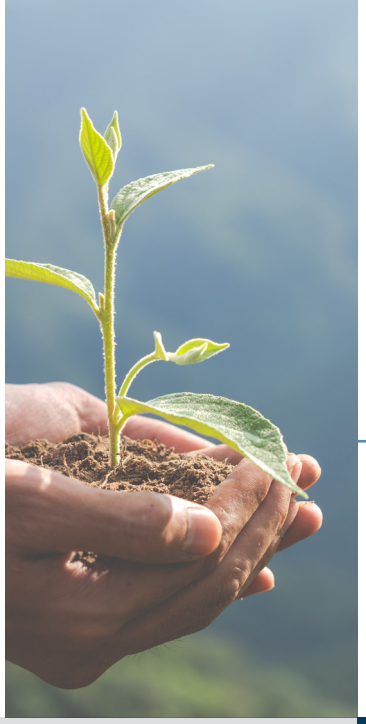


2024

FREEBEE

COMPANY PROFILE

FREEBEE A/S

FREEBEE.DK

About us

"We aim to be a reliable and high quality supplier and business partner. We are a team - and we act like one."
- Team Freebee -

Freebee is a Scandinavian company residing in Nyborg, Denmark.

- Born Global Danish company
- Founded in 2006 by Jørgen Kildegaard
- Specialist in raw materials for the industrial markets
- Production sites in Denmark
- Operations Worldwide

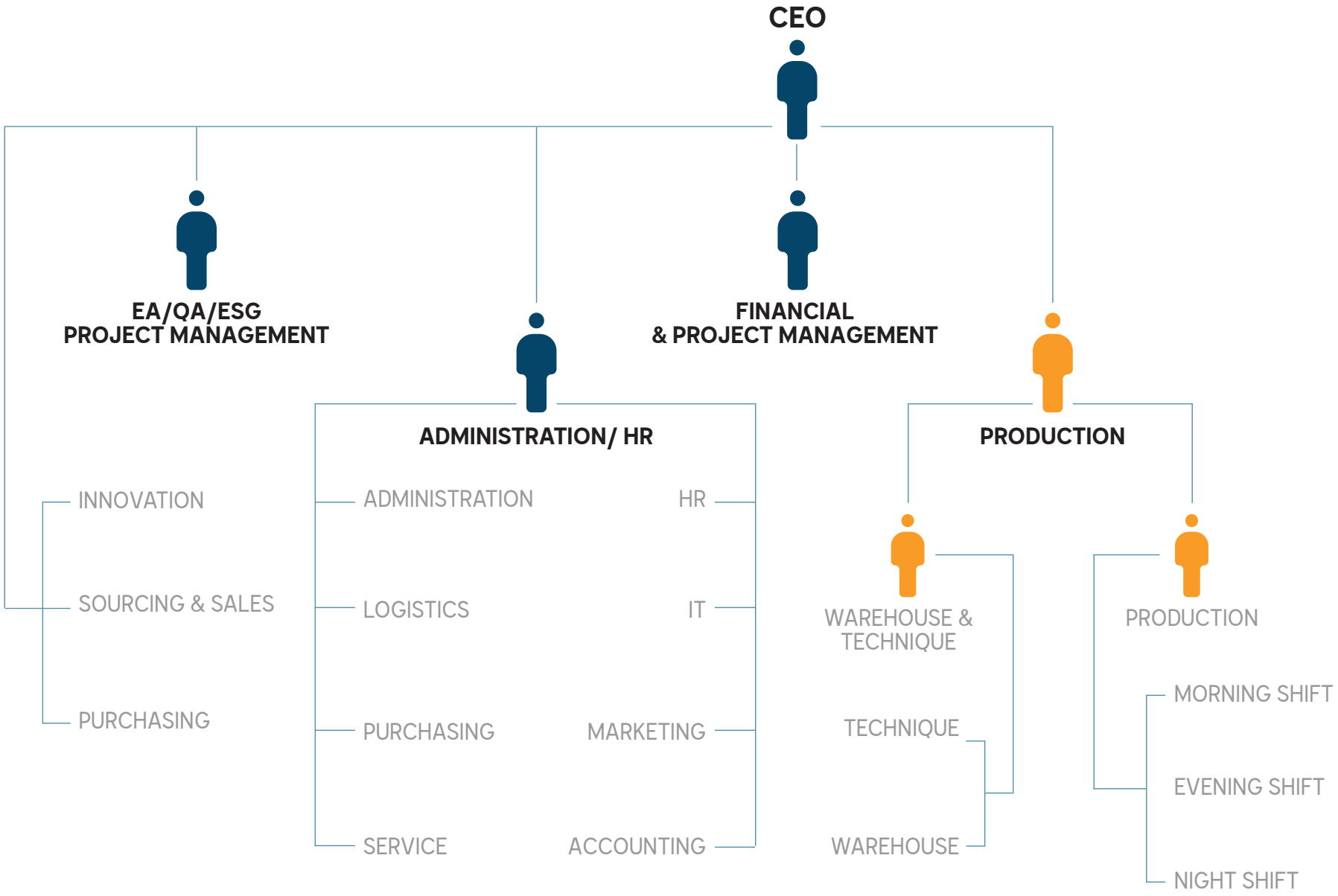
Our target markets are Primary Aluminum Industry, Secondary Aluminium Industry, Abrasive Industry, Foundry Industry and Steel Industry.

Sizing and classification of Cryolite, KBF4 and PAF is our main force, as well as providing custom salt-flux mixes to our foundry clients. Our fully modernized manufacturing facility produces large volumes of tailor-made materials to our clients in over 30 countries.

We offer several products, packaged in 20-25kg plastic bags depending on the product, or big bags when required.

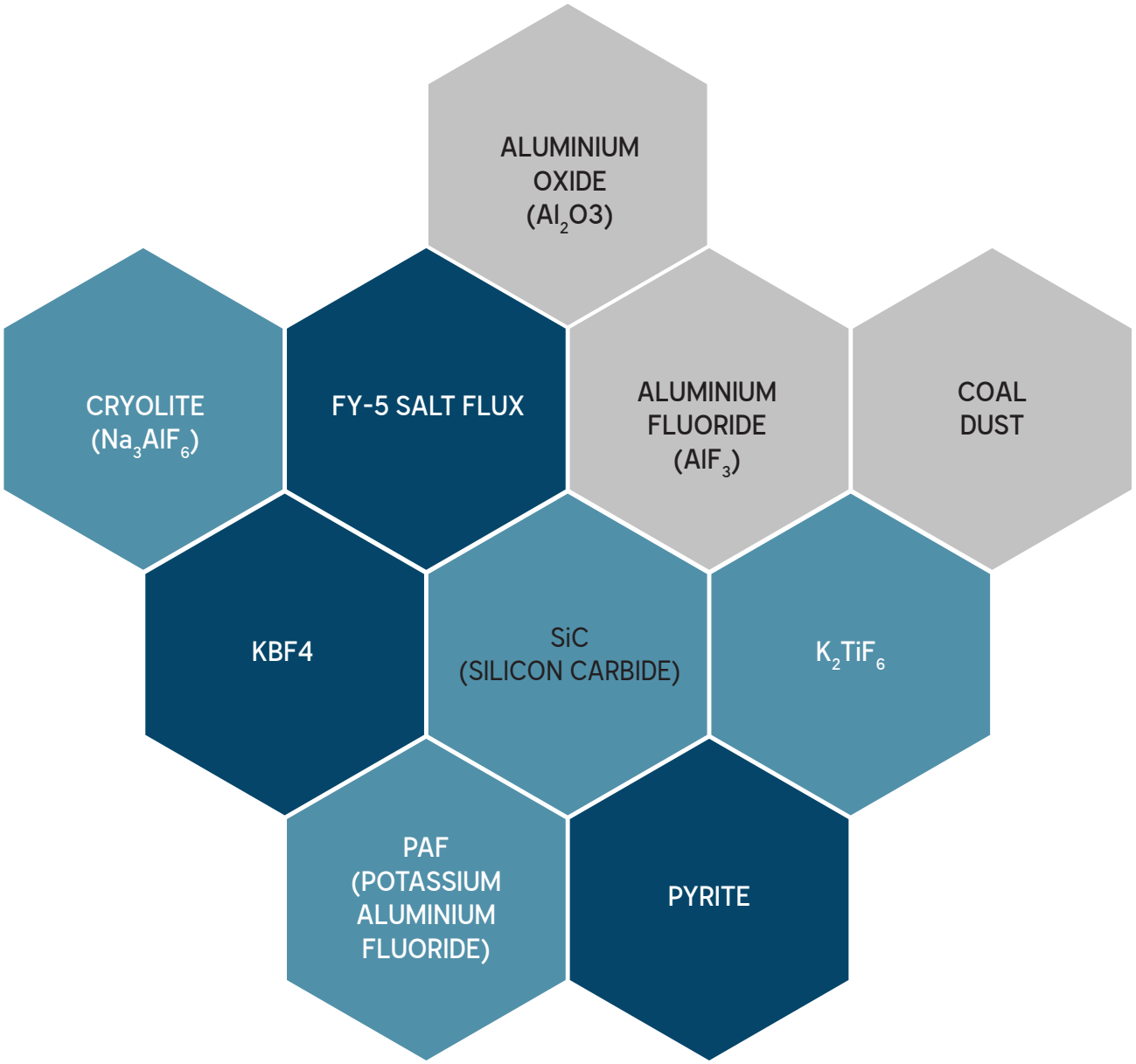
We can offer samples for your analysis and performance testing.

