



>>Entry Name: Chromium selenides

Molecular Formula: [CrSe]

>>Variant: Chromium selenide (CrSe), 9CI

CAS Registry Number: 12053-13-3

Molecular Formula: CrSe

Molecular Weight: 130.956

Accurate Mass: 131.857029

Percentage Composition: Cr 39.70%; Se 60.30%

General Statement: Has the NiAs struct.

Source/Synthesis: Prepd. by heating Cr + Se or $\text{CrCl}_2 + \text{H}_2\text{Se}$

Physical Description: Grey powder. Antiferromagnetic. A metallic conductor

Aldrich: 40101-3

>>Variant: Chromium selenide (Cr_7Se_8), 9CI

CAS Registry Number: 12053-59-7

Molecular Formula: Cr_7Se_8

Molecular Weight: 995.653

Accurate Mass: 1002.915723

Percentage Composition: Cr 36.56%; Se 63.44%

Source/Synthesis: Phase in the Cr-Se system

Physical Description: A metallic-type conductor. Antiferromagnetic with T_N 162K. Also shows micromagnetic behaviour

>>Variant: Chromium selenide (Cr_3Se_4), 9CI

CAS Registry Number: 12053-51-9

Molecular Formula: Cr_3Se_4

Molecular Weight: 471.828

Accurate Mass: 475.487607

Percentage Composition: Cr 33.06%; Se 66.94%

Source/Synthesis: Prepd. by heating Cr + Se in presence of H_2 at 750°

Physical Description: Semiconductor

Other Data: Antiferromagnetic. T_N 82K

>>Variant: Chromium selenide (Cr_5Se_8), 9CI

Molecular Formula: Cr_5Se_8

Molecular Weight: 891.66

Accurate Mass: 899.034705

Percentage Composition: Cr 29.16%; Se 70.84%

Source/Synthesis: Prepd. from Cr + Se at 6.5×10^3 atm. and 1200°

Physical Description: Silvery, rod-shaped cryst.

>>Variant: Chromium selenide (Cr_2Se_3), 9CI

CAS Registry Number: 12053-36-0

Molecular Formula: Cr_2Se_3

Molecular Weight: 340.872

Accurate Mass: 343.630578

Percentage Composition: Cr 30.51%; Se 69.49%

General Statement: Struct. is of the NiAs type with a superstructure of Cr-ion vacancies

Source/Synthesis: Prepd. by heating Cr + Se or from $\text{CrCl}_2 + \text{H}_2\text{Se}$

Physical Description: Lustrous black cryst. Antiferromagnetic with T_N 43K. An *n*-type semiconductor

Other Data: At least 8 other phases including CrSe_2 , Cr_2Se_5 , Cr_5Se_5 , Cr_5Se_6 and various non-stoichiometric phases known

References: