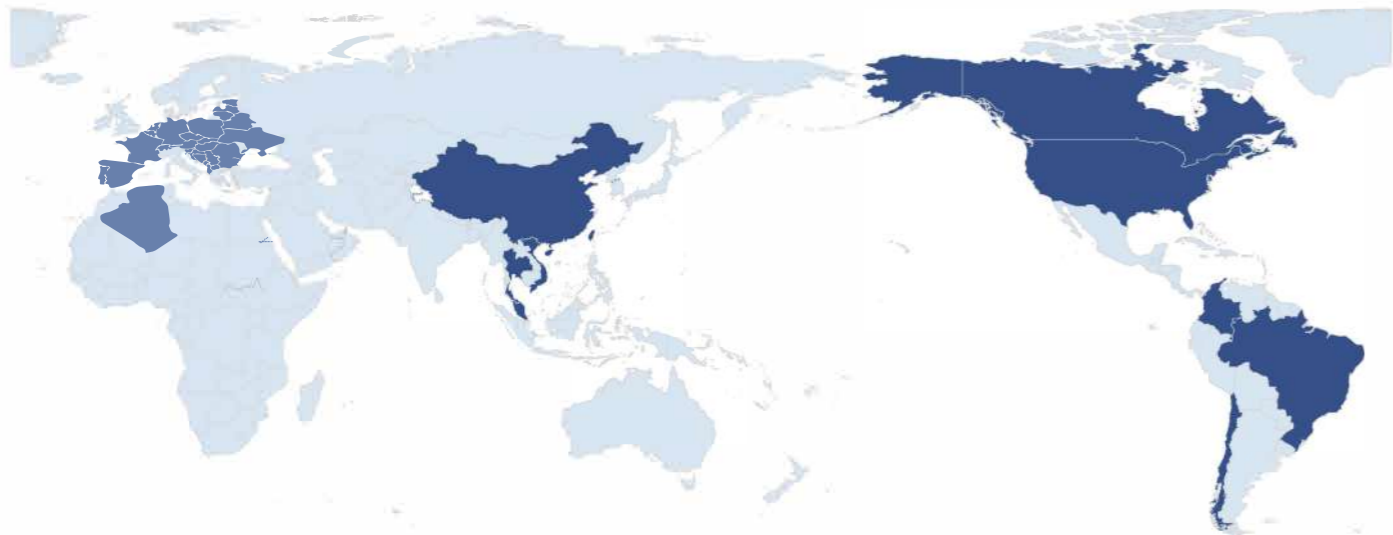


梅塞尔全球分布
Global network of Messer



审图号:GS(2016)1664号

自然资源部 监制

吴江梅塞尔工业气体有限公司

地址: 江苏省苏州市吴江区平望镇竹江桥3号
电话: 0512-63664216
邮编: 215221

Wujiang Messer Industrial Gas Co., Ltd.

Address: No.3 ZhuJiang Qiao, PingWang Town,
Wujiang District, Suzhou 215221
Tel: 0512-63664216
P.C.: 215221

梅塞尔特种气体(苏州)有限公司

地址: 江苏省苏州市吴江经济技术开发区
南村路158号
电话: 0512-63664216
邮编: 215200

Messer Specialty Gases (Suzhou) Co., Ltd.

Address: No.158 Nancun Road, Wujiang Economic &
Technological Development Zone, Suzhou
Tel: 0512-63664216
P.C.: 215200

梅塞尔特种气体(滁州)有限公司

地址: 安徽省滁州市全椒县十潭现代产业园化工
集中区远大路20号
电话: 0512-63664216
邮编: 239500

Messer Specialty Gases (Chuzhou) Co., Ltd.

Address: Chemical industry concentration area of Shitan
modern industrial park, Quanjiao County
Tel: 0512-63664216
P.C.: 239500

梅塞尔特种气体(眉山)有限公司

地址: 四川省眉山市高新技术产业区君乐路8号
电话: 028-87890900
邮编: 620031

Messer Specialty Gases (Meishan) Co., Ltd.

