



Application note



Chemicals

Considerations for code quality on specialty chemicals packaging



The specialty chemicals industry has experienced slower than average growth over the past ten years, mainly due to inconsistent global consumption. Demand is now increasing in the manufacturing and construction industries, with a forecasted global rise of 4% over the next three years.*

The biggest growth is expected in emerging markets, which offer more dynamic prospects for chemicals because of consumer-driven economies and industrialization.

The challenge:

With increased demands for specialty chemical production, manufacturers will need to become more efficient at producing greater numbers of quality products. Many chemical manufacturers use a diverse range of uniquely shaped packaging formats and materials, and often leverage their packaging to build and differentiate their brands. Government regulation is high and is driven by environmental, health and safety concerns, meaning manufacturers must comply with the Global Harmonized System of Classification and Labeling of Chemicals (GHS). Some emerging market manufacturers may be less familiar with these regulations, and less well-informed to select the most appropriate coding and marking solution for their needs. This can make it difficult to find the right coding solutions to address all application needs and requirements.

Videojet advantage:

Videojet offers the widest range of coding, marking and printing products, plus the largest selection of inks and ribbons, allowing a solution that meets the exact customer and application needs. Over the past 40 years, Videojet has invested significantly in R&D to help ensure that we provide the ideal solutions to drive efficiency and productivity, while delivering consistent quality codes time after time. While there are a wide range of printing solutions available, not all of them will be able to also offer the expertise and global coverage offered by the Videojet team. Additionally, Videojet understands what matters to you, and our application experts can help overcome integration obstacles or recommend innovative coding solutions that may have not been previously considered.

*<https://www.ihs.com/products/specialty-chemicals-industry-scup.html>

Selecting the right solution for your application



Understanding application criteria

Specialty chemicals, such as paints, adhesives, sealants and lubricants, are low volume but high value compounds, which have brand value that goes beyond product efficiency. They are packaged in materials that require more sophisticated coding solutions for their application needs. Many chemical manufacturers code for the following reasons:

- **Traceability** – unique codes help enable the product to be tracked through the distribution chain, and be recalled in case of emergency
- **Regulation** – coding to address environmental, health and safety concerns
- **Internal / External Production Tracking** – facilitates internal production metrics and B2B inventory systems
- **Product Identification** – ID product type, manufacturing date and batch / lot number

Depending on the type and amount of code content you need to apply to your products, there will be various solutions. For example, some may have more capability in printing high resolution logos and bar codes, whereas some options will be able to offer more versatility in variable printing or integration into challenging spaces.

Packaging types and brand consistency

Chemical manufacturers leverage packaging to build and differentiate their brands, and can be packaged in materials such as plastic containers, sacks or metal containers. Specialty chemicals, in particular, are often packaged in uniquely shaped bottles, cans, tubes and other packaging for brand differentiation and dispensing methods. This means consistent print quality and accurate placement of codes is paramount.

Videojet understands that one solution does not fit all and has a number of coding solutions to meet your unique needs, including:

- **Continuous inkjet printing (CIJ)** – a versatile coding solution for almost any substrate, size or color requirement
- **Laser marking solutions** – high-resolution scribing technology that provides clear codes, logos and text, helping to ensure permanent codes and brand protection
- **Thermal inkjet printing (TIJ)** – high-resolution, ink-based printing with no wear parts, minimizing maintenance and related production downtime

WHAT YOU NEED TO KNOW

It is important to have a full understanding of GHS standards. The need for GHS labels varies by product category and is not required for all chemicals.

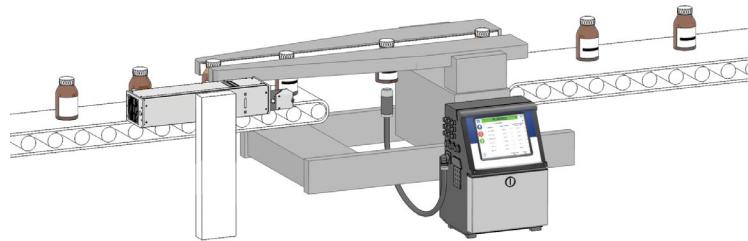
- 1 **GHS covers all hazardous materials**
- 2 **Adoption of GHS standards are voluntary by country**
- 3 **The need for GHS labels and safety data sheets varies by product category or stage in a chemical's life cycle**



Integrating with your line

By offering a full suite of coding solutions, we can code on virtually any unique packaging and material type with the ideal solutions for each application.

