



# PYROFLUX KILMAG 10, 20, 22, 40

## MAGNESIUM AND ALKALI REMOVAL FLUX

Pyroflux KILMAG is a powder or granular refining flux designed for magnesium removal from molten aluminium and molten aluminium alloys. KILMAG will also react with and remove alkali and alkaline earth metals.

### USAGE GUIDELINES

Apply KILMAG to a clean furnace surface, where it can be adequately mixed with molten metal. A clean furnace surface also ensures that KILMAG is not trapped in surface oxide layers.

KILMAG should be thoroughly mixed below the metal line and allowed adequate reaction time. After treatment, skim and clean the furnace heel to prevent impurity and reaction product build up. In general, KILMAG is best for relatively low starting magnesium content.

For alloys containing more than 5 percent magnesium, two treatment cycles should be completed. Magnesium removal is typically fastest after the initial flux addition and slows over time.

### MANUAL ADDITION INSTRUCTIONS

1. Clean debris and dross layers from the furnace surface.
2. Evenly spread the KILMAG flux over the melt surface.
3. Thoroughly stir the flux into the molten melt.
4. Allow a minimum of 15-20 minutes of reaction time.

### INJECTION ADDITION INSTRUCTIONS

1. Open KILMAG bags and fill injection-system hopper.
2. Prepare for the injection cycle. Make sure the gas pressure and system parameters will not allow a flux clog in the injection system but will also not overly agitate the melt surface.
3. Inject the flux and move the injection orifice around inside the melt if the flux is not being circulated automatically.
4. After the flux is injected, purge the flux lines by continuing to pump the inert gas for a short period after the hopper flux has been consumed.
5. Depending on the flux injection rate additional reaction time may be required.

### AVAILABILITY

- Powder and Granular Form
- 5 kilogram (11 lb) bags
- 25 kilogram (55 lb) bags
- 1000 kilograms (2205 lb) per pallet

### STORAGE

Store the product in a cool, dry area. Keep the KILMAG closed in its original packaging prior to use to avoid moisture absorption.

### HEALTH AND SAFETY

KILMAG contains inorganic fluorides and generates potentially harmful fumes. Undiluted fumes from the convected powder, or from the product in use, will irritate eyes, nose and lungs and may be harmful. Normal furnace extraction should control fume levels. Wear a suitable dust mask or respirator if contact with the product dust is unavoidable. Use gloves when handling the product.

Prior to use, refer to the product safety datasheet for additional handling information and required personal protective equipment.





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Product	KILMAG 10	KILMAG 20	KILMAG 22	KILMAG 40
Description	Original Pyrotek recipe for magnesium removal from aluminium alloys.		Alternative recipe designed for lower salt addition rates.	Alternative recipe for reduced dross buildup, smoke, and lower application temperatures.
Form	Granular or Powder Flux			
Application	KILMAG should be thoroughly mixed below the metal line and allowed adequate reaction time. After treatment, skim and clean the furnace heel to prevent impurity and reaction product build up.			
Addition Rate*	11–14kg/kg Magnesium (11–14lb/lb Magnesium)	6–8kg/kg Magnesium (6– 8lb/lb Magnesium)	5–10kg/kg Magnesium (5–10lb/lb Magnesium)	8–10kg/kg Magnesium (8–10lb/lb Magnesium)
Application Temperature	700–740 (1292–1364°F)	700–740 (1292–1364°F)	700°C (1292°F)	680–700°C (1256–1292°F)

\*Addition rate mentioned is based on lab trials and injection practices with best stirring methods. Actual addition rate may vary based on application method, stirring efficiency, and other metal treatment conditions such as metal composition and treatment temperature.

