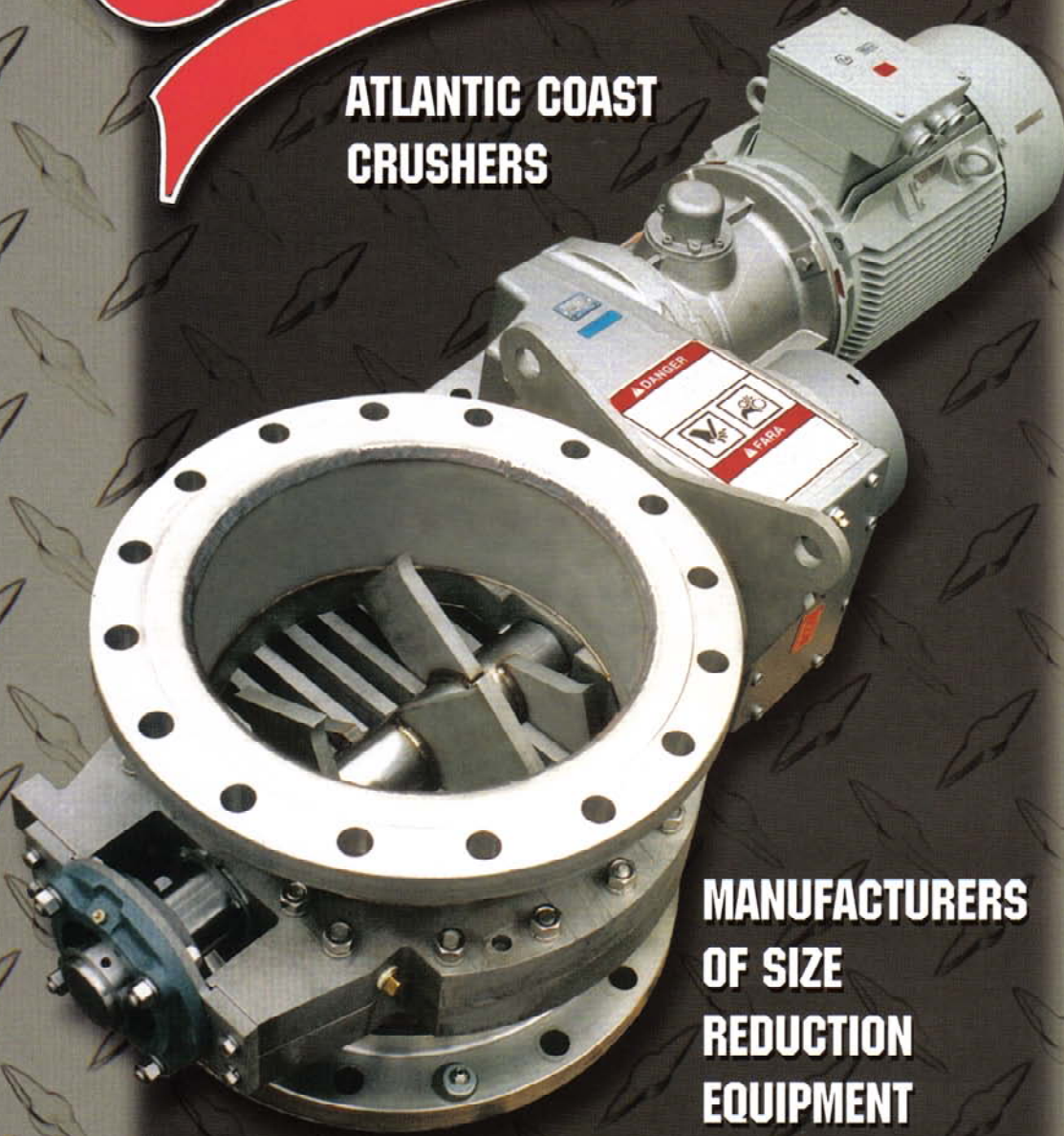




Carolina Material Technologies  
Charlotte, NC  
704-846-3737  
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# Crushers

**ATLANTIC COAST  
CRUSHERS**



**MANUFACTURERS  
OF SIZE  
REDUCTION  
EQUIPMENT**

# COMPANY OVERVIEW

# A

Atlantic Coast Crushers manufactures and sells innovative size reduction machinery for use in the Chemical Process Industries. We specialize in designing machinery that uses impact to shatter chunks, lumps, and agglomerations formed from friable materials. Reducing large chunks of material to a consistent, free flowing size allows product transport equipment to run at peak efficiency, while increasing the available product surface area which allows reactive processes (mixing, melting, dissolving, etc.) to occur more quickly and completely.

