



# S1 SORTER

- Technology you can trust

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## **Technology you can trust – at a price you can afford**

In the business-critical area of handheld XRF technology, Bruker aims not only to be the best, but also to deliver the best value. Our S1 SORTER is the ideal solution for businesses looking to compete in tough economic times.

It delivers performance equal to any handheld system using a SiPIN detector, but at a price significantly less than equivalents on the market. To complete the package we offer world class customer service and maximum uptime.

## ● The S1 SORTER



### **Clarity and usability**

We believe the best technology should be intuitive and instinctive to use. Every element of the S1 SORTER has been designed with this in mind. The bright display is easy to read in any lighting conditions. The touch screen allows you to operate the analyzer with one finger whether inputting a password or starting the measurement.

The operating system is Microsoft Windows – so well known that it's almost universal. Data transfer options include Microsoft ActivSync via USB cable or wireless Bluetooth connection, as well as using an SD card. Built-in memory makes it possible to store thousands of spectra and millions of results safely.

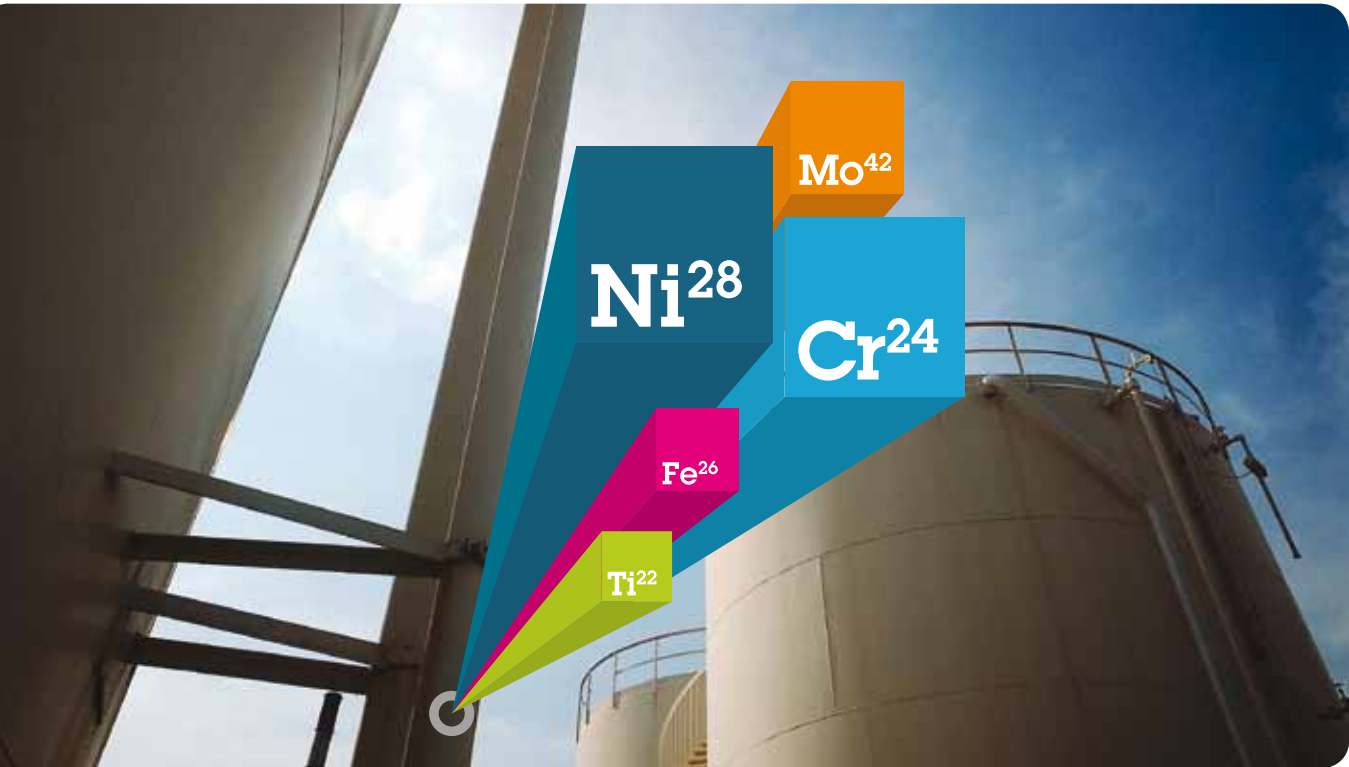
### **A tough performer**

The S1 SORTER's state-of-the-art technology is protected by a very tough shell. It's designed to be used out in the field, in temperatures ranging from -10°C to +50°C. It can be used to measure samples up to 500°C. The case is made of industrial-strength plastic, and the holster allows you to work hands-free even when climbing service racks.

### **Plug and play**

Simply turn on the S1 SORTER, enter the password and start measuring. There are no set-up procedures or complex instructions to follow. Most metal samples require zero preparation and measurements are completely non-destructive. They're also extremely fast – meaning more productivity and less time waiting around.

