



>>Entry Name: Chromium silicides

CAS Registry Number: 12626-44-7

Related CAS Registry Numbers(s): 12018-42-7 69106-86-1 108252-32-0 112548-47-7 130280-64-7

Molecular Formula: [CrSi]

>>Variant: Chromium silicide (Cr₃Si)

CAS Registry Number: 12018-36-9

Molecular Formula: Cr₃Si

Molecular Weight: 184.074

Accurate Mass: 183.798454

Percentage Composition: Cr 84.74%; Si 15.26%

Source/Synthesis: Synth. e.g. from Cu, Cr, Si melt treated alternately with HNO₃ and NaOH

Physical Description: Prismatic grey cryst.

Melting Point: Mp 1730-1770°

>>Variant: Chromium silicide (Cr₂Si)

CAS Registry Number: 12190-91-9

Molecular Formula: Cr₂Si

Molecular Weight: 132.078

Accurate Mass: 131.857945

Percentage Composition: Cr 78.74%; Si 21.26%

Source/Synthesis: Synth. e.g. from Si, Cu, Cr melt treated alternately with HNO₃ and dil. NaOH soln.

Physical Description: Prismatic cryst.

>>Variant: Chromium silicide (Cr₃Si₂)

CAS Registry Number: 12134-19-9

Molecular Formula: Cr₃Si₂

Molecular Weight: 212.159

Accurate Mass: 211.775381

Percentage Composition: Cr 73.52%; Si 26.48%

Melting Point: Mp 1560°

>>Variant: Chromium silicide (CrSi)

CAS Registry Number: 12018-08-5

Molecular Formula: CrSi

Molecular Weight: 80.082

Accurate Mass: 79.917436

Percentage Composition: Cr 64.93%; Si 35.07%

General Statement: Isostructural with FeSi

Source/Synthesis: Phase in Cr-Si system

Physical Description: Greyish cryst.

Melting Point: Mp 1630°

>>Variant: Chromium silicide (CrSi₂)

CAS Registry Number: 12018-09-6

Molecular Formula: CrSi₂

Molecular Weight: 108.167

Accurate Mass: 107.894363

Percentage Composition: Cr 48.07%; Si 51.93%

General Statement: Layer struct.

Source/Synthesis: Synth. from chromic oxide, charcoal and excess silica

Use/Importance: Refractory

Physical Description: Grey metallic needles

Melting Point: Mp 1550°

Other Data: Chemically inert. Diamagnetic

Aldrich: 37269-2

References: