



شرکت ملی گاز ایران

امورتدوین استانداردها

IGS

مشخصات فنی خرید

متیل دی اتانول آمین (MDEA) ونوع اکتیوآن (aMDEA) برای استفاده درواحدهای شیرین سازی گازطبیعی

Methyldiethanolamine (MDEA) and Activated Methyldiethanolamine (aMDEA) for use in Natural Gas Sweetening Plants



تاریخ: ۱۳۹۲/۳/۲۸
شماره: گ/دب/۰-۱۷۳-۱۶۶۱۴

ابلاغ مصوبه هیأت مدیره

مدیر محترم پژوهش و فناوری و رئیس شورای استاندارد

باسلام،

به استحضار می‌رساند در جلسه ۱۵۳۸ مورخ ۱۳۹۱/۱۲/۲۷ هیأت مدیره. نامه شماره گ/۹/۰۰۰/۱۸۱۴۵۳ مورخ ۱۳۹۱/۱۲/۱۹ مدیر پژوهش و فناوری و رئیس شورای استاندارد در مورد تصویب نهایی استاندارد تحت عناوین ذیل مطرح و مورد تصویب قرار گرفت:

ردیف	عنوان	شماره تقاضا
۱	لوله های فولادی بدون درز / درز جوش گرید B ، اندازه های ۱/۲ تا ۴ اینچ	IGS-M-PL-001-1(0)
۲	لوله های فولادی بدون درز / درز جوش گریدهای B تا X80 ، اندازه های ۶ تا ۵۶ اینچ	IGS-M-PL-001-2(0)
۳	شیرآلات پلی اتیلن	IGS-M-PL-015(1)
۴	دستگاه الکترونیکی تصحیح کننده حجم گاز کنتورهای گاز	IGS-M-IN-106(0)
۵	پوشش اپوکسی مایع برای تعویض و تعمیر پوشش سطوح خارجی خطوط لوله فولادی ، خم ها ، سر جوش ها ، شیرآلات و اتصالات مدفون	IGS-M-TP-027(0)
۶	شیرهای قفل شونده قبل از رگولاتور جهت انشعابات شبکه های گاز پلی اتیلن (بدون اتصال عایقی)	IGS-M-PL-012(1)
۷	شیرهای قفل شونده قبل از رگولاتور جهت انشعابات شبکه های گاز فولادی	IGS-M-PL-019(1)
۸	متیل دی اتانول آمین و نوع اکتیو آن برای استفاده در واحدهای شیرین سازی گاز طبیعی	IGS-M-CH-050(0)

ناصر آبگون
دبیر هیأت مدیره

رونوشت: مدیرعامل محترم شرکت ملی گاز ایران و نائب رئیس هیأت مدیره

اعضای محترم هیأت مدیره

مدیر محترم هماهنگی و نظارت بر تولید

مدیرعامل محترم شرکت انتقال گاز ایران

رئیس کل محترم امور حسابرسی داخلی

رئیس محترم امور حقوقی

رئیس محترم امور مجامع

Documents
Document Sharing Hub

FOREWORD

This standard is intended to be mainly used by NIGC and contractors and has been prepared on interpretation recognized standards, technical documents, knowledge, backgrounds and experiences in gas industries at national and international levels.

Iranian gas standards (IGS) are prepared, reviewed and amended by technical standard committees within NIGC Standardization division and submitted to the NIGC's "STANDARDS COUNCIL" for approval.

IGS Standards are subject to revision, amendment or withdrawal, if required, thus the latest edition of IGS shall be checked/inquired by NIGC users.

This standard must not be modified or altered by the end users within NIGC and her contractors. Any deviation from normative references and/or well known manufacturers specifications must be reported to Standardization division.

Any comments from concerned parties on NIGC distributed IGS are welcome to technical standards committees and will receive serious attention and consideration should a revision to standards is recommended.

GENERAL DEFINITIONS:

Throughout this standard the following definitions, where applicable, should be followed:

- 1- "STANDARDIZATION DIV." has been organized to deal with all aspects of industrial standards in NIGC. Therefore, all queries for clarification or amendments are requested to be directed to mentioned division.
- 2- "COMPANY": refers to national Iranian gas company.
- 3- "SUPPLIER": refers to a firm who will supply the service, equipment or material to IGS specification whether as the prime producer or manufacturer or a trading firm.
- 4- "SHALL ": is used where a provision is mandatory.
- 5- "SHOULD": is used where a provision is advised only.
- 6- "MAY": is used where a provision is completely discretionary.