# Alloy Verification



## Petrochemical

When it comes to Positive Material Identification (PMI), the S1 SORTER provides a fast, easy and completely non-destructive analysis method for every metal component.

Within the petrochemical industry, that can apply to everything from a single component up to miles of pipeline. This is particularly important in an industry where the use of precise alloy components is critical to plant safety. Many component failures have been traced to the installation of the wrong metals, which then leads to faster corrosion rates, or directly to an outage or explosion.

## Fabrication

Alloy Verification is exactly the same principle applied to the fabrication process, where alloy verification is a required part of Quality Assurance. In fact 100% alloy verification is now a common part of ISO9000 certification for many fabricators.

This is especially the case when the parts in question are designed for use in petrochemical applications, or anything else that requires high temperature and pressure. Getting the verification right at an early stage prevents any possibility of a costly alloy mix-up, dramatically reducing scrap and improving product quality. Again, the S1 SORTER makes for a straightforward, cost-effective solution.

- Application

## Scrap



### Scrap

Sorting scrap used to be the job of experienced metal sorters, but that has all changed since the introduction of handheld XRF technology. The S1 SORTER provides a fast, reliable way of separating the valuable content of scrap and the ability to identify unwanted or 'tramp' elements – without the need for highly-trained operators. The size of the sample isn't a problem – the analyzer can measure everything from single wires up to big heat-exchangers and other large structures. It's a simple case of point-and-shoot.



### Empirical calibrations

With accuracy and ease of use in mind, the S1 SORTER is calibrated using certified reference materials for all the most common alloys. This allows for fast and reliable analysis of alloys within the calibration range. In addition an optional Fundamental Parameters (FP) calibration is available for the occasional sample which falls outside of the range of the standard calibration.

### Grade identification

The S1 SORTER provides a unique display which compares the measured assay with the defined grade limits giving you instant grade identification and indicating where out of spec elements exist. This allows even unskilled operators to understand the materials being measured. The S1 SORTER also comes with an extensive grade library.

### Radiation safety

It's worth noting that the S1 SORTER contains zero radioactive material, which means much easier registration requirements, safe transportation, no disposal restrictions<sup>1</sup> and no need for a wipe test every six months. For extra security, the system also comes in a lockable case and is password protected. A low count rate sensor checks that the sample is correctly in place before x-rays are generated and a cover is supplied to minimize x-ray exposure when measuring small parts. Finally, the inclusion of safety straps means there's much less chance of dropping or damaging the unit.

1. No restrictions related to radioactive material disposal, however, local WEEE restrictions may apply.

## ● Specifications

Module	S1 SORTER
<b>Weight</b>	2 kg (4.49 lbs) with batteries, 1.77kg (3.9 lbs) base weight
<b>Dimensions</b>	30cm(L) x 10cm(W) x 28cm(H)
<b>Excitation Source</b>	X-ray tube with Ag target; max voltage 40 kV
<b>Detector</b>	SiPIN diode
<b>Operating Software</b>	Microsoft® Windows Mobile™ 5.0 for Pocket PC Bruker Elemental proprietary software
<b>Power</b>	2 rechargeable Li-ion batteries
<b>Display</b>	240 x 320; 65,536 colors; back lit; touch screen
<b>Standard Calibrations</b>	Tool Steel, Stainless Steel, Carbon and Low Alloy Steels, Cobalt, Nickel and Copper Alloys
<b>Optional calibrations</b>	Aluminum and Titanium alloys (heavy alloying elements), Precious Metal Alloys, Fundamental Parameters calibration
<b>Data Transfer</b>	ActiveSync via USB or wireless Bluetooth; Memory Card
<b>Data Storage</b>	256 MB standard PDA memory, 512 MB Memory Card allows for storage of thousands of spectra and millions of results; larger memory cards available
<b>Hot Surface</b>	Measure samples at temperatures up to 500°C
<b>Security</b>	Password protected, No sample (backscatter) shutoff
<b>Environmental Range</b>	-10°C to 50°C
<b>Languages Support</b>	English, Chinese, Korean, Japanese, Russian, German, Italian, French, Dutch, Polish, Spanish, Spanish (Mexican), Portuguese
<b>Available Colors</b>	Orange, grey
<b>Certification</b>	CE, cTÜVus, IEC 61010-1:2002 by TÜV SÜD

## Worldwide Support; Local Service

Bruker has been in this business for many years and we understand the critical importance of post-sales service to our clients. That's why we not only design our products with maximum uptime in mind – we provide a two year warranty on our products<sup>2</sup>. We will provide exceptional service on your instrument from a service center close to you.

We are a company with global scale and presence. Our support staff are based in offices throughout the world, so knowledgeable and comprehensive service is always close at hand.

When it comes to service contracts and warranties, we offer the kind of flexibility and coverage that others find hard to match. At any time during your two-year warranty period, you can decide to add extended coverage, either on an annual basis or through a discounted package of coverage for three years. Just let us know what works for you.

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2. See Terms and Conditions for details.