ORGANISATION CHART

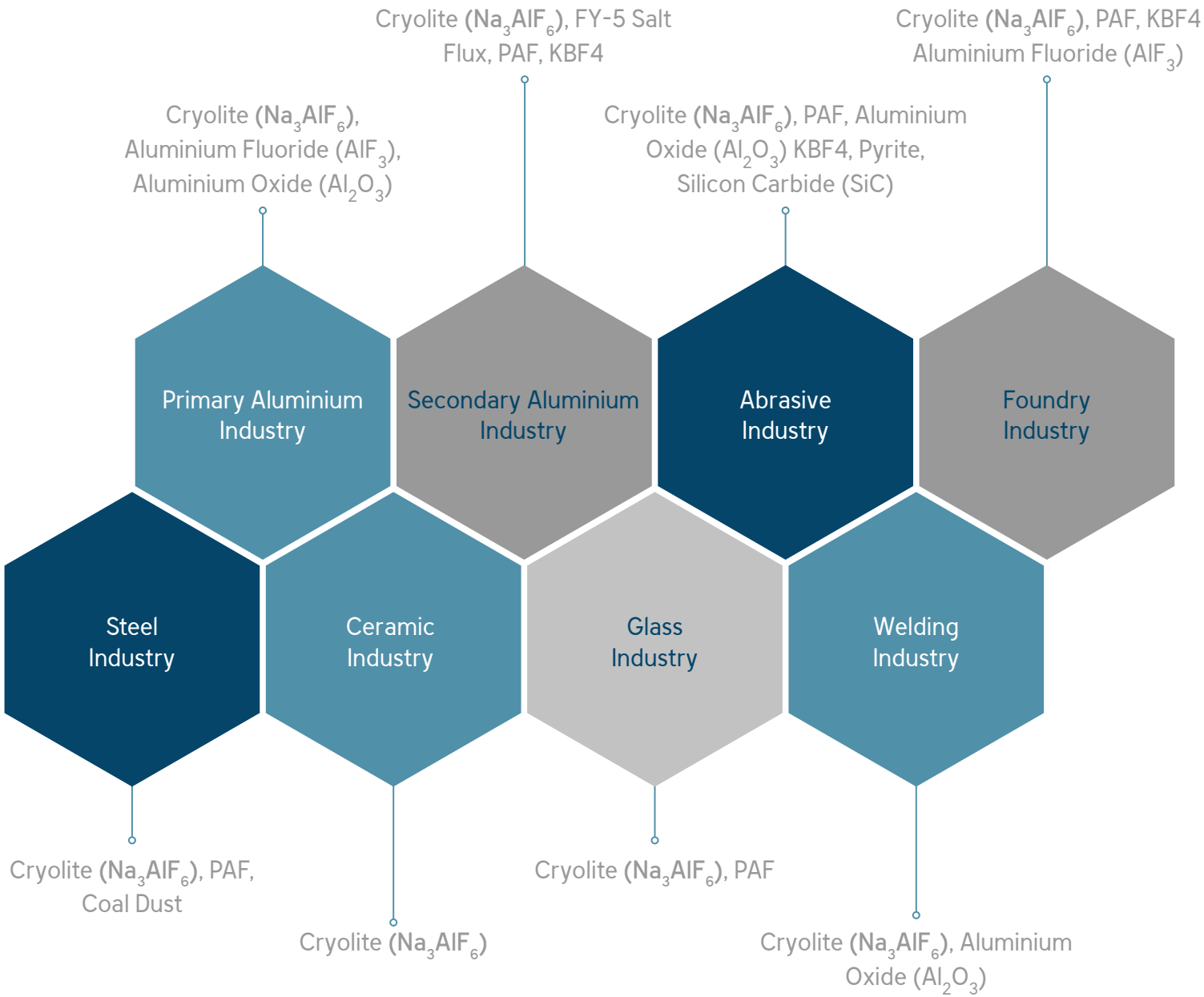


Products

- **Main products:** Cryolite, FY-5 Salt Flux, KBF4, PAF (Potassium Aluminium Fluoride), Pyrite, Silicon Carbide (Sic) and K2TiF6
- **Products on demand:** Aluminium Oxide, Aluminium Fluoride (AlF3) and Coal Dust



Industries


Cryolite (Na_3AlF_6), FY-5 Salt Flux, PAF, KBF4
Cryolite (Na_3AlF_6), PAF, KBF4 Aluminium Fluoride (AlF_3)
Cryolite (Na_3AlF_6), Aluminium Fluoride (AlF_3), Aluminium Oxide (Al_2O_3)
Cryolite (Na_3AlF_6), PAF, Aluminium Oxide (Al_2O_3) KBF4, Pyrite, Silicon Carbide (SiC)
Primary Aluminium Industry
Secondary Aluminium Industry
Abrasive Industry
Foundry Industry
Steel Industry
Ceramic Industry
Glass Industry
Welding Industry
Cryolite (Na_3AlF_6), PAF, Coal Dust
Cryolite (Na_3AlF_6)
Cryolite (Na_3AlF_6), PAF
Cryolite (Na_3AlF_6), Aluminium Oxide (Al_2O_3)

