GDF100E

INHIBITED TEG GAS DEHYDRATION FLUID

GDF100E is an inhibited triethylene glycol for natural gas dehydration. The TEG base absorbs water vapor the same way standard TEG does. The additive package adds a measured reserve alkalinity and corrosion protection for carbon steel and copper alloys.



01 IDENTIFICATION

PRODUCT CODE	BASIS	SYNONYMS	SDS REFERENCE	MANUFACTURER
GDF100E	Inhibited triethylene glycol · CAS 112-27-6	Inhibited Triethylene Glycol; Inhibited TEG	GDF100E SDS, Revision 2	Coastline Chemical, Inc. · 30426 Depot Street, New Church, VA 23415

HYGROSCOPIC. KEEP SEALED. The fluid absorbs moisture from the air. Store in tightly closed containers to protect dehydrating capacity. Read the GDF100E Safety Data Sheet (Revision 2) before use.

02 PRODUCT DESCRIPTION

GDF100E combines an inhibited triethylene glycol base with a multi-functional additive package. **Multi-metal corrosion inhibition** protects carbon steel and copper alloys throughout the glycol loop. A **reserve alkalinity of 8.5 to 11 mL** neutralizes acidic contaminants (CO_2, H_2S, and HCl carryover) that enter the circulating glycol. **Buffered pH control** slows glycol degradation in high-temperature service. The inhibitor package also helps protect steel and copper alloys against chloride-promoted corrosion; monitor salt accumulation by fluid analysis. The fluid is designed for repeated absorption and regeneration service at a maximum recommended bulk temperature of 400°F (204°C).

03 PRODUCT SPECIFICATIONS · QC RELEASE CRITERIA

PARAMETER	SPECIFICATION	TEST METHOD
Triethylene Glycol Content	**90 – 93 wt%**	GC, based on ASTM E202
Inhibitor Complex	**8 – 10 wt%**	Internal method
Specific Gravity, 20/20°C	**1.134 – 1.138**	ASTM D5931
pH, 50 vol% aqueous @ 20–25°C	**9.5 – 10.5**	ASTM D1287
Reserve Alkalinity	**8.5 – 11 mL**	ASTM D1121
Appearance	**Clear, pale straw to amber**	Visual

- *Specifications are QC release criteria; batch values are reported on the Certificate of Analysis (COA) supplied with each shipment. Percentages are by weight.*

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04 PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE	**Liquid**	**APPEARANCE**	**Clear, pale straw to amber**
ODOR	**Mild**	**VAPOR PRESSURE @ 20°C**	**< 0.01 mmHg**
SOLUBILITY IN WATER	**Complete (miscible)**	**FLASH POINT, CLOSED CUP**	**> 300°F (149°C)**
KINEMATIC VISCOSITY @ 20°C	**approx. 40 cSt**	**BOILING POINT, 1 ATM**	**approx. 545°F (285°C)**
FREEZE POINT	**< 19°F (–7°C)**		

- *Values are typical and are not release specifications unless also listed in section 03. The freeze point is a conservative product bound.*

05 BASE-FLUID THERMOPHYSICAL PROPERTIES

PROPERTY	VALUE
Specific Heat @ 25°C	**2.22 J/g·°C (0.53 Btu/lb·°F)**
Thermal Conductivity @ 25°C	**0.21 W/m·K (0.12 Btu/hr·ft·°F)**
Dynamic Viscosity @ 25°C	**35.7 cP**
Surface Tension @ 25°C	**45.5 mN/m**
Heat of Vaporization	**58.3 kJ/mol**

- *Published values for the triethylene glycol base fluid, consistent with the Coastline Triethylene Glycol technical data sheet; finished-fluid values may differ slightly. For heat-transfer design data, contact the Coastline technical team.*

06 APPLICATIONS

NATURAL GAS DEHYDRATION

Contactor and regenerator systems removing water vapor from produced, gathering, transmission, or storage gas. Equilibrium water-content behavior follows published TEG dehydration data (GPSA Engineering Data Book).

ACID-GAS BUFFERING

Service with CO_2, H_2S, or HCl carryover, where the measured reserve alkalinity (section 03) neutralizes acidic contaminants entering the glycol charge and the inhibitor package helps protect against chloride-promoted corrosion.

DESICCANT SERVICE

Hygroscopic drying duty where a stable, inhibited high-TEG fluid is specified in place of uninhibited triethylene glycol.

HEAT TRANSFER

Closed-loop heating and cooling circuits compatible with inhibited glycol service. Base-fluid thermophysical data in section 05; contact the Coastline technical team for heat-transfer design support.

- *Achieved outlet-gas water content and dew point depend on unit design, lean-fluid condition, contact temperature, pressure, circulation rate, and stripping-gas rate. Fluid properties are not a system-performance guarantee.*

07 SERVICE & USE GUIDANCE

INITIAL CHARGE	Use as supplied; do not dilute before charging	**REBOILER**	Max bulk 400°F (204°C); avoid localized overheating and high fire-tube flux
MAKEUP FLUID	GDF100E; consult Coastline before commingling with another glycol product	**CONTAMINATION**	Minimize carryover of amines, salts, hydrocarbons, and suspended solids
MONITORING	pH, reserve alkalinity, TEG % (GC), appearance; release bands in section 03	**STORAGE**	Keep sealed; the fluid is hygroscopic

- *Trend results against established site baselines. No single result determines remaining fluid life; evaluate water content, composition, alkalinity, contamination, and unit performance together. Equipment-manufacturer limits govern.*

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08 STORAGE & HANDLING

STORAGE CONDITIONS

Store in tightly closed, labeled containers in a cool, dry, well-ventilated area. Keep sealed. The fluid is hygroscopic and absorbs moisture from the air, which reduces dehydrating capacity.

RECOMMENDED MATERIALS

Carbon steel, stainless steel, and HDPE are suitable for storage and transfer. The fluid is mildly alkaline; avoid prolonged contact with aluminum, zinc, and galvanized surfaces.

INCOMPATIBILITIES

Strong oxidizing agents, strong acids, and amine or ammonium compounds, consistent with SDS Section 10. Prevent contamination of the stored fluid.

HANDLING PRECAUTIONS

Use safety glasses and chemical-resistant gloves; ensure ventilation. Avoid breathing mists and prolonged skin contact. Refer to the GDF100E Safety Data Sheet for complete information.

09 PACKAGING & ORDERING

CONTAINER TYPE	NOMINAL VOLUME	ORDER CODE
Drum	**55 U.S. gal (208 L)**	**55GDF100E**
Tote (IBC)	**275 U.S. gal (1,041 L)**	**275GDF100E**
Bulk Tanker	**As ordered; contact for details**	**B GDF100E**

- *Custom packaging is available on request. Contact your Coastline representative for bulk and specialty options.*

10 REGULATORY & QUALITY ASSURANCE

TSCA STATUS	All components are listed on the TSCA Chemical Substance Inventory
DOT CLASSIFICATION	Not regulated as a hazardous material for transport
QUALITY SYSTEM	ISO 9001:2015 certified; documented production, blending, and quality-control program
ORIGIN	Made in USA

Each batch of GDF100E is released against the QC criteria in section 03 based on in-process and final testing, and ships with a Certificate of Analysis. For technical assistance or application review, contact your Coastline representative.

ORDERING & TECHNICAL SUPPORT

PHONE	WEB	SDS	COA
(757) 824-3831	**coastlinechemical.com**	**Current revision on request**	**With every shipment**

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Users should conduct their own tests to determine suitability of the product for their specific applications. For technical assistance or application review, contact your Coastline representative.

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