Address: No. 8, junle Road, high tech Industrial Park,
Dongpo District, Meishan City, Sichuan
Tel: 028-87890900
P.C.: 620031

MESSER
Gases for Life

梅塞尔特气 “芯” 路
助力 芯 路

Specialty gases for the semiconductor



梅塞尔——全球领先的工业气体和特种气体专家 Messer—the global expert for industrial and specialty gases

德国梅塞尔创建于 1898 年，是世界最大的私营工业气体、特种气体和医用气体专家，业务遍布，欧洲、亚洲和美洲。梅塞尔的气体创彩科技与生活，广泛应用于工业、环保、科研、医疗、食品饮料、焊接切割、3D 打印及建筑等行业。

梅塞尔 1995 年进入中国，至今在中国的总投资额已经超过 15 亿美元，设立了 39 家企业，拥有 50 座空分，4 个二氧化碳工厂，8 座制氢装置，5 个稀有气体生产基地，4 个特气中心，3 家电子气工厂以及 17 个充装站，是在中国的主要国外工业气体供应商。

Founded in 1898, Messer is the world's largest privately held specialist for industrial, medical and specialty gases, and has established presence in Asia, Europe, and America. Since then, Messer's Gases for Life are widely used in industry, environmental protection, science and technology, medicine, the food and beverage, welding and cutting technology, 3D printing, building and other industries.

Since Messer entered China market in 1995, it has made total investment over 1.5 billion dollars in China. Today, Messer has set up 39 enterprises in the country, including 50 air separation units, 4 carbon dioxide plants, 8 hydrogen production plants, 5 noble gas facilities, 4 specialty gases centers, 3 electronic gas plants and 17 filling stations. Messer has ranked among the leading industrial and specialty gases providers in China.

梅塞尔-辉煌百年
Messer - A century of brilliance

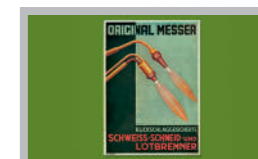
1898



Adolf Messer founded Frankfurter Acetylen-Gas-Gesellschaft Messer & Cie. in Höchst as a manufacturer of acetylene generators and lighting appliances