Certificates & Awards

Højeste kreditværdighed
Sølv 5-9 år • 2023
Bisnode

AAA
Highest Creditworthiness
5-9 years

BUREAU VERITAS
ISO 14001:2015
ISO 9001:2015

BØRSEN. GAZELLE
2016-2022

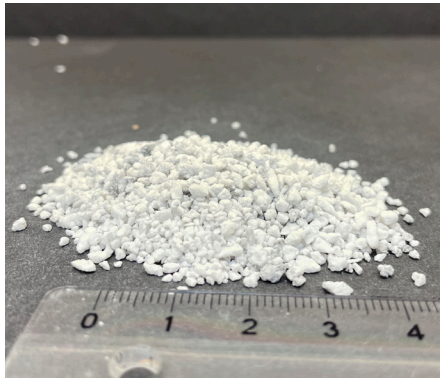
SUCCES VIRKSOMHED
2019-2022

pwc
2022

2024

Cryolite

Cryolite is a mineral once identified on the western coast of Greenland. The large deposit at Lvigtût was depleted by 1987. Cryolite is also known as sodium aluminium fluoride, potassium cryolite, secondary cryolite and bath cryolite, and has similar qualities to sodium aluminium Tetrafluoride (SAF).



Freebees Cryolite, due to its composition and very high quality, offers distinct performance advantages over other types of cryolite. Freebee produces Cryolite in various particle size distributions, and grain size can also be tailor-made according to customers' requirements.