Although we stock our standard machinery, due to the diverse nature of our customer base and their requirements, Atlantic Coast Crushers is constantly creating new custom designs and/or variations of our standard equipment for specific applications or processes. Typical options for our various Crusher designs are shown below, but we can accommodate many other special requirements.

#### Typical Options:

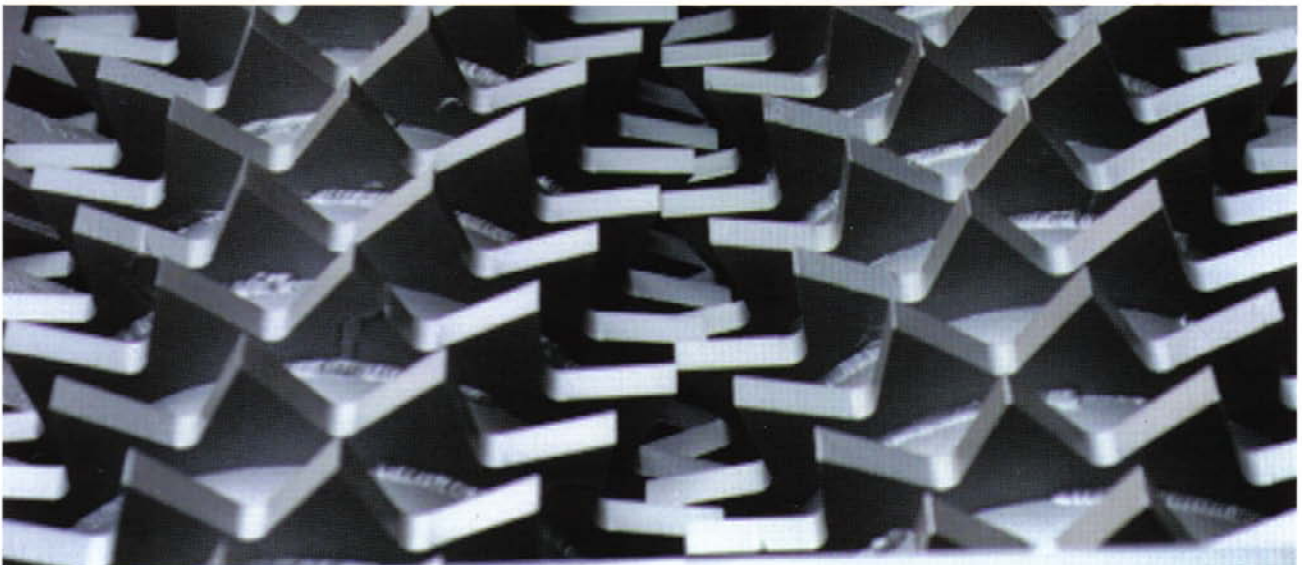
- Construction: Typically available in carbon or stainless steel; Hastelloy, Titanium and other exotic metal construction, polished surfaces, sanitary designs, and abrasion resistant materials for high wear applications also available.

- Seals: Lip seals, Powder Seals, or Packings are standard; single, double, or tandem Mechanical Seals available as required.
- Drives: A variety of gear reduction units, belt/sheave systems, and motor types are available.
- Controls: Jam sensing and reversing controllers are available for jam clearing; torque limiters, limit switches, low speed detectors available.
- Ancillary Equipment: Hoppers, stands, mobile mounting, feed or takeaway systems, special cleaning features as required.

#### Custom Designs:

Atlantic Coast Crushers uses its knowledge and experience to design and build custom size reduction equipment for problem applications. We have been granted two US Patents and have additional work in development. We take pride in our ability to provide creative solutions to difficult size reduction problems including, but not limited to:

- High pressure and/or high temperature applications.
- Special output requirements.
- Special materials of construction.
- High capacities.
- Tight space restrictions.
- Critical sealing problems.
- Highly abrasive materials.