Integration challenges can be physical, in terms of space and the need for mounting accessories, or software and communications based. Videojet works closely with machinery manufacturers to help ensure that the optimal coding solution is installed to mark your products exactly where you want it.



Compliance in your industry

Stringent labeling regulations such as GHS compliance can impact product packaging, leaving less room for branding and codes. Although Videojet printing solutions are not designed to address all GHS requirements, we can assist with printing a number of GHS components – including symbols and logos – on your packaging. Other coding needs addressed include batch and lot information for traceability, product identification, and expiration dates.



As well as offering the support and expertise of a global organization, Videojet has a team of application experts whose job it is to stay on top of industry trends and challenges posed by regulation. Videojet can provide guidance on new coding solutions to help maximize the print process, offering solutions that complement your brand and product packaging. You care about your brand, and we care about offering coding and marking solutions that can provide the best quality codes via highly efficient, low-maintenance systems.

For specialty containers, a side grip conveyor is often required to control products and assure proper code orientation. Videojet has experience integrating a variety of coding technologies into side grip conveyors and other packaging lines. In addition, Videojet service and technical support teams help ensure that the installation is done right, and provide support throughout the life of the printer.

Training and operation simplicity

The diversity in chemicals packaging can often mean that manufacturers will require more than one type of coding solution within their production facility. This can lead to the need for user experts on individual lines, or multiple expensive training courses to help ensure that all operators are competent in using all equipment. Not to mention the complexity of maintaining different solutions from different suppliers.

All Videojet solutions operate with one common and inherently simple user interface. The brightly colored CLARiTY™ touchscreen makes operating any Videojet product quick, easy and almost impossible to get wrong. The built-in Code Assurance software helps prevent human errors during data entry, and the menu structure offers intuitive navigation to reduce training requirements, so that all of your operators can feel confident during job set ups or changeovers.



CLARiTY™ interface on Videojet printers

Compare Videojet solutions to see which could suit your application needs

Solutions for a wide variety of specialty containers:

Continuous Inkjet (CIJ)

- Versatile coding solution for almost any substrate, size or color requirement
- Configurable with a 50 micron nozzle to deliver code in small areas
- Smart Cartridge™ fluid system virtually eliminates waste, mess and mistakes

Laser Marking Systems

- High-resolution scribing technology provides excellent code resolution
- Variety of marking fields for varying product sizes and line speeds
- Clear codes, logos and text etch into glass packaging helping to ensure permanence and protection

Thermal Inkjet (TIJ)

- High resolution, ink-based printing with no wear parts, minimizing maintenance and related downtime
- Water and light solvent inks are available for porous substrates
- 8610 uses MEK-based inks for excellent adhesion on non-porous substrates



Solutions for large containers or shipping cases:

Label Printer Applicator (LPA)

- Automatic application of high quality printed labels, designed for ease of use and low maintenance
- Direct Apply™ labeling increases performance with on-demand label application up to 150 packs per minute (typical 4" x 6" label)

Laser Marking Systems

- A DataLase® (a contrast enhancer) coated case marked with a laser will produce a dark black and extremely high resolution print
- Ablating painted or labeled surfaces provides highly-legible codes

Large Character Marking (LCM)

- Eliminates cost, storage and management of labels and need for customer-specific pre-printed cases
- Solution with patented micro-purge process purges ink in programmable intervals to help keep the printhead free of debris for best print quality



The bottom line

To keep pace with the changing needs of the specialty chemicals manufacturing industry, facilities need to be prepared to make educated decisions on coding solutions that can support the critical needs of their business. We know that in the chemicals industry, one technology solution is not necessarily the same for all your applications and that selecting the most appropriate can be difficult. Videojet stands ready to help with innovative printing solutions that promote operational efficiency and work with customers' packaging design goals.

Let Videojet help you select the right solution to meet your production objectives and performance needs.

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