阿道夫·梅塞尔在赫斯特创立了“法兰克福梅塞尔&齐叶乙炔气体公司”，制造乙炔发生器和乙炔照明装置。

1908



The first oxygen plant opened at Chemische Fabrik Griesheim-Elektron

格里斯海姆电子公司化工的首家氧气工厂开始运营。

1965



Hans Messer founds Messer Griesheim GmbH

汉斯·梅塞尔创立梅塞尔·格里斯海姆股份有限公司

1966



Expansion into Europe and North America

版图扩张至欧洲和北美



Entry into China and rapid expansion

进入中国市场并迅速扩张

1995



Establishment of the first specialty gases plant in China

中国第一家特气工厂落成

1998



2014

Establishment of electronic specialty gases plant in Suzhou

在苏州成立电子特气工厂

2023



Electronic specialty gases plant in Anhui-Chuzhou began to put into service

安徽滁州的电子特气工厂开始生产

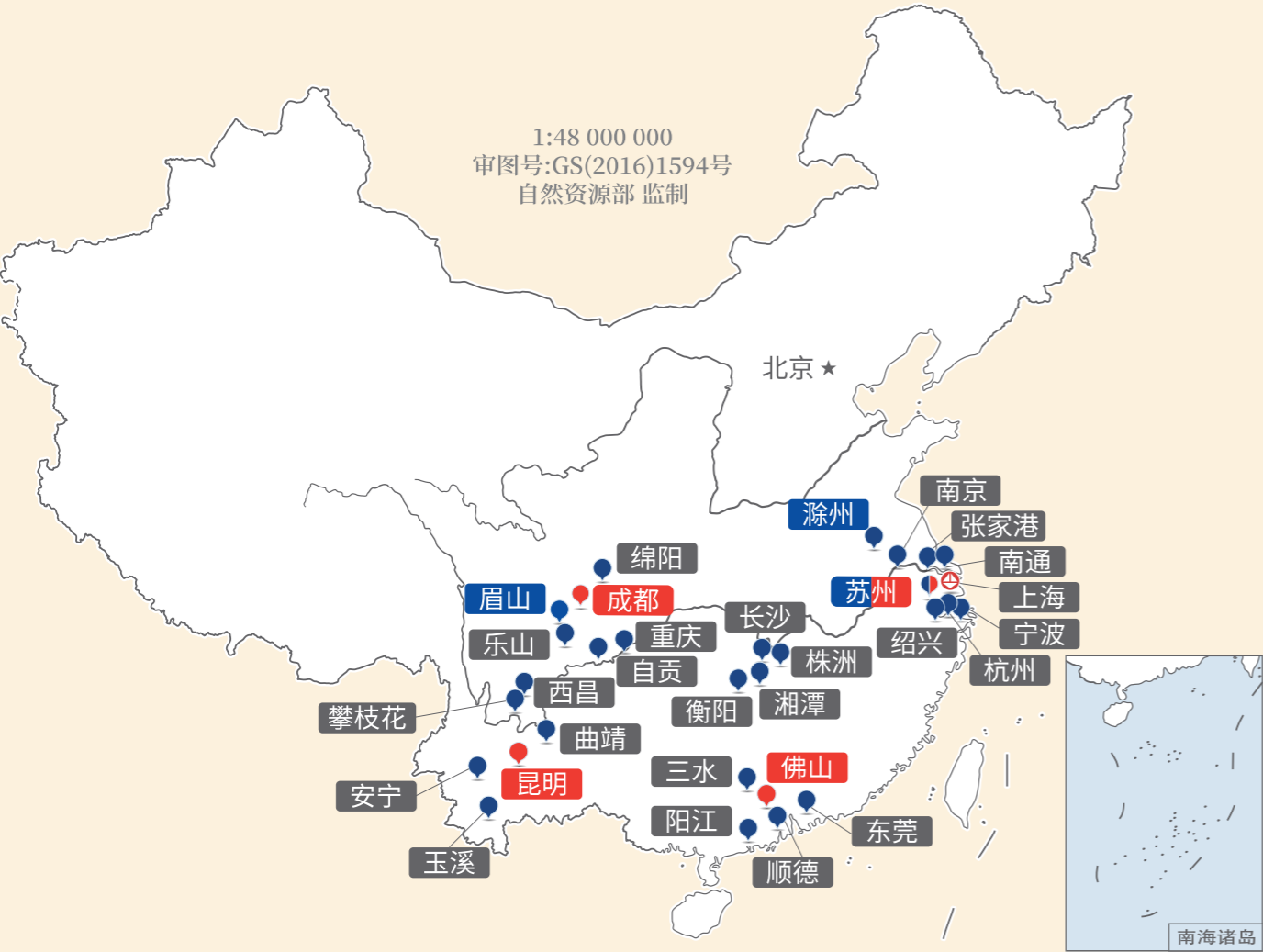
2023



Electronic specialty gases plant in Meishan-Sichuan launched trial production

四川眉山的电子特气工厂开始试生产

梅塞尔中国分布
Messer in China



三个电子特气工厂 3 electronic specialty gases plants
苏州梅塞尔 SZMG
滁州梅塞尔 CZMG
眉山梅塞尔 MSMG

四个特气中心 4 specialty gases centers
江苏苏州 Suzhou, Jiangsu
广东佛山 Foshan, Guangdong
四川成都 Chengdu, Sichuan
云南昆明 Kunming, Yunnan

在中国,我们是行业可靠的电子特气生产商
We are reliable producer of electronic specialty gases in China



