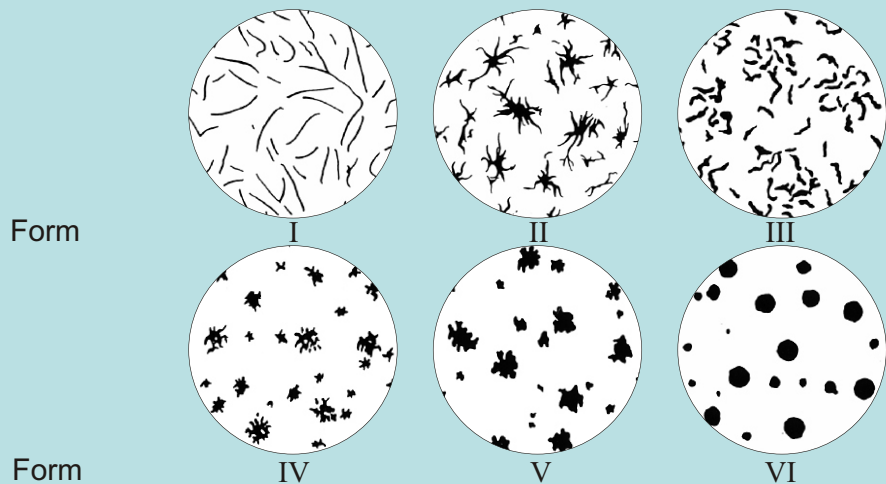
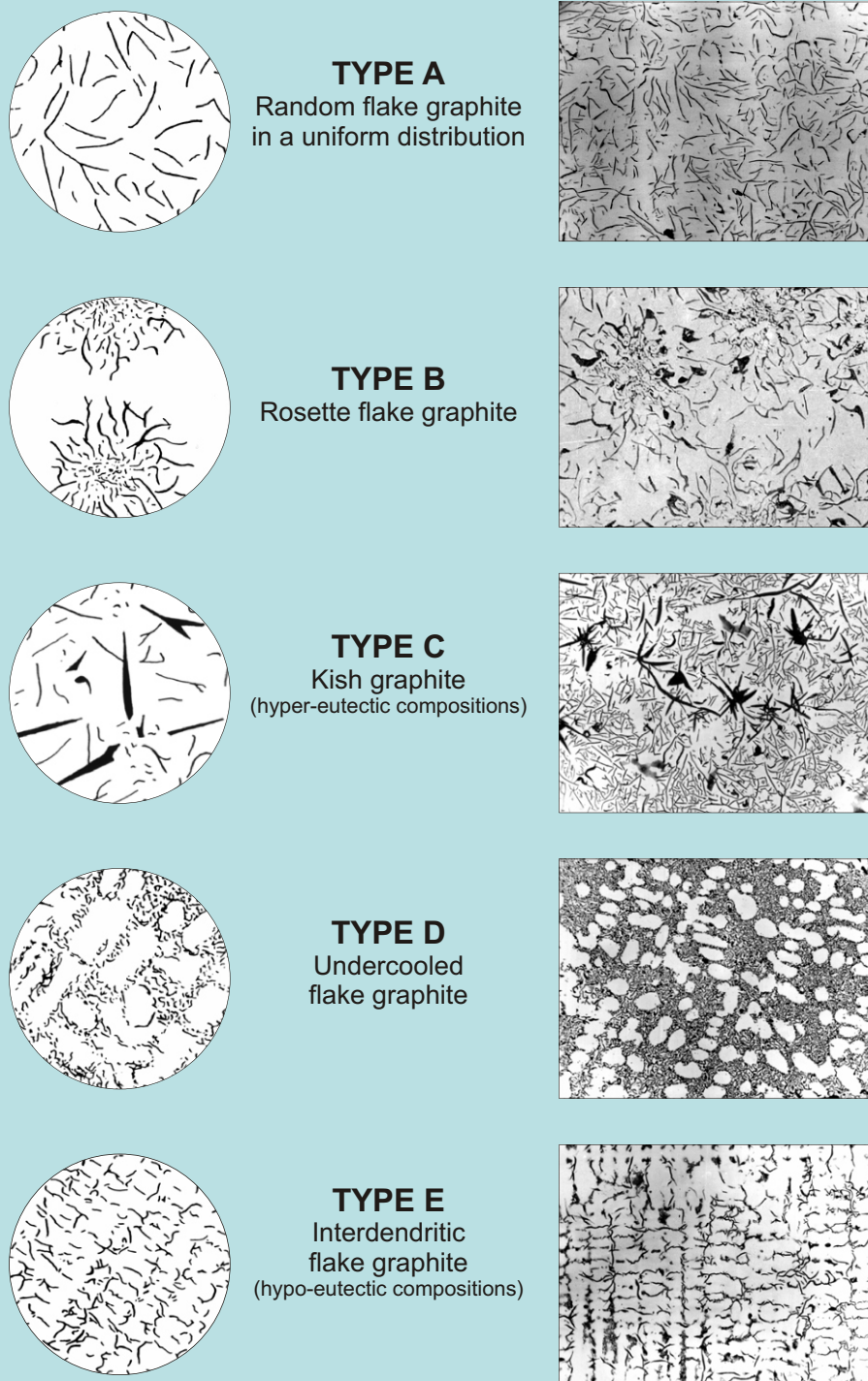