# FLOW SMASHER™

## CRUSHER/LUMPBREAKER

# F

low Smasher Crushers are heavy duty, high torque, high capacity-crushing machines capable of reducing large chunks of friable bulk materials to a consistent and free-flowing size. The machines employ a dynamic crushing action to break up and disperse troublesome materials.

Crushing the oversize lumps in the process stream improves efficiency by preventing blockages, by allowing more accurate metering, and by increasing the available surface area of the crushed material, which improves the speed of downstream production processes.

Typical Flow-Smasher designs use one or two rotating Shafts with Blades and a sizing grid with individually replaceable cross-bars. Particles smaller than the grid slots pass easily through the machine while any oversize materials are trapped within the impact area. The rotating Blades, acting like a series of crushing hammers, impact and shatter the trapped chunks and produce an output that is consistent and free-flowing.

Flow-Smashers with two shafts have counter-rotating blades. The counter-rotation draws the oversize material between the shafts, where it is impacted by both sets of blades. This enables the Flow-Smasher to break up larger, denser materials and, since the blade design is

self-cleaning, it is often used for problem materials that are sticky or tend to bridge.

### Hedgehog™, Brickbreaker™, and Bear-Claw™

The Hedgehog, Brickbreaker, and Bear-Claw are variations of the typical two shaft Flow-Smasher design, and have special Blade arrangements. The Hedgehog is designed to process very high capacities of materials to a fine output size, and also works well to tear long, thin boards, slabs, or tiles into small pieces. The Brickbreaker and Bear-Claw designs concentrate their high torque and power to break up large, hard blocks of material.

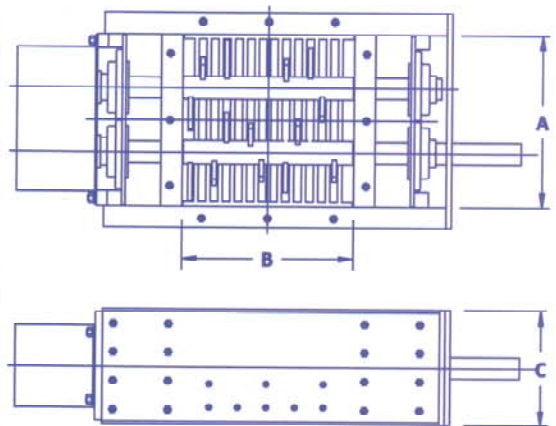
The bodies of the Flow-Smasher designs are typically bolted together for easy disassembly and maintenance. The design also incorporates our isolated bearing design, which prevents a seal failure from affecting the bearings. The Flow-Smasher is also available in ACC's new patented "-04" design. The "-04" design allows for remarkable flexibility in the design of new blade arrangements, special inlet and outlet configurations, and extremely short face-to-face dimensions.

The Flow-Smasher designs are very compact, have exceptionally short face-to-face dimensions, and are available with a variety of Motor and Drive configurations which allow easy integration with ducts, chutes and conveyor systems, above or below rotary airlocks, in silo discharges, or in bulk bag unloaders.

Flow-Smasher Typical Dimensions

Single Shaft Models	A	B	C
1212	12"	12"	12"
1218	12"	18"	12"
1224	12"	24"	12"
1818	18"	18"	17"
1824	18"	24"	17"
Two Shaft Models	A	B	C
1212	12"	12"	8"
1218	12"	18"	8"
1224	12"	24"	8"
1518	15"	18"	10"
1818	18"	18"	12"
1824	18"	24"	12"
2424	24"	24"	15"
2436	24"	36"	15"
2448	24"	48"	15"

Additional sizes and design configurations are available. Dimensions are nominal and subject to change. Consult factory for certified drawings.



# FLOW SIZER™

## GRUSHER/LUMPBREAKER

**T**

he Flow-Sizer is an economical, heavy duty Crusher designed to reduce dry bulk materials to a consistent, fine, free-flowing size. It employs a dynamic crushing action to break up and disperse troublesome oversize materials.

Crushing the oversize lumps in the process stream improves efficiency by preventing blockages, by allowing more accurate metering, and by increasing the available surface area of the crushed material, which improves the speed of downstream production processes.

