Unicat Catalyst Technologies

Catalyst & Bedgrading Supply Program

UNIVAR® OIL & GAS

A World Leader in Chemical Distribution partners with an Innovative Catalyst Company

Univar is one of the leading global chemical distributors, providing more chemical products and related services than any other similar company in the marketplace. Univar EMEA sales and distribution network assures reliable, local service to Univar customers.

Unicat Catalyst Technologies are an established world-wide catalyst supplier and manufacturer founded in 1999. With over 100 different products manufactured in its ISO 9002 certified and highly quality controlled production centers, Unicat's broad product line has provided over 500 industrial clients exceptional value with its quality, pricing and service.

Steam Reforming – Syn Gas

- Does your SMR need pressure drop relief without sacrificing activity?
- Are condensate or steam leaks affecting your Temperature Shift Catalysts?
- Does your Low Temperature Shift need to minimize methanol formation without sacrificing activity?
- Do you have Sulphur removal issues or you intend to optimize this system? Unicat can provide complete solutions for the removal of multiple specific sulphur species, even in a single vessel

What we can help with

- Zero Sulphur
- Polymerization
- Corrosion
- Green Oil
- Organic Chlorides
- Delta P
- Emission-Control
- CO_2
- NOx
- Particulate Matters
- Efficiency
- Purification
- Hydrotreating
- Amine
- Cost-Reduction
- Integrated Design
- Mixed Metals

UNICAT
CATALYST TECHNOLOGIES, INC.

Unicat Purification Catalysts

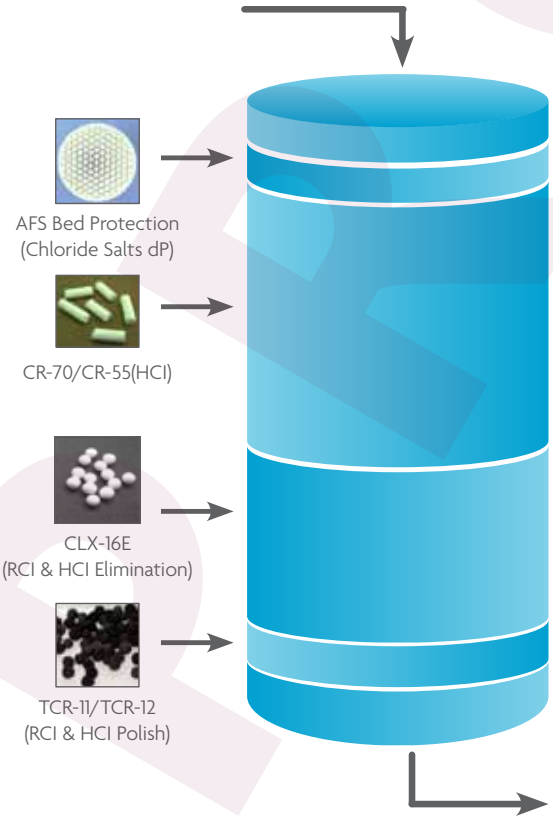
- Optimization Through Mixed Bed Design Technology to Minimize Costs - Maximize Run Life - Minimize Impurity Leakages and Mitigate Pressure Drop Issues
- While other suppliers may only use a single catalyst approach, UNICAT has developed a wide range of purification adsorbents and catalysts to create optimized purification solutions in one single unit.
- Advanced Purification Solutions for the Removal of Sulfurs, Chlorides, Arsine, Mercury, Oxygen, nitrogen and heavy metals from Refinery, Chemical & Petrochemical Streams
- Analytical Lab Services to Identify Impurity Problems and Levels, which leads to a Custom Design Approach and Zero Leakage Systems

Multiple problems can be addressed in a single vessel. For the removal of Sulfur - Chloride Species and other impurities from refining- & petrochemical-feedstreams , Unicat's mixed bed design technology matches Unicat's diverse line of purification adsorbents and catalysts to the specific impurity type, concentration, temperature or other relevant purification condition.

Unicat's broad product line and mixed bed design technology has the flexibility to provide optimal purification performance at the best. This is based on the severity of service and operating temperature including trace removal for ultra-purification applications.

Please refer to the end of this brochure for an overview of our guards and catalysts.

