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SUN CHEMICAL: ATEX FORKLIFT FLEET

Yate, UK, 2021

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ATEX FORKLIFT FLEET FOR SUN CHEMICAL

SUN CHEMICAL CORPORATION HAS INTRODUCED A FLEET OF NINE PYROBAN EXPLOSION PROTECTED LIFT TRUCKS AT ITS SITE IN YATE, UK, WHICH SPECIALISES IN THE MANUFACTURE AND STORAGE OF FOOD PACKAGING INKS.

“Safety is the number one priority on our site, as there is such a high volume of flammable material present, including over 100,000 litres of solvents,” says Sean Clancy, Manufacturing Manager at the Sun Chemical site in Yate, explaining that the manufacturing operations usually involve blending solvents with pigments to produce solvent based liquid inks for flexible packaging printed by the flexographic and gravure print processes. This includes anti-mist coatings (for direct food contact) produced in a dedicated production area.

“We typically have more than one million kilos of finished product stored in IBCs and 200-gallon drums,” he continues.

Sun Chemical is a recognised leader in printing inks, coatings and supplies for the packaging, publication, commercial, industrial, and digital markets, as well as pigments for architectural and industrial coatings, automotive coatings, cosmetics, inks and more. It also produces a variety of advanced materials, including liquid compounds, solid compounds, and application materials.

The site at Yate includes manufacturing, storage, workshop, and laboratory operations, and has a number of areas classified as Zone 1, 2, and 22 in line with the ATEX directive, depending on the activity and type of hazard. Sun Chemical is a leader in regulatory, compliance, and sustainability issues, committed to developing solutions that improve productivity, create new revenue opportunities for customers,

reduce CO2 emissions, and contribute to a more sustainable future.

To support Sun Chemical in Yate, safety company Pyroban has provided effective solutions for the company's materials handling equipment so that it can operate in different ATEX Zones without being the source of an ignition.

Three UniCarriers DX20 2-tonne diesel lift trucks have been converted with Pyroban's system6000 for Zone 2 hazardous areas, which combines active gas detection with various explosion protection methods. If any solvent vapour is detected at 10% LEL* (propane in air), the active gas detection system gives operators a visual and audible warning, prompting them to drive away from the area and raise an alert. If the vapour levels continue to rise the trucks will automatically be brought to a controlled stop.

“Our diesel forklifts are typically used in the outside storage area where an unexpected release of vapour from storage drums and IBCs could present a risk. They are also used to transport goods to and from our large Zone 2 finished goods warehouse and for loading/unloading lorries,” says Sean. “We also have a pigment store with flammable powder hazards, so these trucks have also been converted for Zone 22 operation, giving us maximum flexibility in where we can deploy our fleet.”

The Pyroban Zone 2+22 hybrid conversion includes temperature monitoring of hot surfaces, modification of arcing, sparking and hot components and restricted breathing enclosures

“In the past 12 months, we have had no incidents with the trucks. This has helped keep operations running as planned during Covid-19.”

*Sean Clancy, Manufacturing Manager
at the Sun Chemical site in Yate*

to restrict the ingress of any flammable vapours or combustible powders, and cladding of truck forks with non-sparking materials.

For the firm's Zone 2 operations, two electric AM20SE, AisleMaster articulated lift trucks were also specified with system6000. These are used for picking in its raw material stores and in the warehouse. Sun Chemical already has two Pyroban Zone 2 converted shrink wrappers on site in its warehouse.

“This site also includes Zone 1 areas, where an explosive atmosphere is expected as part of normal operation,” explains Darren Boiling, Materials Handling Sales Manager for Pyroban. “This is different to Zone 2, where if a flammable gas or vapour is encountered, it means something has gone wrong, like a spillage or other accidental release.”

“This type of operation requires a very different type of conversion, as the trucks need to continue to work through the explosive atmosphere, but must, of course, do so safely,” he continues. “And this site handles everything from MEK and cyclohexane to heptane.”

For these areas, Pyroban modified four UniCarriers TX4-20 electric forklifts with its Extex 2G conversion. Whether it is collecting solvents from the site's solvent tank farm to bring into production, operating near to its seven 10-tonne mixers, working with the highly flammable nitro cellulose for making varnishes, or transporting finished goods from Zone 1 production areas to the warehouse, the specially adapted Zone 1 forklifts can be operated safely.

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ABOUT PYROBAN

Pyroban provide explosion protection solutions for materials handling equipment and diesel engines.

For almost 50 years we have been at the forefront of the industry developing products to protect your people, your site and equipment when operating in hazardous & added safety areas.



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Pyroban's explosion protection
solutions contact us or visit our
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