The Flow-Sizer utilizes a large diameter drum with short blades securely welded in place. These Blades pass through the slots of stationary Breaker Bars at close clearance, and act like a series of crushing, cutting hammers. Particles smaller than the Breaker Bar slots continue through the machine, while larger particles are trapped in the impact area until they are impacted and crushed to a consistent, free flowing size.

The bodies of the Flow-Sizer designs are typically bolted together for easy disassembly and maintenance. The design also incorporates our



Model FSZ1224 Flow-Sizer, with belt drive.

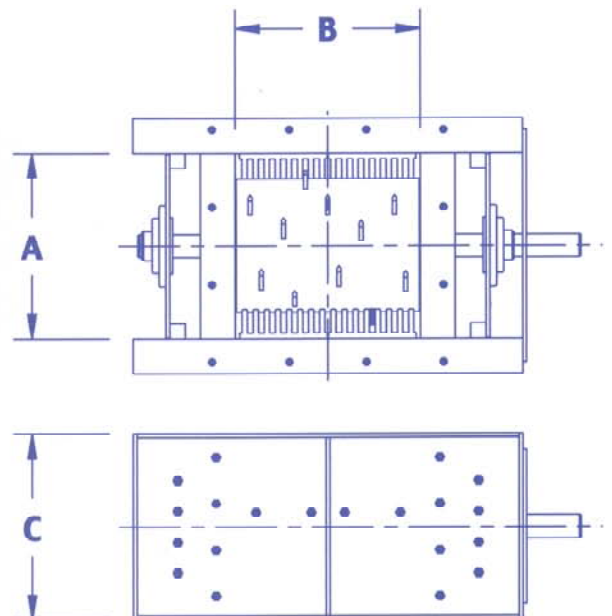
isolated bearing design, which prevents a seal failure from affecting the bearings.

The Flow-Sizer's compact design and short face to face dimension allows for easy integration with ducts, chutes, and conveyor systems, above or below rotary airlock feeders or screw feeders, or within silo discharge or pneumatic feed systems.

The Flow-Sizer is offered with Fine, Standard or Coarse Blade/Breaker Bar configurations. Polished, sanitary, and side or end Access Plate designs are also available.

Flow-Sizer Typical Dimensions			
Model	A	B	C
66	6"	6"	5"
1212	12"	12"	12"
1218	12"	18"	12"
1224	12"	24"	12"
1230	12"	30"	12"
1236	12"	36"	12"

Additional sizes and design configurations are available.  
Dimensions are nominal and subject to change.  
Consult factory for certified drawings.



# FLOW SENTRY™

## IN-LINE CRUSHER

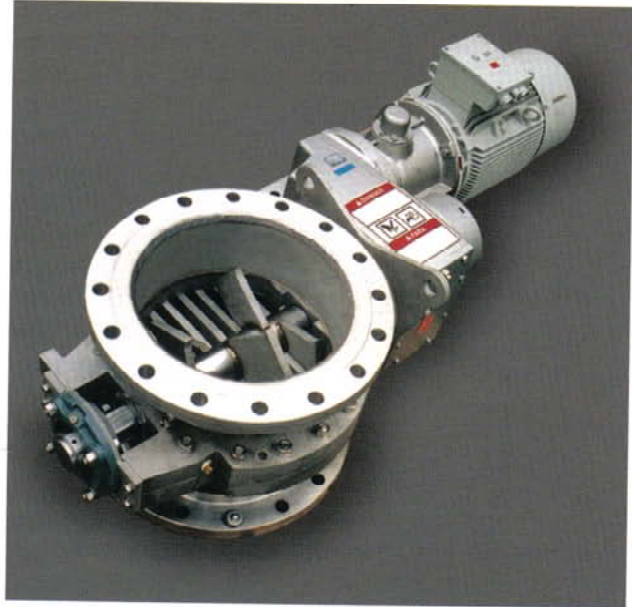
**T**

he Flow-Sentry is a fully enclosed crushing device designed to reduce oversize lumps as they travel through a pipe or tube. The Flow-Sentry employs a single set of rotating blades to impact and shatter at close clearance any

materials too large to pass between the stationary bars of a sizing grid. Products that pass through the Flow-Sentry are consistent, free-flowing and are often substantially smaller than the slot width of the sizing grid.