Example of Optimized Cl Species Removal System
Total Cl Removal (HCl + RCl) & dP optimization



Unicat Catalyst Technologies

Unicat Catalyst Technologies can help you to address the above issues and propose you optimized solutions. We hold a full range of SMR catalyst in our portfolio, including Total Sulphur Removal catalysts, Pre-Reforming, Reforming, Secondary Reforming, HT Shift, MT Shift, LT Shift, Methanation and PSA Adsorbent Catalysts. We continuously run R&D programs to search for improved solutions and optimized products, can offer you full service and have new software available which enables you to monitor your processes.

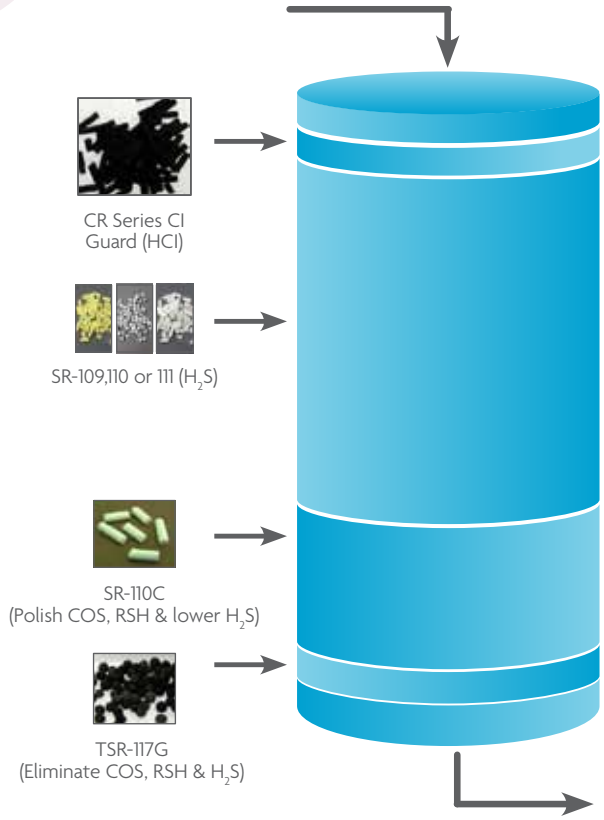
Please refer to the end of this brochure for an overview of our catalyst products available.

Polymerization-SPA Catalyst Systems

Unicat has already the third generation SPA (Solid Phosphoric Acid) catalyst product available on the market. After an extensive research program we are able to propose a catalyst which combines high activity and conversion yields with high mechanical properties. By optimizing the catalyst binder our customer no longer suffer from increased pressure drops and intensive mechanical drilling works to remove the catalyst at EOR.

We are interested in reviewing your units to discuss possible improvements for your specific situation.

Example of Fully Optimized S-removal system



Pressure Drop Bed Protection
UNICAT AFS™ Active Filtration System

DP Issues?

- AFS is the best Top Grading / Filtration Material available on the market place today.
- AFS has the highest internal and external void fraction representing >83% total void for maximum retention of pressure causing particulates.
- AFS offers a better flow distribution through better design than the any of the competition.
- AFS makes it possible to custom design to your specific problem.

AFS 1010 Filters 2400 to 800 micron particulates Designed for Polymerization & Large Iron Scale particulates

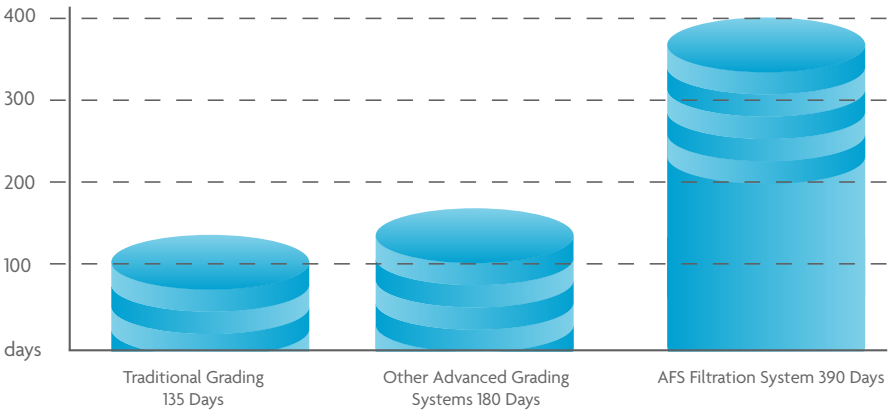
AFS 1050 Filters 100 to 5 micron particulates. Designed to filter Iron Sulfides & small fines

