as a colorless, yellow-red, or blue-purple uniformly flowing liquid.

There are many types of fracturing crosslinkers, which can generally be divided into organic crosslinkers, inorganic crosslinkers, and composite crosslinkers.

Each type of crosslinker has its own unique chemical properties and application characteristics. In actual fracturing operations, the appropriate type and ratio of crosslinker should be selected according to the specific conditions in order to achieve the best fracturing effect and operational efficiency.

### Characteristics

- 1.Has a wide crosslinking range, and no water separation occurs in cases of over-crosslinking.
- 2.Low-temperature gel does not become brittle and hydrates completely.
- 3.At low temperatures, the gel does not revert and the frozen gel has strong temperature and shear resistance.
- 4.Good proppant-carrying performance.

### Technical Specification

Item	Product Specifications					
	60℃	90℃	120℃	140℃	160℃	180℃
Appearance	Liquid: Uniform liquid/emulsion Solid: Free-flowing granules					
Solid content, %	60℃	120℃	30℃-300℃			
pH value	Can be picked up with a glass rod					
Closed cup flash point	≥50					
Pour point	≤5.0					
Relative dehydration rate	0					

### Applications

Crosslinking agents for fracturing have multiple applications in oil and gas extraction.

First, crosslinking agents increase the viscosity of water-based fluids through chemical reactions, thereby improving both the viscosity and molecular viscosity of the fracturing fluid, which facilitates fluid flow under high pressure.

Second, they can improve the rheological properties of the fluid, including the transformation of inflection points, changes in shear rate, and an increase in viscoelasticity, enabling the fluid to exhibit better flowability and stability in complex formations.

### Package and Storage

- 1.Packaged in 1000 kg IBC totes, 200 kg or 25 kg barrels; custom packaging available. Handle with care, do not overturn.
- 2.Keep sealed in a cool, ventilated place. Avoid skin or eye contact; rinse with plenty of water if contact occurs.



公司地址 Company Address:

陕西省商洛市商南县东正公司

Dongzheng Company, Shangnan, Shangluo, Shaanxi Province, China

公司电话 Company Office Number: 400-8031-008

邮箱 Email: dz@dongzhengjituan.cn

网址 Website: www.dongzhenghuagong.com