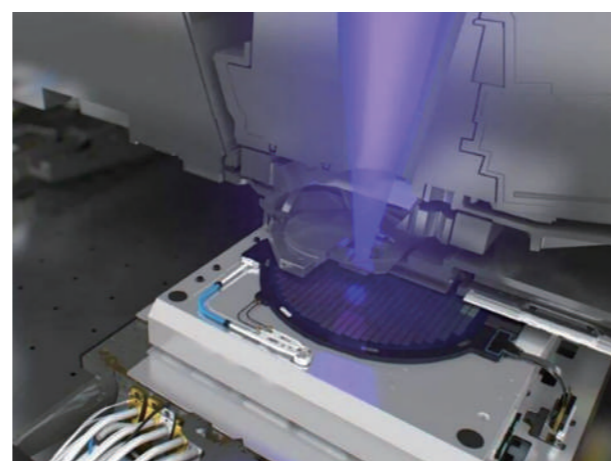
梅塞尔具备供应六十多种高纯和超高纯电子特气的
能力, 包括 N_2O 、 B_2H_6 、 CO 、 H_2 、 C_4F_6 、 C_4F_8 、 CH_3F 、 C_3H_6 、 C_2H_4 等多种氟碳及碳氢化合物的电子级纯气, 同
时也提供 PH_3 混合气、 GeH_4 混合气、准分子激光气等
产品, 覆盖电子行业绝大部分的气体应用, 为中国半导
体、面板等高端电子制造业提供安全、可靠、高品质的
电子特气。

Messer has the capability to supply more than 60 types
of high-purity and ultra-high-purity electronic specialty
gases, including electronic grade pure gases like N_2O ,
 B_2H_6 , CO , H_2 , C_4F_6 , C_4F_8 , CH_3F , C_2H_4 , and many other
fluorocarbon and hydrocarbon compounds; at the same
time, PH_3 gas mixture; GeH_4 gas mixture; excimer laser
gas and other products are offered as well, which cover
most gas applications in electronics industry. Messer
always provides safe, reliable and high quality gases for
high-end electronics manufacturing industry such as in
semiconductors and panels.



传承德国的坚实背景，梅塞尔的品牌始终代表着专业、实力、高效、优质、创新和值得信赖。最先进的国外技术研发力量结合本土优质资源及价格优势，梅塞尔特气团队时刻准备着响应电子客户的应用需求。从普通高纯气体，到凝聚着万千关注的“造芯”利器-DUV 激光混合气；从“量大气足”的 CVD 成膜纯气、混合气，到要求严苛的掺杂混合气；从气氮到液氮；从严控 GWP 系数的刻蚀气到终极清洁能源 H₂；从“黄金气体”氪氙到基础原料 Ar, N₂，梅塞尔以中国匠心铸就世界品质，始终给客户id提供最佳的特种气体产品与解决方案。

With its German profound strengths, the name of Messer stands for professionalism, competency, efficiency, quality, innovation and reliability. Relying on the most cutting-edge foreign research and development strength, coupled with local high-quality resources and price advantages, Messer specialty gases team is always ready to call for any application needs of electronic customers. From ordinary high-purity gases to the core gas for chips-DUV laser gas mixtures that has drawn wide attention; from sufficient pure CVD film-forming gases and mixtures to demanding dopant mixtures; from gas helium to liquid helium; from GWP strictly controlled etching gases to clean energy-H₂; from golden gases-krypton, xenon to basic raw materials-Ar, N₂, Messer, with the spirit of Chinese craftsmanship, is always committed to supplying world-class specialty gases and tailor-made solutions for customers.