Crushing the oversize lumps in the process stream improves efficiency by preventing blockages and pump cavitation, by allowing more accurate metering, and by increasing the available surface area of the crushed material, which improves the speed of downstream production processes.

The Flow-Sentry makes use of ACC's patented "-04" design (US Patent # 6,024,310) for remarkable flexibility in design, and also incorporates our isolated bearing design, which separates the bearings from the seals. The design also incorporates our isolated bearing design, which prevents a seal failure from affecting the bearings. Other available options include; special blade arrangements and slot widths, special inlet and outlet configurations (including ANSI or DIN flanges), sanitary ferrules, custom fabricated flanges (including square or rectangular configurations), our exclusive "wafer"



Model 18FS-04 Flow-Sentry

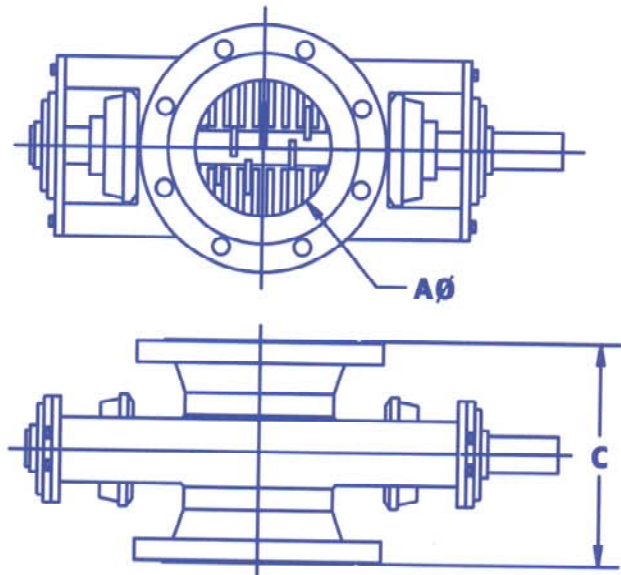
arrangement (with face-to-face dimensions as short as 1.75 inches), and designs for high pressure and/or temperature applications.

The "-04" design advantage allows the Flow-Sentry to be easily integrated into numerous locations and applications beyond the obvious pumped liquid slurry systems. Applications include pneumatic transfer systems, gravity systems such as silo or bulk bag feed or discharge systems, and only above or below rotary airlocks.

Flow-Sentry Typical Dimensions			
Model	"A" diameter	"C"	
		minimum	standard*
3FS-04	3	1.75	8.5
4FS-04	4	1.75	8.5
6FS-04	6	2.38	10
8FS-04	8	2.38	11
10FS-04	10	2.38	10
12FS-04	12	3.38	12
14FS-04	14	3.38	14
16FS-04	16	4.25	16
18FS-04	18	4.25	18
20FS-04	20	4.25	20

\* Based on 150# RF Flanges. Other flange styles (300# ASA, DIN, Ferrule) and custom face to face lengths are also available

Dimensions are nominal and subject to change. Consult factory for certified drawings.



# THE PARTICLE-SIZER™

FINE GRINDING MILL

**F**

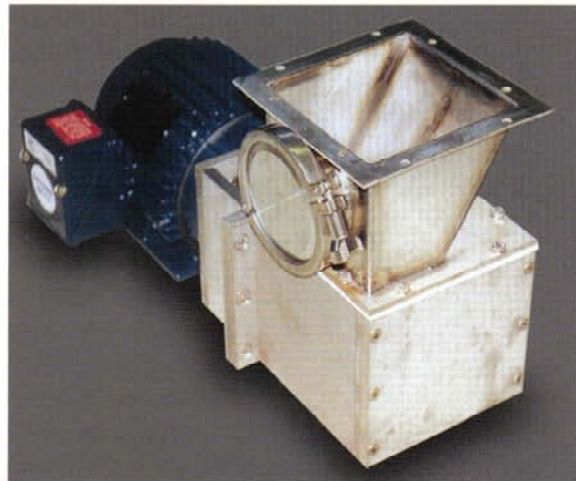
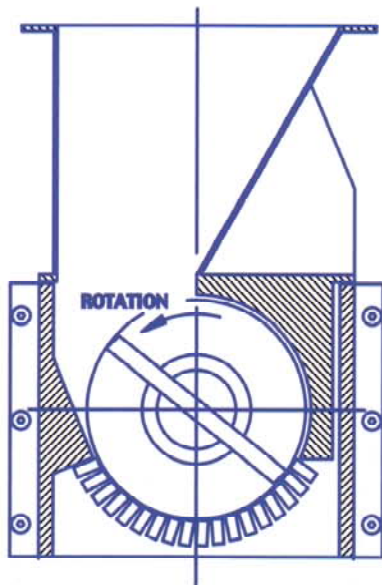
or the majority of our size reduction applications a "free flowing" output size is acceptable. However a significant number of applications require the process material to be reduced to a fine powder. ACC