## GRAPHITE FORMS

Diagrammatic representations of the standard graphite forms in cast irons

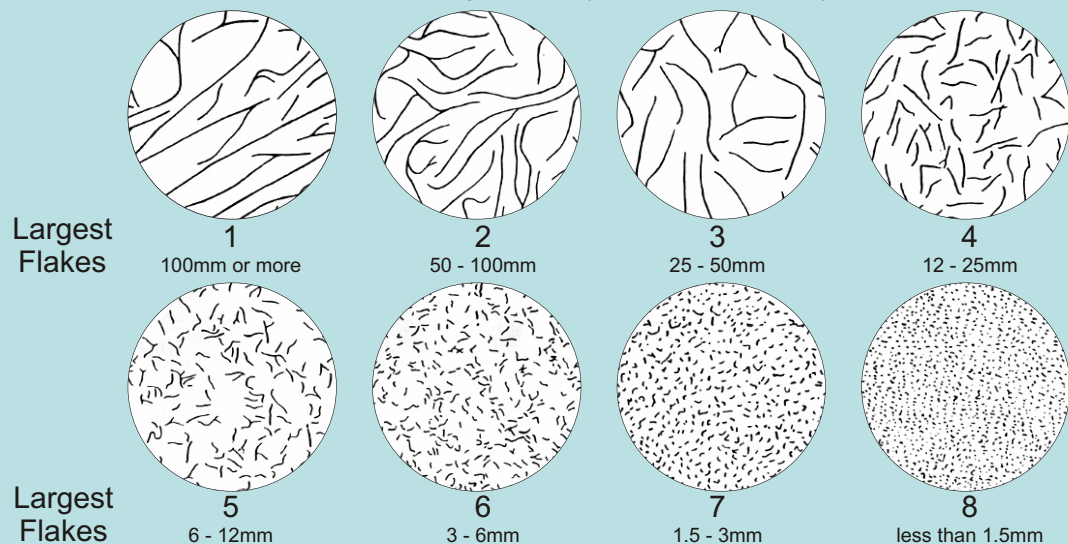


## GRAPHITE DISTRIBUTION IN GREY CAST IRON



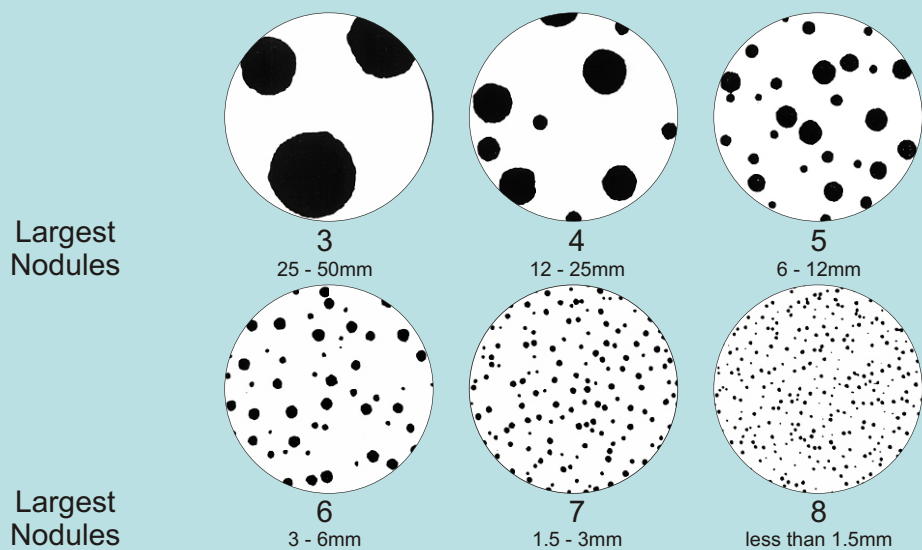
## GRAPHITE SIZES IN GREY CAST IRON

Diagrammatic representations of the standard flake graphite sizes in grey cast iron at x100 magnification (Form I Distribution A)