B₂H₆ and Mixtures

B₂H₆及混气

梅塞尔滁州工厂具有高纯乙硼烷生产线，采用自有专利工艺及进口设备，让梅塞尔的乙硼烷产品品质始终如一。此外，依托多年气体混配控制经验，梅塞尔提供各种比例的混配气，包括混氢、混氮、混氩等，特别适合半导体及光伏行业。

Messer Chuzhou plant has high-purity B₂H₆ production line. Our own patented process and imported equipment enabling Messer's B₂H₆ products to be of consistent quality. In addition, relying on years of experience in gas mixing, Messer provides various ratios of gas mixtures, including hydrogen mixture, nitrogen mixture, argon mixture, etc., which is especially suitable for semiconductor and photovoltaic industries.

5%B₂H₆+N₂:

运输状态/Shipping as:	压缩气体/Compressed Gas
产品名称/Shipping Name:	混合气/Mixture Gas
主要性质/General:	有毒、易燃/Toxic, flammable
联合国编号/UN number:	1953
气瓶颜色/Cylinder Marking:	银灰/Silver gray
危险化学品等级/Hazard Class	2.3(2.1)
标识/Label	有毒易燃气体/Toxic, flammable gas



包装规格/Standard Package

气瓶规格/Cylinder Type	47L
充装压力/Filling Pressure@20℃	10±0.5MPa
阀门出口类型/Valve Connection	DISS632
推荐减压器/Recommended Regulator	Spectropur SBE3



产品规格/Product Specification

组分	B ₂ H ₆ ≥99.999%	N ₂ ≥99.9999%
B ₂ H ₆	4.75%~5.25%	
N ₂	Balance	
O ₂	≤1.0ppm	≤0.2ppm
N ₂	≤1.0ppm	N/A
CO	≤0.5ppm	≤0.1ppm
CO ₂	≤1.0ppm	≤0.1ppm
CH ₄	≤1.0ppm	≤0.1ppm
H ₂ O	N/A	≤0.5ppm

PH₃ Mixtures

PH₃混气

磷烷混气具有高度活性，易燃有毒，主要作为P源，用于N型器件的掺杂工艺。从半导体掺杂工艺，到新型光伏电池的掺杂，PH₃混气涵盖浓度从ppm到百分比级，对浓度的稳定性要求极高。

PH₃ mixtures are highly reactive, flammable and toxic, and are mainly used as a P source for the doping process of N-type devices. From semiconductor doping processes to the doping of new photovoltaic cells, gas concentration stability of PH₃ mixtures is highly demanding, covering from ppm level to percentage level.

1%PH₃+H₂:

运输状态/Shipping as:	压缩气体/Compressed Gas
产品名称/Shipping Name:	混合气/Mixture Gas
主要性质/General:	有毒、易燃/Toxic, flammable
联合国编号/UN number:	1953
气瓶颜色/Cylinder Marking:	银灰/Silver gray
危险化学品等级/Hazard Class:	2.3(2.1)
标识/Label	有毒易燃气体/Toxic, flammable gas



包装规格/Standard Package

气瓶规格/Cylinder Type	47L
充装压力/Filling Pressure@20℃	10±0.5MPa
阀门出口类型/Valve Connection	DISS632
推荐减压器/Recommended Regulator	Spectropur SBE3



产品规格/Product Specification

组分	PH ₃ ≥99.9995%	H ₂ ≥99.9999%
PH ₃	0.95%~1.05%	
H ₂	Balance	
O ₂	≤0.5ppm	≤0.2ppm
N ₂	≤0.5ppm	≤0.4ppm
CO	≤0.5ppm	≤0.1ppm
CO ₂	≤0.5ppm	≤0.1ppm
CH ₄	≤0.5ppm	≤0.2ppm
H ₂ O	≤0.5ppm	≤0.5ppm

Electronic grade N₂O

电子级N₂O

氧化亚氮 N₂O，氧化剂，多用于半导体，平板显示，LED 及太阳能电池片的化学气相沉积工艺，产生 SiO₂ 薄膜，用于半导体器件的绝缘层。

N₂O, nitrous oxide, is an oxidizing agent chiefly applied in semiconductor, flat panel displays, LEDs and chemical vapor deposition process of solar cell wafers. N₂O is used to produce SiO₂ films for insulating layers of semiconductor devices.