AFS 1025 Filters 800 to 100 micron particulates Designed for Carbon/Coke & medium Iron Scale particulates

AFS Mini Designed to improve distribution of feed & filter fines

AFS Custom Custom AFS designs for your specific needs

Run Length Study: NHT Unit – 25000 BPD – Feed 10% Coker 90% Straight Run Naphtha



dP issues – FeS, Polymerization, Solid Silica, and small fines

An unique aspect of Unicat's bed design technology is its proprietary, AFS (Active Filtration System) Bed Protection Filter Disk grading technology, that is used to filter fines in Hydrotreating Units, Sulfur Guards Beds and traps ammonium-chloride salts in Chloride Guards Beds. Every solid specimen that can cause premature, EOR pressure drop conditions can be filtered. This proven and patented technology significantly increases lifetimes of pressure sensitive units (up to 200%).

Unicat's AFS-HA Series are uniquely shaped, high alumina, inert filtration grading disks. Originally designed to mitigate pressure drop problems that are caused by the buildup of various fouling agents at the top grading layers of hydrotreating reactors and other fixed bed units, AFS has also proven itself in SynGas plants and other applications.

In SynGas plants, AFS's high thermal shock resistance and numerous flow channels have prevented or at least minimized pressure drop increase in high temperature shift beds due to water or condensate carryover. A thin (~30 cm) layer on top of the bed dissipates the carryover before it reaches the HTS catalyst and causes it to "popcorn" and break apart and thereby increase the pressure drop. AFS can also minimise HTS catalyst damage due to water hardness issues.

Additionally, AFS installed on top of the HDS and methanator beds can mitigate pressure drop increase due to the carryover of cracked natural gas in the HDS and amines in the methanator.

In other applications, AFS has been installed in Hydrocrackers, Ultraformer Catalytic Reformers, Sulphur guards and Tailgas unit to filter fines. Also in Chloride guard Beds AFS has proven itself to filter ammonium chloride salts that previously caused pressure drop increase and so premature EOR conditions.

Vessel Loading Example:

1) AFS 1010
2) AFS 1025
3) AFS 1050
4) AFS MINI/UDC 1000
5) HT RINGS
6) MAIN BED CATALYST

Depth of grading layers depends upon size and severity of particulates

Unicat Bed Grading

AFS's open, controlled dimension channels maintain and distribute flow (e.g. mitigate pressure drop increase). Simultaneously this filters the pressure drop causing particulates through AFS's high fraction, fully flow accessible, internal void spaces for pressure drop mitigation. This is unmatched in the industry. Today our AFS systems are installed in numerous units worldwide and references & case study documents are available.

Please refer to the end of this brochure for an overview of our AFS products.

Unicat new active rings tested, proven, state of the art

- UNICAT Catalyst Technologies has developed a complete gamma of Active High Surface Ring Shapes – Unique and Unmatched in the industry.
- Introducing purification-activity in the bed grading zone of the vessel , enabling larger main beds and increasing reactor capacity.
- Available sizes: 3,2 – 4,8 – 6,5 – 8,0 mm

HT-10R Grading Rings:

- Inert rings used for grading purposes in traditional hydrotreating or filter reactor service
- Sizes range from 3.2 mm to 9 mm for high duration/strength and pressure drop elevation.

UDC-1000 Ceramic Support:

- Shape optimized 6 hole ceramic provides high void fraction particle on top zone of hydrotreators/hydrocrackers:
- Provides pressure drop relief and/or better flow distribution

AFS Filtration Disks:

- Thermal Resistance: 1.927 °C
- Crush Strength: > Face – 317 kgf; Side – 141 kgf
- 4,45 cm diameter x 1,14 cm thick
- Total Void Space: > 83%
- Surface Area: > 15 m2/g

AFS solves Pressure Drop Issues by:

- Increasing void fraction by 30% over traditional grading
- Filters contaminant particulates from 2400 to 5 microns
- Reduces channeling by splitting flow into multiple streams.
- Utilizes three filtration techniques:

