

压裂用支撑剂石英砂

Fracturing proppant quartz sand

产品概述

压裂用支撑剂石英砂系列产品的外观一般呈白色或黄色结晶状流动性强的圆型颗粒。

本品是一种以天然石英砂为主要原料制成的材料，具有高硬度、耐磨、化学稳定性好等特点，在石油、天然气等资源的开采和压裂作业中发挥着



性能特点

1. 抗压强度高；
2. 化学性质稳定；
3. 抗腐蚀性好；
4. 导流能力强；
5. 产品成本低。

技术指标

破碎率性能指标			
粒径规格/目	闭合压力/mpa	破碎室压力/kN	破碎率，%
6/12	52	105	25.0
8/16	52	105	25.0
12/18	52	105	25.0
12/20	52	105	25.0
16/20	69	140	20.0
20/40	52	105	9.0
30/50	69	140	5.0
40/60	86	174	10.0
40/70	86	174	10.0
70/140	86	174	10.0
溶解度性能指标			
支撑剂粒径规格/μm		酸溶解度，%	
3350~1700，2360~1180，1700~1000， 1700~580，1180~850，1180~600，850~425， 600~300		≤5.0	
425~250，425~212，212~106		≤7.0	
球度与圆度指标			
球度、圆度	天然石英砂的球度、圆度应不低于 0.6。		
石英砂支撑剂抗破碎测试压力及指标			
粒径规格	闭合压力 Mpa	破碎室受 ² kN	破碎率 %
1180~850（16/20 目）	21	45	≤14.0
850~425（20/40 目）	28	57	≤14.0
600~300（30/50 目）	35	71	≤10.0
425~250（40/60 目） 425~212（40/70 目） 212~106（70/140 目）	35	71	≤8.0
² 表中破碎率受力值只适用于 50.8mm 直径的破碎室，其他直径的破碎室按 SY/T5108-2006 式（7）进行计算。			

产品用途

压裂用石英砂的主要用途是在石油和天然气开采过程中作为支撑剂使用。在水力压裂作业中，压裂砂与高压流体混合后注入地层，形成裂缝以增加储层的渗透性，保持岩石裂缝的开放，形成一条从储层到井筒的高导流路径，从而提高石油和天然气的产量。

包装与贮存

1. 本产品一般用吨包或散装包装，净重 1000kg、1500kg，也可根据客户要求定制包装。
2. 本产品应储存在干燥通风处，应避免阳光直射，存放处应防尘防污染，避免不同型号的产品混放。
3. 保质期:1 年。



Product Overview

The appearance of quartz sand series products used as fracturing proppants generally appears as white or yellow crystalline round particles with strong fluidity. This product is a material made mainly from natural quartz sand, which has the characteristics of high hardness, wear resistance, and good chemical stability. It plays a role in the extraction and fracturing operations of resources such as oil and natural gas

Characteristics

1. High compressive strength;
2. Stable chemical properties;
3. Good corrosion resistance;
4. Strong diversion capacity;
5. Low product cost.

Technical Specification

Crushing Rate Performance Indicators			
Particle Size / Mesh	Closing Pressure/mpa	Crushing Chamber Pressure/kN	Crushing Rate, %
6/12	52	105	25.0
8/16	52	105	25.0
12/18	52	105	25.0
12/20	52	105	25.0
16/20	69	140	20.0
20/40	52	105	9.0
30/50	69	140	5.0
40/60	86	174	10.0
40/70	86	174	10.0
70/140	86	174	10.0
Solubility Performance Index			
Proppant Particle Size/μm		Acid Solubility, %	
3350~1700, 2360~1180, 1700~1000, 1700~580, 1180~850, 1180~600, 850~425, 600~300		≤5.0	
425~250, 425~212, 212~106		≤7.0	
Sphericity and Roundness Index			
Sphericity, roundness	The sphericity and roundness of natural quartz sand should not be less than 0.6.		
Quartz Sand Proppant Crush Resistance Test Pressure and Index			
Particle Size	MeshClosing Pressure / Mpa	Crushing Chamber Load ² kN	Crushing Rate %
1180~850 (16/20mesh)	21	45	≤14.0
850~425 (20/40mesh)	28	57	≤14.0
600~300(30/50mesh)	35	71	≤10.0
425~250(40/60mesh)	35	71	≤8.0
425~212(40/70mesh)			
212~106 (70/140mesh)			
Note: The crushing test is performed with a specimen layer thickness of 50.0 mm, in accordance with SY/T5108-2006 standards, unless otherwise specified.			

Applications

The main use of quartz sand for hydraulic fracturing is as a proppant in the process of oil and gas extraction. In hydraulic fracturing operations, the fracturing sand is mixed with high-pressure fluid and injected into the formation to form fractures that increase the permeability of the reservoir, keep rock fractures open, and create a high flow path from the reservoir to the wellbore, thereby increasing oil and gas production.

Package and Storage

1. Package: This product is generally packaged in ton or bulk, with a net weight of 1000kg, 1500kg, or customized packaging according to customer requirements.
2. Storage: This product should be stored in a dry and ventilated place, avoiding direct sunlight. The storage location should be dust-proof and pollution proof, and avoid mixing different models of products.
3. Shelf - life : one (1) year .



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