offers the Particle-Sizer to meet this need.

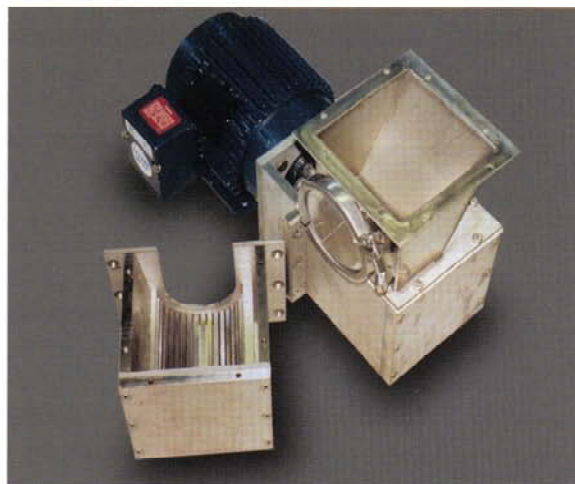
The Particle-Sizer is a compact, high output device that can be used by itself with moderately oversize materials or in combination with our other equipment to reduce large "chunks" or "lumps" to a fine powder. The Particle-Sizer uses two high-speed rotary knives to sweep and cut against a series of stationary bars mounted in a "Sizing Cage". This cutting action can reduce materials to 30 mesh or less, depending on material characteristics and the Sizing Cage spacing. Sizing Cages are available in several different slot combinations to provide different output particle size distributions, and they are made to be interchangeable.

The Particle-Sizer is designed for simple disassembly so that maintenance, cleaning, or replacing a Sizing Cage can be accomplished quickly and easily.

The standard Particle-Sizer is offered in 316 SS construction. Special materials of construction and polished, sanitary designs are available.



Model 66 PSZ with optional hand-hole cleanout.



Model 66 PSZ, shown with spare Sizing Cage.



Model 66 PSZ, dismantled for cleaning.

## SIZE REDUCTION EQUIPMENT FOR:

- CHEMICALS & PETROCHEMICALS
- FOOD PROCESSING
- PULP & PAPER
- PHARMACEUTICALS
- PLASTICS
- A WIDE VARIETY OF INDUSTRIAL APPLICATIONS REQUIRING INNOVATIVE CRUSHING TECHNOLOGY

## TYPICAL MATERIALS PROCESSED:

ASBESTOS	CORNMEAL	LIMESTONE	SEAFOOD SHELLS
BAKING SODA	CRACKERS	OXIDES	SLUDGE CAKE
BARK	CRUMB RUBBER	PVC	SODIUM BICARBONATE
BORATES	DETERGENTS	PESTICIDES	SOYBEANS
CANDY	DYES	PET FOODS	SPICES
CAT LITTER	FERTILIZERS	PHOTOGRAPHIC CHEMICALS	SUGAR MASSAQUE
CELLULOSE	FILTER CAKES	PIGMENTS	SUGARS
CEMENT POWDER	FISH PRODUCTS	PLASTIC RESINS	SULFATES
CERAMICS	FLY ASH	POLYETHYLENES	SULFIDES
CEREALS	FROZEN VEGETABLES	POTATO WASTE	TEREPHTHALIC ACID
CHLORIDES	GRAINS	POWDERED METALS	UREAS
CHOCOLATES	GRANOLA	POWDERED MILK	VINYLS
CLINKERS	HERBICIDES	RESINS	WAXES
COAL	KAOLIN LUMPS	SALTS	



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