1. Grain (surface) filtration
2. Turbulent flow filtration
3. Laminar flow filtration

- Precision geometric channels for consistent results

Active Rings

- HT-80R-Mo
- HT-82R-Os
- HT-83R-Os
- HT-84R-Os
- HT-85R-Co Mo
- HT-86R-Ni Mo
- HT-88R-As
- HT-89R-Si
- HT-90R-Demet

Purification sulphur removal

Product	Material	Application	Size (mm)	Shape
CHC-5	Alumina	COS hydrolysis 70 – 95 oC plus H2S, CO2 & H2O	3, 4 / 6	Sphere
HT-75HSA	CoMo	COS hydrolysis, > 315 oC, high GHSV	3, 2	Extrudate
PS-10	Noble Metal	COS hydrolysis, 150 – 400 oC	4,5 x 4,5	Extrudate
NSR-116R	Ni, NiO	Sulfurs & thiophenes in heavy HC feed, < 200 oC	1,6 / 2,5	Extrudate
SR-109	ZnO	H2S - Standard density ZnO, 290 – 400 oC optimum	4 x 8 / 16	Extrudate
SR-110	ZnO	H2S - High Porosity ZnO, 120 – 290 oC optimum	3,0	Sphere
SR-110C, CX, CXS	ZnO – Alumina	H2S & COS - Very High Surface ZnO, ambient – 150 oC (Unique product!)	1,6, -2,5 / 4,5	Extrudate
SR-111	ZnO	H2S, High density ZnO, 280 – 400 oC optimum	4 x 8 / 16	Extrudate
SR-112DMP	ZnO, MnO	High H2S & RSH feed, ambient – 100 oC	4 x 8 / 16	Extrudate
SR-115CR	MnO	H2S, COS and RSH removal, ambient – 430 oC	2,5 / 4.5	Extrudate
TSR-120	CuCO3-ZnCO3	New low temperature CO2 purification catalyst	2,5-5	Sphere
TSR-121E	CuCO3-ZnCO3	Next Generation Low Temperature – Modified With New Binder For Maximal Strength	2,5-5	Sphere
TSR-122E	CuCO3	Next Generation Low Temperature – Modified With New Binder For Maximal Strength	2,5-5	Sphere
TSR-123G	CuO, ZnO	High Absorption Capacity – Gas Phase	1,6-2, 5/5	Sphere /Tablet
TSR-117G	CuO, ZnO	High Absorption Capacity – Gas Phase	5 x 5 / 5 x 2,5/ 4	Tablet /Extrudate
AR-202 HC	Proprietary	Trace removal Sulphur and Max Absorption As	1,6 / 2,5 / 4 / 5 x 5 / 5 x 2,5	Sphere / Tablet

Purification chloride removal

Product	Material	Application	Size (mm)	Shape
CLX-13	Zeolite	Moderate HCl capacity, RCl capacity, < 120 oC	1,6 / 3,2	Sphere
CLX-16	Zeolite	High HCl capacity, moderate RCl capacity, < 120 oC	1,6 / 3,2	Sphere
CLX-19	Zeolite & CuO	Equal HCl and RCl capacity, < 120 oC	1,6 / 3,2	Sphere
CR-10	Alumina	Standard HCl capacity, ambient 370 oC	3 / 4 / 6	Sphere
CR-20	Alumina promoted	High HCl capacity, ambient 370 oC	2,5 / 3,2	Sphere
CR-55	ZnO, CaO	Very high HCl capacity, ambient 200 oC optimum	1,6 / 2,5 / 4,0	Extrudate
CR-70	ZnO	Ultra-high HCl capacity, ambient 120 oC optimum	3,0	Sphere
TCR-12	CuO, Na2O	RCl removal & HCl polishing, ambient 121 oC optimum	3,0	Sphere
TCR-14	Proprietary	Medium levels RCl (R1 – R5) in liquid feeds, < 200 oC	1,6 / 2,5	Extrudate
TCR-16	Proprietary	High levels RCl (R1 – R6) in liquid feeds, < 180 oC	1,6 / 2,5	Extrudate
TSR-120	CuCO3-ZnCO3	New low temperature CO2 purification catalyst	2,5-5	Sphere
TSR-121E	CuCO3-ZnCO3	Next Generation Low Temperature – Modified With New Binder For Maximal Strength	2,5-5	Sphere
TSR-122E	CuCO3	Next Generation Low Temperature – Modified With New Binder For Maximal Strength	2,5-5	Sphere
TSR-123G	CuO, ZnO	High Absorption Capacity – Gas Phase	1,6-2, 5/5	Sphere /Tablet
TSR-117G	CuO, ZnO	High Absorption Capacity – Gas Phase	5 x 5 / 5 x 2,5/ 4	Tablet /Extrudate
AR-202 HC	Proprietary	Trace removal Sulphur and Max Absorption As	1,6 / 2,5 / 4 / 5 x 5 / 5 x 2,5	Sphere / Tablet