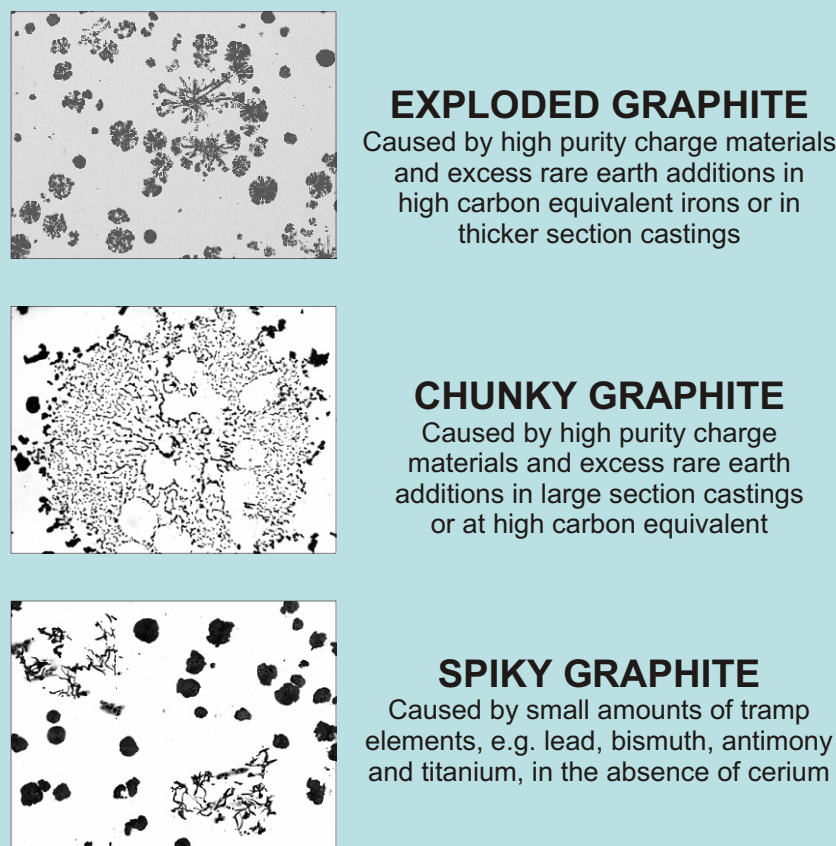


## GRAPHITE SIZES IN DUCTILE IRON

Diagrammatic representations of the standard graphite nodule sizes in ductile iron at x100 magnification (Form VI)



## SOME ABNORMAL GRAPHITE FORMS IN DUCTILE IRON



## INOCULANTS

Elkem manufactures and markets a series of high quality inoculants to treat cast iron and ensure the production of the ideal graphite form, distribution and freedom from chill (cementite). Examples:

Inoculant	Active Elements	Advantages and Uses
Superseal <sup>®</sup> 75/50	Si, Sr	Low Al content. Low eutectic cell count through lower addition rates. High chill reduction.
Foundrisil <sup>®</sup> /Barinoc <sup>®</sup>	Si Ba Ca (Al)	High chill reduction. Resistance to fading. Used in all cast irons.
Ultraseed <sup>®</sup>	Si, Ca, Ce, (Al, S, O)	High nodule count. Improved nodularity. Helps to prevent micro-shrinkage. Reactivates "dead" irons.
Reseed <sup>®</sup>	Si Ca Ce (Al)	High nodule count. Improved nodularity. Controls tramp elements in ductile irons. Low S grey iron.

All inoculants are available in sizes suitable for ladle or in-stream additions. Other inoculants for specialist applications are available.

## NODULARISERS

Elkem manufactures and markets a range of high quality nodularising alloys to produce ductile and compacted graphite cast irons. They contain balanced ratios of the active elements to control reactivity, minimise slag and neutralise tramp elements.

Product	Active Elements	Advantages and Uses
Elmag <sup>™</sup>	Si, Mg, Ca, Rare Earths	Magnesium contents from 4 to 10%. Calcium from 0.2 to 3.5%. Rare Earths from 0.1 to 3%. Allows the choice of the ideal alloy for all foundry conditions.
Remag <sup>™</sup>	Si, Mg, Ca, Rare Earths	High RE, low Mg alloy for low reactivity. Suited to thin section ductile iron castings.
Lamet <sup>™</sup>	Si, Mg, Ca, La	Alloy for in-the-mould treatment of ductile iron. Helps to prevent shrinkage.
CompactMag <sup>™</sup>	Si, Mg, Ca, Rare Earths	Highly effective alloy for the production of compacted graphite irons with reduced section sensitivity and wide production window.

Description of a structure should follow the convention  
Form : Distribution : Size, e.g. Type IA4 for a grey cast iron Type VI5 for a ductile iron

For complete information on Elkem products contact your local Elkem company or agent

[www.foundry.elkem.com](http://www.foundry.elkem.com)