CONSIDERATIONS FOR INKJET CODING ON PLASTICS

Plastic is a general term that covers a large variety of materials with different code adhesion challenges. Excellent code durability can be achieved by matching the ink formulation to the plastic type and product-use environment.



WHAT AFFECTS INK ADHESION TO PLASTIC?





ENVIRONMENTS a code over time. Others may need to endure cold

temperatures from storage in commercial freezers and refrigerators. This can be mitigated through ink formulation.



During stacking and production line transport, products can come into contact with each other or experience abrasion from their case packaging. Certain inks are

TRANSPORT

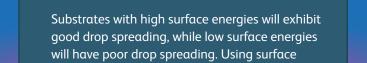
designed for excellent adhesion and abrasion resistance.



cleaning products, oil, lubricants, and other chemicals, if spilled, often smear or remove ink codes on plastic.

SPILLAGE

Many plastic containers hold ingredients that can easily remove ink codes. Fragrances,



treatments such as corona or plasma treatment can raise the surface tension of many types of plastics and promote improved adhesion.

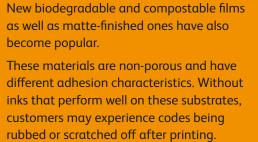
TREATMENTS

SURFACE TEXTURE

more surface area to adhere and improve adhesion.

A rougher or more textured surface will allow the ink

PLASTIC TYPE



Hexible

Glossy substrates and flexible films such as

low-density polyethylene (LDPE), metalized

polypropylene (PP) and bi-axially oriented

polypropylene (BOPP).

Codes need the ability to withstand the challenges of your distribution channel. The optimal coding solution

polyethylene (HDPE) are among the most common plastics used for rigid packaging. These substrates pose coding challenges due to material surface, shape, and color adhesion difficult. With relatively low surface energy, printing on plastic containers can be challenging but is easily achievable with Videojet solutions.

RIGID

terephthalate (PET) and high-density

Polyethylene (PE), polyethylene

takes into consideration your required ink resiliency. There are different methods to test for code adhesion, and some can be more severe than others.

THUMB RUB

Rub thumb across the

smearing or removal

code and look for

TEST CRITERIA

Abrasion test

TAPE TEST

off rapidly. Look for

removal of ink drops.

Apply a piece of tape on

top of the code and pull

and adherence on slick plasticizers which support plastic flexibility but make coding

RIGID HDPE

V4230 (Very good)

ABRASION TEST

Rub an abrasive material across code. Most common is

kraft paper or cardboard, but

also can be done with cloth,

tissue or a fingernail scratch

CHOOSING THE RIGHT INK

BOPP FLEXIBLE FILM

Since there are a multitude of different plastic materials available, Videojet offers a number of different ink formulations to help achieve good adhesion to the widest variety of plastic material types. The following chart is a good starting point for choosing the right Videojet ink for your application. The inks are listed from top to bottom in order of best choice.

「humb rub	V4230 (Excellent)	V4230 (Excellent)	V4230 (Excellent)
	V4262 (Very good)	V4231 (Excellent)	V4231 (Very good)
	V4263 (Very good)	V4262 (Excellent)	V4262 (Very good)
	V4231 (Good)	V4263 (Excellent)	V4263 (Very good)
Tαpe test	V4231 (Good)	V4230 (Excellent)	V4231 (Excellent)
	V4230 (Good)	V4231 (Excellent)	V4230 (Very good)
	V4262 (Good)	V4262 (Good)	V4262 (Very good)
	V4263 (Good)	V4263 (Good)	V4263 (Very good)

V4230 (Very Good)

POLYPROPYLENE

V4262 (Good) V4263 (Good)

For more information on how Videojet coding technology can help you code on plastics, visit our website.

Visit www.videojet.com 800-843-3610

continued product improvement. We reserve the right to alter design and/or specifications without notice.

Videojet experts are here to help

V4230 (Best)

V4231 (Good)