Purification mercury removal

Product	Material	Application	Size (mm)	Shape
MR-13	Carbon	Trace Hg from gas streams	5,0	Sphere
MR-15	Alumina Sulfide	Also As, V & Fe, ambient – 100 oC optimum	2,5 & 3,2	Sphere
MR-17	Metal Oxide	Also H2S, COS, CS2 & RSH, ambient – 100 oC optimum	2,5 & 4,0	Extrudate
MR-19	Metal Sulfide	Also As, V & Fe, 50 – 100 oC optimum	2,5 & 4,0	Extrudate
MR-21	Metal Sulfide	High capacity, 50 – 100 oC optimum	2,5	Sphere

Purification As & phosphine removal

Product	Material	Application	Size (mm)	Shape
AR-201	PbO	Trace S & COS, ambient – 100 oC optimum	4,0	Sphere
AR-202HC	CuO, ZnO	H2S, COS, CS2 & RSH, ambient – 200 oC optimum	1,6, 2,5 & 4,0 5,0 x 5,0	Extrudate Tablet
AR-205E	CuO, MnO	AsH3 & Tri-Methyl Arsine, ambient – 140 oC optimum	1,6	Extrudate

Purification nitrogen removal

Product	Material	Application	Size (mm)	Shape
NR-99B	Proprietary	Removal Of Organic Nitro-amines & N2 Bearing Components	1,6 / 2,5	Sphere

Purification gas purification

Product	Material	Application	Size (mm)	Shape
CTX-44	Pt	VOC's - Severe CATOX service, 300 – 550 oC optimum	5,0 x 5,0	Tablet
CTX-48	Pt, Pd	VOC's – Moderate severity CATOX, 300 – 550 oC	5,0 x 5,0	Tablet
HR-47	Pt, Pd	H2 in CO2 rich feeds, 100 – 220 oC optimum	5,0 x 5,0	Tablet
OR-32	MnO	O2 up to 100 ppmv, high regeneration capacity	2,5	Extrudate
OR-35	Pd	O2 up to 2,000 ppmv, 8 – 10 regeneration cycles	4,0	Sphere
OR-50C	CuO	O2 up to 100 ppmv, < 120 oC, regenerable	5,0 x 5,0	Tablet
OR-400	CuO, ZnO	O2 or CO < 50 ppmv & trace COS in liquid feed, < 200 oC	2,5 & 5,0	Extrudate

Purification ethylene - propylene

Product	Material	Application	Size (mm)	Shape
CHC-5	Promoted Alumina	Selective COS Hydrolysis	1,5-2 / 3-5	Sphere
CHC-6	Promoted Alumina	Selective Removal of CO2	3-5	Sphere
AR-202HC	Cu/Zn	As Removal Catalyst	1,6 / 2,5 / 4 /5 x 5 / 5 x 2,5	Sphere/Tablet
SR-110CX	ZnO - Alumina	Ultra High Porosity / High Surface Sulphur Removal	1,6 / 2,5 / 4,5	Extrudate
TSR-Range	Metal oxide/ Carbonate	High capacity Sulphur Removal		