Categories: Main product

Applications: Primary and Secondary Aluminium Industry, Abrasive Industry, Foundry Industry, Steel Industry, Ceramic Industry, Glass Industry, Welding Industry

Cryolite

USAGE & BENEFITS

Usage

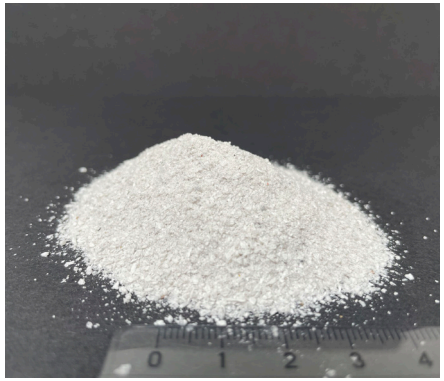
- Used as a fluxing agent in the smelting or electrolytic production of aluminium
- Used for lowering the melting point of alumina, making electrolysis work at lower temperatures
- Used in the production of abrasives, enamel, glazing frits and glass, soldering agents, welding agents, blasting and pyrotechnics.

Benefits

- Cryolite lowers the melting point of alumina
- The use of cryolite makes the smelting process cheaper and more cost effective
- Freebee cryolite comes in different qualities and specific grain sizes

PAF KAlF4

PAF (KAlF4) a complex fluoride salt of potassium and aluminium. It serves as an alternative to conventional fluoride salts for a variety of applications.



Categories: Main product

Applications: Secondary Aluminium Industry, Abrasive Industry, Foundry Industry, Steel Industry, Glass Industry

PAF

USAGE & BENEFITS

Usage

- Used as a fluxing agent in the smelting of secondary aluminium
- Used to reduce or remove the magnesium content of the smelt
- Glass producers use the PAF for opacification, or to cloud the glass, giving it a milky white color

Benefits

- The addition of fluoride enhances the general performance of the salt flux
- Improves metal purity
- Separates metals from oxide and dross and prevents incendiary burning of the aluminum

KBF4

Potassium fluoroborate, also known as potassium tetrafluoroborate, is a chemical compound with the formula KBF4. It is commonly used in various industrial applications due to its unique properties. Its usage contributes to improving the efficiency, quality, and performance of various manufacturing processes and products.

Usage and benefits

- Used as a fluxing agent in secondary aluminum production, facilitates the removal of impurities from the surface of molten aluminium, resulting in high-purity and quality of the metal.
- Used as a fluxing agent to obtain smoother casting surfaces and minimizing defects and improving the overall quality of the final metal castings in foundry Industry.
- Used as an active filler to enhance performance and properties of abrasive materials in abrasive industry

Categories: Main product

Applications: Secondary Aluminium Industry, Abrasive Industry and Foundry Industry

FY-5 SALT FLUX

A mixture of sodium chloride (NaCl), potassium chloride (KCl) and Cryolite (Na3AlF6) is used to make our salt flux.

FY-5 Salt Flux offers several advantages over the standard salt fluxes presently used in most reclamation plants.

Usage and benefits

- Used for recovering aluminium from surface areas or dirty aluminium scrap and dross
- Lower flux consumption
- Lower energy costs
- Higher metal recoveries
- Reduction of black dross generation, which decreases waste disposal costs
- Mixing under strict control ensures the absence of oxidizing agents
- The high purity reduces the possibility of contaminating the metal with unwanted elements

Categories: Main product

Applications: Secondary Aluminium Industry

PYRITE

Pyrite, known as fool's gold, is an iron sulfide with the chemical formula FeS_2.
It is the most abundant sulfide mineral and is found associated with other sulfides or oxides in quartz veins, sedimentary and metamorphic rock.

Categories: Main product
Applications: Abrasive Industry

Usage and benefits

- Organic bonded abrasives – alone or as an additive in combination with other active fillers
- Hot or cold pressed grinding wheels – as an active filler, functioning in friction applications to increase thermal conductivity
- Improves durability by improving friction coefficients and hardness, reducing the temperature in the contact zone

