

MIL-53

Ferrous

Metal Organic Framework



MOF



Follow us:



| www.nanoshel.com | sales@nanoshel.com

NEXT 

Ferrous

Metal Organic Framework

Fe-MOFs are used in many applications including gas/vapor separation, gas storage, catalysis, luminescent materials, and biomedical imaging. These structures have additional features that promote their use as drug carriers in the biomedical field. One application of nanotechnology in medicine currently being developed involves employing nanoparticles to deliver drugs, heat, light or other substances to specific types of cells.

Quick Facts

Synonyms	:	MIL-53
Stock No.	:	NS6130-12-000875
CAS	:	7439-89-9
Purity	:	99 %
APS	:	30-40µm
Molecular Formula	:	Fe(OH)(O ₂ C-C ₆ H ₄ -CO ₂)
Molecular Weight	:	229.60 g/mol
Form	:	Powder



Properties

- Large Surface Area
- High degree of crystallinity
- Low density
- Uniform channels
- Porosity
- High thermal stability
- Chemical tailor ability

MIL-53

Ferrous

Follow us:

f i t l | www.nanoshel.com | sales@nanoshel.com



NEXT

Applications

01 Food

- Quality control (e.g. moisture control)
- Food storage (e.g. suppression of ripening agents)
- Shelf life management (e.g. triggered release of ripening agents)
- Delivery of agrochemicals (e.g. triggered release of fertilizers etc.)

02 Gas storage

- Compressed gas storage (e.g. natural gas, hydrogen, etc.)
- Toxic and reactive gas systems (e.g. via sub-atmospheric storage systems)
- Carbon capture and sequestration (CCS)

03 Conductivity

- Electronics
- Batteries (e.g. electrodes, electrolytes, etc.)
- Optoelectronic devices (e.g. solar cells)
- Additives

04 Catalysis

- Catalytic support and immobilization
- Encapsulation of catalytic active species
- Unprecedented selectivity and activity

05 Sensoring and detection

- Gas/vapor and small molecule detection
- Luminescence (e.g. scintillation)
- Medical diagnostics
- Explosive detection

06 Gas Treatment

- Separation (e.g. hydrocarbons, CO₂, O₂, H₂, NH₃, H₂S, toxics, etc.)
- Purification
- Impurity and odor removal
- Filtering (e.g. molecular sieves)

07 Textile upgrading

- Additives
- Personal protection
- Chemical, biological, radiological and nuclear (CBRN) defense

08 Gas and liquid adsorption

- Drug Delivery (e.g. slow release of target molecules)
- Water harvesting
- Removal of toxic and hazardous substances (e.g. chemical warfare agents)
- Heat transformation (e.g. adsorption heat pumps)
- Respiratory systems (e.g. gas masks)
- Water treatment (e.g. heavy metal removal)



ISO 9001:2015
CERTIFIED COMPANY

INTELLIGENT MATERIALS PVT LTD

Derabassi
Punjab (140507)
INDIA

+91 9779 550077, 9779238252

NANOSHEL UK LIMITED

Chapel House,
Chapel St Cheshire,
CW12 4AB United Kingdom

+44 (0) 74 105 488, +44 203 137 5187

NANOSHEL LLC

3422 Old Capitol Suit
1305 Wilmington DE - 19808
United States

+1 646 470 4911

Follow us:

| www.nanoshel.com | sales@nanoshel.com