N₂O:

运输状态/Shipping as:	液化气体/Liquefied Gas
产品名称/Shipping Name:	氧化亚氮/Nitrous Oxide
主要性质/General:	无色、氧化性，有点甜味的液化气体 Colorless,oxidizing,liquefied gas with a slightly sweetish odor
联合国编号/UN number:	1070
气瓶颜色/Cylinder Marking:	银灰/Silver gray
危险化学品等级/Hazard Class:	2.2
标识/Label:	不燃、氧化剂/Nonflammable, oxidizing
MSDS编号/MSDS Number:	EIGA093A
CAS编号/CAS Number:	10024-97-2



包装规格/Standard Package

气瓶规格/Cylinder Type	47L	470Y
充装重量/Filling Quantity	29kg	290kg
阀门出口类型/Valve Connection	CGA326/DISS712	DISS712
推荐减压器/Recommended Regulator	Spectrolab FM61 FM62 Spectrocem FE51 FE52 FE53	



产品规格/Product Specification

产品等级Product Grade		5.5
N ₂ O	≥	99.9995%
杂质含量Impurities		
H ₂	≤	0.5ppm
O ₂ +Ar	≤	1.0ppm
N ₂	≤	1.0ppm
CO	≤	0.2ppm
CO ₂	≤	0.5ppm
THC	≤	0.2ppm
NH ₃	≤	1.0ppm
NO _x	≤	1.0ppm
H ₂ O	≤	1.0ppm

Electronic Grade CO₂

电子级CO₂

具备多种用途，包括：沉积组分氧化剂；超临界清洗和用于浸入式光刻镜头保护气，对于一些特定杂质有着严苛的要求；干法刻蚀组分气。Messer 采用稳定可靠的纯化技术使客户的品质要求得到保障。

Electronic grade CO₂ has various applications, including:
Deposition component oxidizer. Used for supercritical cleaning and protection gases for immersion lithography lens, which has stringent requirements for specific impurities. Dry etching component gases. Messer adopts stable and reliable purification technology so that our customers' quality requirements are met.

CO₂:

运输状态/Shipping as:	液化气体/Liquefied Gas
产品名称/Shipping Name:	二氧化碳/Carbon Dioxide
主要性质/General:	无色、无味、不燃液化气体/ Colorless,odorless, nonflammable, liquefied gas
联合国编号/UN number:	1013
气瓶颜色/Cylinder Marking:	铝白/Aluminium White
危险化学品等级/Hazard Class:	2.2
标识/Label:	不易燃高压气体/Nonflammable, high pressnre gas
MSDS编号/MSDS Number:	EIGA018A
CAS编号/CAS Number:	124-38-9



包装规格/Standard Package

气瓶规格/Cylinder Type	47L	470L-Y
充装重量/Filling Quantity	27±1kg	270±5kg
阀门出口类型/Valve Connection	DISS716	DISS716
推荐减压器/Recommended Regulator	Tornado Spectrolab FM51FM52 FM53 Spectrocem FE51 FE52 FE53	



产品规格/Product Specification

产品等级Product Grade		5.0
CO ₂		≥99.999%
杂质含量Impurities		
H ₂	≤	0.5ppm
O ₂	≤	1.0ppm
N ₂	≤	3.0ppm
CO	≤	0.5ppm
THC	≤	0.5ppm
H ₂ O	≤	1.0ppm

Etching gas

刻蚀气

用于半导体干法刻蚀工艺。匹配不同型号设备机台的要求，Messer 提供 C₄F₆、C₄F₈、C₃H₆、CH₃F 等品类繁多的刻蚀气。目前基于环境保护考虑，从设备设计阶段到终端用户使用，越来越倾向于使用温室效应指数更友好的品种。

Used in dry etch process for semiconductors. For matching the requirements of different types of equipment, Messer provides various etching gases, such as C₄F₆, C₄F₈, C₃H₆ and CH₃F. Currently, there is a growing trend towards low GWP gas varieties for environmental reasons, from design stage of the equipment to the end-user.