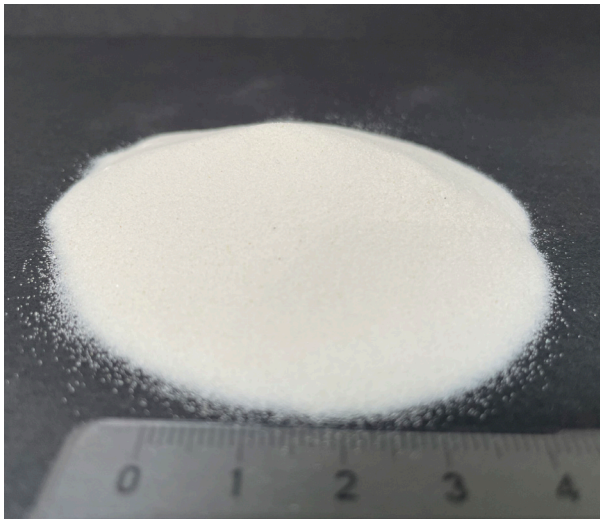
K2TiF6

POTASSIUM FLUOTITANATE

Potassium Fluotitanate is a versatile compound, that belongs to the class of fluotitanates and has numerous applications in various industries.

Categories: Main product

Application: Aluminium Industry, Glass Industry and Ceramic Industry



Aluminium Industry

Potassium fluotitanate plays an important role in the aluminium extraction process. Here it acts as a flux, lowering the melting point of aluminum oxide, making the refining process more energy-efficient.

Glass and Ceramic Industry

As a flux, Potassium fluotitanate, eliminates impurities from metal surfaces and ensure a uniform coating.

Aluminium Fluoride

Aluminium Fluoride (AlF3), known as aluminium trifluoride, trifluoroalumane and trifluoroaluminum, is an inorganic compound used primarily in the production of aluminium.

Benefits

- Temperature-lowering properties
- AlF3 has a definite energy saving effect
- Enables aluminum alloys to be produced, that are almost free of magnesium

Usage

- Used by aluminium producers to lower the melting point of electrolytes during smelting process
- Used as a flux ingredient for the removal of magnesium in the refining of aluminium scrap
- Used for glazing mixtures and in the production of refractory products in the ceramic industry
- Used in the manufacture of aluminium silicates
- Used in the Glass Industry as a filler

Categories: Products on demand

Application: Primary Aluminium Industry, Foundry Industry, Ceramic Industry and Glass Industry

Aluminium Oxide

Aluminium oxide (Al2O3) is a chemical compound of aluminium and oxygen. Aluminium oxide is produced industrially from the mineral Bauxite.

It is commonly called alumina, and may also be called aloxide, aloxite, or alundum, depending on the forms or applications.

Benefits

- Very effective as an abrasive due to its hardness
- Effective as a refractory material due to its high melting point
- Very good electrical insulation
- Very high compressive strength
- High corrosion and wear resistance

Usage

- Starting material for the smelting of aluminium
- Catalyst – carrier and adsorbent in the petroleum and chemical industries
- Additive in paper manufacturing
- Resistor-core in the Electronic Industry
- Filler for plastics
- Removal of water from gas streams

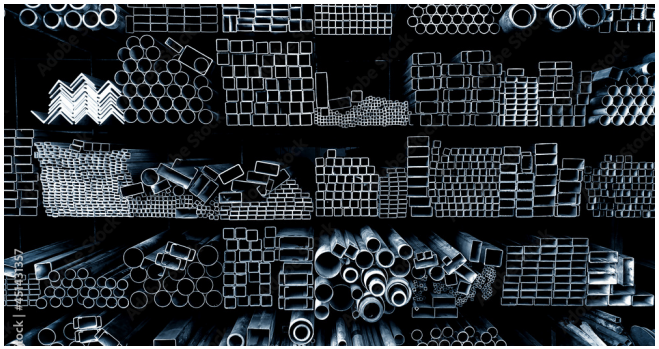
Categories: Products on demand

Application: Primary Aluminium Industry, Abrasive Industry, Paper Industry, Electronic Industry and Welding Industry

Coal Dust

Coal dust is a fine powdered form of coal, created by the crushing, grinding, or pulverizing of coal.

The grinding of coal to dust before combusting is generally done to improve the speed and efficiency of burning, also simplifying its handling.



Usage

- Steel production – As reducing agent or reactant.
- Refining alumina – In low-temperature sintering process.

Benefits

- Improvement in the speed and efficiency of combustion (compared with lumped coal).
- Low-cost energy source

Categories: Products on demand

Application: Steel Industry

Contact us

Phone : +45 8110 4120
Website : www.freebee.dk
Address : Romsøvej 25 . 5800 Nyborg . Denmark

FREEBEE