Website: <http://igs.nigc.ir>

E-mail: igs@nigc.ir

TABLE OF CONTENT

1. SCOPE	1
2. REFERENCES	1
3. DEFINITION	2
4. REQUIREMENTS	2
5. INSPECTION	4
6. MARKING	5
7. PACKAGING	5
8. STORAGE LIFE	6
9. DOCUMENTATION	6
ANNEX A – Data Sheet for MDEA	7
ANNEX B – Data Sheet for aMDEA	8
ANNEX C – Questionnaire for aMDEA Evaluation (Informative)	9
ANNEX D – Typical Purity and Physical Properties of aMDEA (Informative)	14

1. SCOPE

This standard specification covers the minimum requirements for methyldiethanolamine (MDEA) and activated methyldiethanolamine (aMDEA) for absorbing H₂S and CO₂ in natural sour gas treating plant. MDEA is an extremely selective amine that can be used for treating and absorption of hydrogen sulphide from both natural gas and refinery off-gasses. When require a higher carbon dioxide removal rate from gas stream, (as in the case of some LNG operators) or special requirement (corrosion and mercaptan management etc.), activated MDEA (aMDEA) is used. This is a combination of MDEA and activator (like piperizine) specifically formulated for required specification. This standard specification specifies purity, properties, test methods, inspection and packaging of MDEA and aMDEA.

2. REFERENCES

Throughout this standard specification the following standards are referred to. The editions of these standards that are in effect at the time of issue of this standard specification (2012) shall, to the extent specified herein, form part of this standard specification. The applicability of changes in standards that occur after the date of this standard specification shall be mutually agreed upon by the purchaser and the supplier.

ASTM D 93 (2007) "Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester"

ASTM D 95 (2005) "Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation"

ASTM D 445 (2006) "Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (the Calculation of Dynamic Viscosity)"

ASTM D 891 (2004) "Standard Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals"

ASTM D 1015 (2005) "Standard Test Method for Freezing Points of High – Purity Hydrocarbons"

ASTM D 1078 (2005) "Standard Test Method for Distillation Range of Volatile Organic Liquids"

ASTM D 1177 (2007) "Standard Test Method for Freezing Point of Aqueous Engine Coolants"

ASTM D 1209 (2005) "Standard Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)"

ASTM D 1218 (2002) "Standard Test Method for Refractive Index and Refractive Dispersion of Hydrocarbon Liquids"

ASTM D 1364 (2002) "Standard Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)"

ASTM D 2073 (1998) "Standard Test Methods for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines, Amidoamines, and Diamines by Referee Potentiometric Method"

ASTM D 2074 (2007) "Standard Test Methods for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method"

ASTM D 2080 (1998) "Standard Test Method for Average Molecular Weight of Fatty Quaternary Ammonium Chlorides"

ASTM D 2766 (2005) "Standard Test Method for Specific Heat of Liquids and Solids"

ASTM D2879 (2007) "Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isotenoscope"

BS 6829 Section 1.6 (1995) "Analysis of Surface Active Agents (Raw Materials) – Part 1: General Methods – Section 1.6: Method for Determination of Solubility in Water"

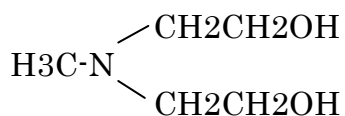
DIN 51755 (1974) "Testing of Mineral Oils and Other Combustible Liquids; Determination of Flash Point by the Closed Tester According to Abel-Pensky"

DIN 51794 (2003) "Determination the Ignition Temperature of Petroleum Products"

3. DEFINITIONS

Methyldiethanolamine (MDEA)

Methyldiethanolamine is an organic chemical compound with molecular formula:



Activated methyldiethanolamine (aMDEA)

Activated methyldiethanolamine is an organic chemical compound combination of MDEA and activator (like piperazine).

4. REQUIREMENTS

4.1 Purity

The composition of MDEA shall be in accordance with Table 1 when tested in accordance with specified test methods.