AFS & Hydrotreating - HDS

Product	Material	Application	Size (mm)	Shape
AOS	High alumina	Inert, high temperature support balls	0.125 – 3 inches	Sphere
AOS-LPD	High alumina	AOS with single or multiple holes for lower dP	1 – 3 inches	Sphere
AFS - 1010HA	Alumina	High Alumina Filtration Grading Disk – 10 MESH	45 x 13	Disk
AFS - 1025HA	Alumina	High Alumina Filtration Grading Disk – 25 MESH	45 x 13	Disk
AFS - 1050HA	Alumina	High Alumina Filtration Grading Disk – 50 MESH	45 x 13	Disk
AFS Distribution	Alumina	Mini and ultra-mini AFS-type disk with circular holes		
AFS - HA - Mini	Alumina	Mini Size Filtration & ReDistribution Grading Disk	25,4 x 9,5	Disk
AFS - HA	Aluminia	Ultra-Mini Size Filtration & ReDistribution Grading Disk	18 x 11	Disk
AFS 7625 Mini	Alumina Promoted CoMo/NiMo	Promoted AFS Disks	45 x 13	Disk
AFS - HPA	Alumina	Ultra High Purity Alumina Based AFS Disks	45 x 13	Disk
AFS ST Mini	Alumina	Pressure Drop Migitation & Silica Trap	45 x 13	Disk
AFS MX	Alumina	Ultra High Strength Version AFS	45 x 13	Disk
Densimax	Ceramic	General purpose inert support balls	0.25 – 2 inches	Sphere
UDC-1000	Alumina	6-Hole Shaped Distribution Tablet – Domed Shape	16 x 16 / 30 x 20	Tablet
HT-10R	Ceramic	Inert Ceramic Grading Ring	3,2 /4,5 /6 / 9	Ring
HT-80R	Ceramic Promoted CoMo	Economical Active Topping Ring	3,2/ 4,5	Ring
HT-86R	Ceramic Promoted NiMo	Promoted Active Top Grading Ring	3,2 / 4,5 / 6 / 9	Ring
HT-88R	Alumina Promoted Ni	Unique AS Trap Active High Void Ring	3,2 / 4,5 / 6,5 / 8	Ring
HT-89R	Alumina Promoted NiMo	Unique Silica Trap Active High Void Ring	3,2 / 4,5 / 6,5 / 8	Ring
HT-90R	Alumina Promoted NiMo	Unique Metal Trap Active High Void Ring Ni / V / Fe Removal	3,2 / 4,5 / 6,5 / 8	Ring
NSR-119	NiMo Based	Si Poisoning Guard Bed Catalyst	2,5 / 3-5	Extr./Sph
NSR-120	Proprietary	NiMo based Guard Bed Catalyst used for protection of main bed hydrotreating catalyst from Si poisoning	1,6 / 2,5	Trilobe
NSR-121	Proprietary	Advanced Silica trap with 10 to 30% additional capacity vs NSR-120	1,6 /2,5	Trilobe
MR-1P	NiMo based	Ni, As & V Trap	1,6 / 2,5	Trilobe
HT-75	CoMo Based	Basic HDS CoMo Hydrotreating Catalyst	2,5 / 3,2	Trilobe / Extr.
HT-85	CoMo Based	High Activity HDS CoMo Hydrotreating Catalyst	2,5 / 3,2	Trilobe / Extr.
HT-86	NiMo Based	High Activity HDS NiMo Hydrotreating Catalyst	2,5 / 3,2	Trilobe / Extr.

Steamreforming – H2 plant

Product	Application
Hydrotreating	
HT-75	Basic Gas CoMo HDT Catalyst
HT-75 HSA	COS Hydrolysis CoMo Based
HT-85R / 86R	Ultra Low Pressure Drop Ring shapes
AFS	Pressure Drop Prevention Topping
Sulphur removal – Zno range	
SR-109	Standard ZnO based Catalyst
SR-111	High Density ZnO Catalyst
SR-110	Medium Temperature ZnO Based Catalyst
SR-110CX	Unique Low Temperature / Polishing ZnO-Alumina Based Catalyst
SR-113	Unique Co – Combination HDS/ZnO Catalyst
High capacity S removal	
TSR-123	CuO / ZnO Based S Guard Catalyst
TSR-121/122E	Ultra High Capacity Low Temperature Carbonate Based – New Optimized Binder
TSR-117G	CuO Based S Guard Catalyst
Steamreforming SMR	
NG-610-6H	Standard SMR NG
NG-611-6H	Low S/C – Heavy Gas Reforming
NG-612-6H	Anti-coking Type
NG-615-6H	C3/C4 Steam Reforming
NG-610-5HQL	Low Pressure Drop Series
NGPR-1	Standard High Activity pre-reformer catalyst. Mg Aluminate carrier prereduced
NGPR-2	High Ni content High Activity pre-reformer catalyst. Medium to Heavy HC service
NG-611-5HQL	Ca aluminate, Low dP, NiO based SMR catalyst for heavy gas feed
NG-612-5HQL	Ca aluminate, Low dP, K2O promoted, NiO, anti-coking SMR catalyst
NG-710-LPD	Alumina, Ultra-low pressure drop, standard NiO based SMR catalyst
NG-711-LPD	Alumina, Ultra-low dP, NiO SMR catalyst for heavy gas feed
NG-712-LPD	Alumina, Ultra-low dP, K2O, NiO, anti-coking SMR catalyst
SMR Catalysts Available in 5-Hole Quad Lobe, 6-Hole Convex End and 5 or 7 Hole Spherical Sizes : 20 x 18 / 16 x 16 / 16 x 11 / 16 x 8/ 13 x 11 and 16 mm Sphere	
Secondary reforming	
NG-600-6H	Standard Sec Reforming Catalyst
NG-605-6H	High Activity Types
NG-600-X	Thermal Shield
NG-710LDP MAH	Multi Axial Hole Design, Next generation LOW dP, New Innovative Advanced Shape with Side Holes
Available Sizes : 19 x 19 / 16 x 16 / 16 x 11 mm and 16 mm Spheres	

