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N,*N*′-Bis[1-(thiophen-2-yl)ethylidene]-ethane-1,2-diamine

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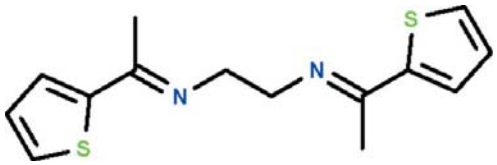
Key indicators: single-crystal X-ray study; T = 100 K; mean σ(C–C) = 0.003 Å; R factor = 0.035; wR factor = 0.090; data-to-parameter ratio = 18.0.

Molecules of the title compound, $C_{14}H_{16}N_2S_2$, have a centre of inversion in the middle of the $-CH_2-CH_2-$ bond; the $(C_4H_3S)(CH_3)C{=}N-CH_2-$ moiety is almost planar (r.m.s. deviation for non-H atoms 0.027 Å).

Related literature

For a related transition metal adduct, see: Modder *et al.* (1995).



Experimental

Crystal data

$C_{14}H_{16}N_2S_2$
M_r = 276.41
Monoclinic, $P2_1/n$
a = 5.5831 (3) Å
b = 9.3939 (4) Å
c = 12.9202 (5) Å
β = 95.342 (4)°
V = 674.68 (5) Å^3
Z = 2
Mo $K\alpha$ radiation
μ = 0.38 mm^{-1}
T = 100 K
0.25 × 0.20 × 0.15 mm

Data collection

Agilent SuperNova Dual diffractometer with Atlas detector
Absorption correction: multi-scan (*CrysAlis PRO*; Agilent, 2010)
T_{min} = 0.912, T_{max} = 0.946
3036 measured reflections
1495 independent reflections
1244 reflections with $I > 2\sigma(I)$
R_{int} = 0.028

Refinement

$R[F^2 > 2\sigma(F^2)]$ = 0.035
$wR(F^2)$ = 0.090
S = 1.04
1495 reflections
83 parameters
H-atom parameters constrained
$\Delta\rho_{max}$ = 0.44 e Å^{-3}
$\Delta\rho_{min}$ = −0.40 e Å^{-3}

Data collection: *CrysAlis PRO* (Agilent, 2010); cell refinement: *CrysAlis PRO*; data reduction: *CrysAlis PRO*; program(s) used to solve structure: *SHELXS97* (Sheldrick, 2008); program(s) used to refine structure: *SHELXL97* (Sheldrick, 2008); molecular graphics: *X-SEED* (Barbour, 2001); software used to prepare material for publication: *publCIF* (Westrip, 2010).

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Supplementary data and figures for this paper are available from the IUCr electronic archives (Reference: BT5618).

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