C₄F₆:

运输状态/Shipping as:	液化气体/Liquefied Gas
产品名称/Shipping Name:	六氟 1, 3 丁二烯/Hexafluoro-1,3-Butadiene
主要性质/General:	有毒、易燃气体/Toxic, flammable gas
联合国编号/UN number:	3160
气瓶颜色/Cylinder Marking:	铝白/Aluminium White
危险化学品等级/Hazard Class:	2.3(2.1)
标识/Label:	有毒、易燃气体/Toxic, flammable gas
MSDS编号/MSDS Number:	EIGA131
CAS编号/CAS Number:	0685-63-2



包装规格/Standard Package

气瓶规格/Cylinder Type	47L
充装重量/Filling Quantity	45kg
阀门出口类型/Valve Connection	CGA350/DISS724
推荐减压器/Recommended Regulator	Spectropur SBE3



产品规格/Product Specification

产品等级Product Grade		3N8
C ₄ F ₆	≥	99.98%
杂质含量Impurities		
O ₂ +Ar	≤	10ppm
N ₂	≤	20ppm
CO	≤	10ppm
CO ₂	≤	20ppm
Other FC	≤	110ppm
HF	≤	10ppm
H ₂ O	≤	10ppm
DMF	≤	10ppm
IPA	≤	10ppm

Gas mixtures

混合气

混合气向各种工艺提供气源和保障，Messer 立足于多年的纯化和混配经验，致力于向客户提供多种标准和定制混合气来满足工艺和应用需求，包括：掺杂混气、标准混气、标准气、准分子激光气和定制混气

Gas mixtures provide gas source and guarantee for a wide range of processes. Based on years of experience in purification and mixing, Messer is committed to providing its customers with various standard and customized gas mixtures to meet their process and application needs, including, dopant mixtures, standard mixtures, standard gases, excimer laser gases, and customized mixtures.....

10ppmXe+3.5%Ar+Ne:

运输状态/Shipping as:	压缩气体/Compressed Gas
产品名称/Shipping Name:	混合气/Mixture Gas
主要性质/General:	不燃气体/Nonflammable gas
联合国编号/UN number:	1956
气瓶颜色/Cylinder Marking:	银灰/Silver gray
危险化学品等级/Hazard Class:	2.2
标识/Label:	不燃气体/Nonflammable gas



包装规格/Standard Package

气瓶规格/Cylinder Type	47L
充装量/Filling Volume	6000L
阀门出口类型/Valve Connection	DISS718
推荐减压器/Recommended Regulator	Tornado
	Spectrolab FM51 FM52 FM53
	Spectrocem FE51 FE52 FE53



产品规格/Product Specification

产品名称Product Name		10ppmXe+3.5%Ar+Ne
Xe		8ppm~10ppm
Ar		3.4%~3.6%
Ne		Balance
杂质含量Impurities		
O ₂	≤	0.5ppm
N ₂	≤	0.5ppm
CO	≤	0.5ppm
CO ₂	≤	0.5ppm
THC(as CH ₄)	≤	0.5ppm
CF ₄	≤	0.5ppm
He	≤	8.0ppm
H ₂ O	≤	0.5ppm

