VERMICULITE

LIGHTWEIGHT CONCRETE



Guide for using Micafil Vermiculite for lightweight concrete.

Dupré Minerals Ltd.
Spencroft Road,
Newcastle-under-Lyme,
Staffordshire ST5 9JE,
England

Telephone:
+44 (0) 1782 383100
Fax:
+44 (0) 1782 383101
Website:
www.dupre-vermiculite.co.uk
Email:
info@dupre-vermiculite.co.uk

When used as an aggregate with Portland cement it forms an ultra lightweight concrete with an open structure ideal for void filling, suitable for use in most light industrial and domestic applications where thermal insulating and fireproof properties are required.

Like most lightweight concretes it does not possess the same mechanical strength as standard material and should therefore not be used for structural applications.

PROPERTIES OF VERMICULITE CONCRETE

	6:1 Vermiculite:Cement	8:1 Vermiculite:Cement
Density (Air Dry)	480 kg/m^3	380 kg/m^3
Thermal Conductivity ("k")	0.12 W/m^{o}C	0.09 W/m^{o}C
Fire Resistance	Incombustible	

FIRE AND CHIMNEY CONSTRUCTION

The fireproof and insulating properties of Micafil concrete make it an ideal material to use around flue linings, behind firebacks and around pipes when fitting room heaters.

Firebacks protected in this way are less likely to crack because of the cushioning effect of the Micafil concrete, and its insulating effect ensures more heat is returned to the room.

In chimneys, use Micafil concrete for extra insulation between the brickwork flue and liner.
This helps to maintain flue gas temperatures thus improving draught - more important than ever with today's high efficiency boilers.

Use		VOID FILLING	CHIMNEY LINING
Mixing Ratio by Volume		**8 : 1**	**6 : 1**
Materials per m^3 placed	Micafil Vermiculite	12 bags	12 bags
	Cement	9 bags*	12 bags*
	Water	264 litres	276 litres
Batching	Micafil Vermiculite	1 bag	1 bag
	Cement	3/4 bag*	1 bag*
	Water	22 litres	23 litres

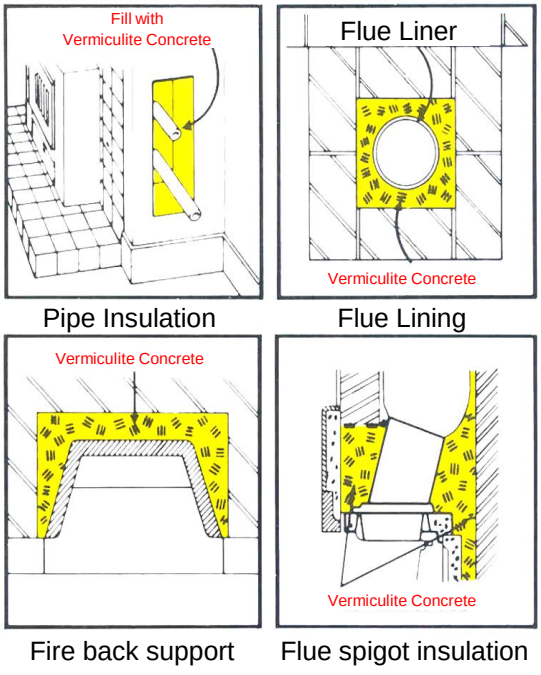
* refers to a standard 25kg bag

MIXING

Always ensure batch measurements are accurate and water is clean. A forced action mixer such as a paddle mixer is preferable, alternatively a RTD type concrete mixer no larger than 10/7 may be used.

Combine Micafil and cement and mix for 1 minute, add water and mix for a further minute. If mixing by hand, blend Micafil and cement dry and then add water using a watering can with a fine rose. The object is to coat the Micafil granules with a cement slurry without the mix becoming sloppy. For deep cavities, pour the dry cement-coated Micafil into the void before watering in.

Mortar plasticizers may be used to manufacturers instructions.



Pipe Insulation | Flue Lining

Fire back support | Flue spigot insulation

ISSUE 270411

Dupré Minerals Ltd.
Spencroft Road, Newcastle-under-Lyme, Staffordshire ST5 9JE, England
Telephone: +44 (0) 1782 383000 **Fax:** +44 (0) 1782 383101
Website: http://www.dupreminerals.com
Email: info@dupreminerals.com