Steamreforming – H2 plant

Product	Application
HT shift catalyst	
HS-500	Basic HT Shift Catalyst
HT-500G	Giant size For Pressure Drop Elevation Sizes : 6 x 6 / 6 x 4 / 9 x 6 mm
LT shift catalyst	
LS-402	Basic LT Shift Catalyst
LS-402 LM	Low Methanol LTS
LS -401 CG	Cl Guard Type
TSR-117G	Active Sulphur Guard Sizes : 6 x 4 / 5 x 2,5 / 4,5 x 3,2 mm
TSR-118	CuO, ZnO ,Sulfur guard with moderate LTS activity
Methanation	
MC 710, 710R, 720R and 770 Series	
PSA Adsorbents	
Unicarbon HRU	PSA Type Active Carbon – High Density from Coconut Shells Activated by High Steam Activation
Unimol PSA-5	PSA Grade 5A Molecular Sieve – Spheres or Extrudates
WR-11	High Performance, High Porosity, High Surface PSA Grade Activated Alumina

Other

Product	Material	Application	Size (mm)	Shape
CTX-44	Pt	VOC's – severe CATOX service, 572 – 1,022° F	5.0 x 5.0 mm	Tablet
CTX-48	Pt, Pd	VOC's – moderate severity CATOX, 572 – 1,022° F	5.0 x 5.0 mm	Tablet
MS-900	CuO, ZnO	Low temperature active methanol synthesis catalyst	5.0 x 5.0 mm	Tablet
PDH Series	Pd	Selective hydrogenation catalysts	Various	Sphere / Extrudate
PolyCat	SPA	Solid phosphoric acid polymerization catalysts	5 – 5.5 mm	Sphere
SAC Series	Vanadium	Sulfuric acid catalyst – SO2 conversion	Various	3 types
TG-79	CoMo	Claus process tailgas catalyst	2.5 / 3.2 mm	Extrudate

Q and A

Guard solutions

Q. How to deal with increasing costs for Nickel-based Sulphur-guards?

A. Change to our innovative mixed-metal based beds. Better performance and strongly lower costs!

Q. How to reach ultra-desulphuration at high temperatures?

A. MnO is our key performer; readily available now also in Europe!

Q. Suffering from Green-oil and corroding units?

A. Adopt our modern Zeolite based Chlorguards!

Hydrotreating solutions

Q. How to deal with nasty feeds, high deltaP on HDS units andsubsequentpoor and corrosive H2S treatment at the Amine-units?

A. Use the best top-grading available; AFS™ with HT-rings for HDS and our most innovative Amine solvent compound.

Hydrocarbon polymerization solutions

Q. What to do with blocked units and poor yields?

A. Get our new generation Solid Phosphoric Acid with new binder!

Diesel NOx and PMs emission solutions

Q. How to reduce NOx and Particulate Matters simultaneously?

A. Now available our VISCON™ Diesel Additive.

Hydrogen demand solutions

Q. How to get an optimal design and performance under one contract?

A. Use our fully integrated Hydrogen Production catalytic design.

Please contact your local Univar Account Manager or
talk with our technical team via oilandgas@univareurope.com

www.univar.com

UNIVAR®