梅塞尔供气方式选择方案
Messer gas supply options



超大规模项目, 最佳解决方案
The best solution for really big jobs
管道系统
Pipeline system



大规模客户的最佳解决方案
The optimal solution for large jobs
现场制气
On-site gas production



中等规模客户供气方案
For medium-sized jobs
现场储罐
On-site storage tanks

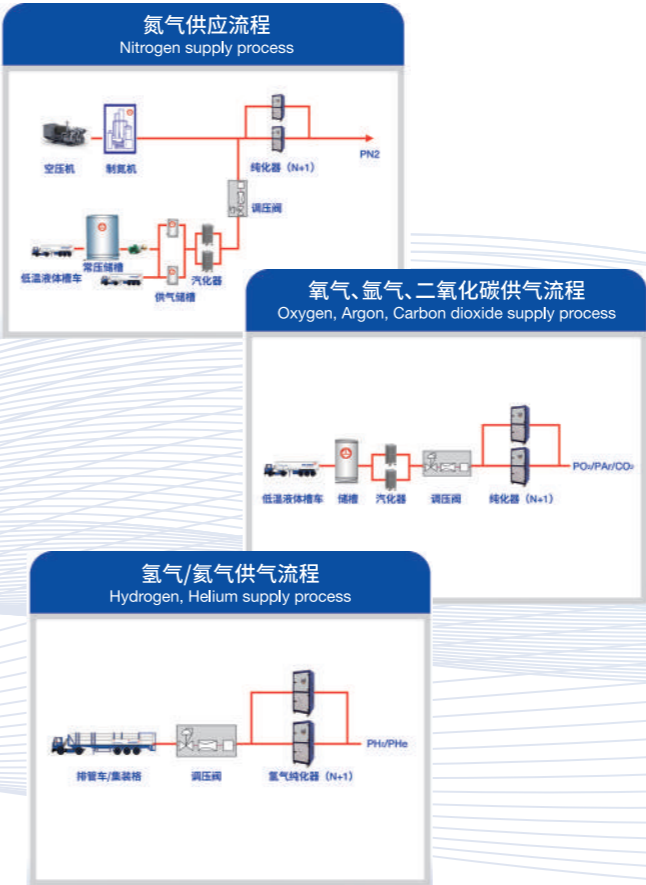


小规模客户供气方案
For smaller jobs
排管车
Tube trailer

梅塞尔大宗气体品质
Messer bulk gas quality

项次 No.	不纯物 Impurities 气体类别 Gas categories	H ₂ O (ppbv)	O ₂ (ppbv)	CO ₂ (ppbv)	CO (ppbv)	H ₂ (ppbv)	THC (ppbv)	颗粒数量 Particulate count pos/scf (≥0.1um)
1	PN ₂	≤1	≤1	≤1	≤1	≤1	≤1	≤1
2	PO ₂	≤1	-	≤1	≤1	≤1	≤1	≤1
3	PAr	≤1	≤1	≤1	≤1	≤1	≤1	≤1
4	PHe	≤1	≤1	≤1	≤1	≤1	≤1	≤1
5	PH ₂	≤1	≤1	≤1	≤1	-	≤1	≤1
6	CO ₂	-	-	99.99%	≤1	-	-	≤10

梅塞尔大宗气站供气流程
Messer bulk gas station supply process



梅塞尔大宗气站设备标准配置
Standard configuration of Messer
bulk gas station equipment

- 氮气供气系统: 包括空气压缩机系统、空气预处理分子筛系统、低温精馏系统。
- Nitrogen supply system: Consisting of air compressor system, air pre-treatment, molecular sieve system, and cryogenic distillation system.
- 液体供气及备用系统: 低温液体储罐、汽化器、调压阀、仪表系统。
- Liquid gas supply and back-up system: Comprising cryogenic liquid storage tank, vaporizer, pressure regulating valve, and instrumentation system.
- 氢气、氦气供气系统: 鱼雷管束拖车/钢瓶集装格、调压阀+纯化器。
- Hydrogen and helium supply system: Torpedo tube bundle trailer/cylinder bundle, pressure regulating valve + purifier.
- 纯化系统: N+1的气体纯化器。
- Purification system: N+1 gas purifiers.
- 循环水系统。
- Circulating water system.
- 动力配电系统。
- Dynamic power distribution system.
- 仪控系统。
- Instrumentation & control system.
- 分析仪系统: IQC+CQC
- Analyzer system: IQC+CQC

