

Acrylic paint

For other uses, see [Acrylic \(disambiguation\)](#).

Acrylic paint is a fast-drying paint containing pigment



Tubes of acrylic paint (made by Caran d'Ache).



Red acrylic paint squeezed from a tube.

suspension in [acrylic polymer emulsion](#). Acrylic paints are water-soluble, but become water-resistant when dry. Depending on how much the paint is diluted with water, or modified with acrylic gels, media, or pastes, the finished acrylic painting can resemble a [watercolor](#) or an [oil painting](#), or have its own unique characteristics not attainable with other media.^[1]

1 History

As early as 1934, the first usable acrylic resin dispersion was developed by German chemical company BASF, which was patented by Rohm and Haas. The synthetic



Detail of acrylic painting showing finishes that resemble both oil and watercolor



Experimental pictures with floating acrylic paint.

paint was first used in the 1940s, combining some of the properties of oil and watercolor.^[2] Between 1946 and 1949, [Leonard Bocour](#) and [Sam Golden](#) invented a solution acrylic paint under the brand [Magna paint](#). These were [mineral spirit-based](#) paints.^[3] Acrylics were made commercially available in the 1950s. Following that development, Golden came up with a waterborne acrylic paint called "Aquatec".^[4] [Otto Rohm](#) invented [acrylic resin](#), which was quickly transformed into acrylic paint. In 1953, the year that Rohm and Haas developed the first acrylic emulsions, [Jose L. Gutierrez](#) produced *Po-litec Acrylic Artists' Colors* in Mexico, and [Henry Levinson](#) of Cincinnati-based Permanent Pigments Co. produced [Liquitex](#) colors. These two product lines were the very first acrylic emulsion artists' paints.^[5] Water-based acrylic paints were subsequently sold as [latex](#) house paints, as latex is the technical term for a suspension of polymer microparticles in water. Interior latex house paints tend to be a combination of [binder](#) (sometimes acrylic, vinyl, pva, and others), [filler](#), [pigment](#), and water.

Exterior latex house paints may also be a **co-polymer** blend, but the best exterior water-based paints are 100% acrylic, due to elasticity and other factors, but vinyl costs half of what 100% acrylic resins cost, and PVA (polyvinyl acetate) is even cheaper, so paint companies make many different combinations of them to match the market.^[6]

Soon after the water-based acrylic binders were introduced as house paints, artists and companies alike began to explore the potential of the new binders. Water-soluble artists' acrylic paints were sold commercially by **Liquitex** beginning in the 1950s, with modern high-viscosity paints becoming available in the early '60s. In 1963, **Rowney** (now part of **Daler-Rowney** since 1983) was the first manufacturer to introduce artist's acrylic paints in Europe, under the brand name "Cryla".^[1]

1.1 Techniques

Main article: **Acrylic painting techniques**

Acrylic artists' paints may be thinned with water and used as **washes** in the manner of watercolor paints, but the washes are not re-hydratable once dry. For this reason, acrylics do not lend themselves to the color lifting techniques of **gum arabic** based watercolor paints.



Fluorescent acrylic paints lit by UV light. Paintings by Beo Beyond.

Acrylic paints with **gloss** or **matte** finishes are common, although a satin (semi-matte) sheen is most common. Some brands exhibit a range of finishes (e.g. heavy-body paints from **Golden**, **Liquitex**, **Winsor & Newton** and **Daler-Rowney**); Politec acrylics are fully matte. As with oils, pigment amounts and particle size or shape can affect the paint sheen. Matting agents can also be added during manufacture to dull the finish. If desired, the artist can mix different media with their paints and use topcoats or varnishes to alter or unify sheen.

When dry, acrylic paint is generally non-removable from a solid surface if it adheres to the surface. Water or mild solvents do not re-solubilize it, although isopropyl alcohol can lift some fresh paint films off. Toluene and acetone

can remove paint films, but they do not lift paint stains very well and are not selective. The use of a solvent to remove paint may result in removal of all of the paint layers (acrylic **gesso**, et cetera). Oils and warm, soapy water can remove acrylic paint from skin.^[7]

Only a proper, artist-grade acrylic gesso should be used to prime canvas in preparation for painting with acrylic paints. However, acrylic paint can be applied to a raw canvas if so desired without any negative effect or chemical reaction (as would be the case with oil paint). It is important to avoid adding non-stable or non-archival elements to the gesso upon application. However, the viscosity of acrylic can be successfully reduced by using suitable extenders that maintain the integrity of the paint film. There are **retarders** to slow drying and extend workability time, and flow releases to increase color-blending ability.

2 Painters and acrylic

Before the 19th century, artists mixed their own paints, which allowed them to achieve the desired color and thickness, and to control the use of fillers, if any. While suitable media and raw pigments are available for the individual production of acrylic paint, hand mixing may not be practical because of the fast drying time and other technical issues.

Acrylic painters can modify the appearance, hardness, flexibility, texture, and other characteristics of the paint surface by using acrylic media or simply by adding water. Watercolor and oil painters also use various media, but the range of acrylic media is much greater. Acrylics have the ability to bond to many different surfaces, and media can be used to modify their binding characteristics. Acrylics can be used on paper, canvas and a range of other materials, however their use on engineered woods such as **medium-density fiberboard** can be problematic because of the porous nature of those surfaces.^[8] In these cases it is recommended that the surface first be sealed with an appropriate sealer. Acrylics can be applied in thin layers or washes to create effects that resemble watercolors and other water-based media. They can also be used to build thick layers of paint—gel and molding paste media are sometimes used to create paintings with relief features that are, quite literally, sculptural. Acrylic paints are also used in hobbies such as train, car, house, and human models. People who make such models use acrylic paint to build facial features on dolls, or raised details on other types of models. Wet acrylic paint is easily removed from paint brushes and skin with water, whereas oil paints require the use of a hydrocarbon.

Acrylic paints are the most common paints used in **grattage**, a surrealist technique that became popular with the advent of acrylic paint. Acrylics are used for this purpose because they easily scrape or peel from a surface.^[9]

3 Grades

Commercial acrylic paints come in two grades:

- **Artist or professional acrylics** are created and designed to resist chemical reactions from exposure to water, ultraviolet light, and oxygen.^[10] Professional-grade acrylics have higher pigment, which allows for more medium manipulation and a limited color shift when mixed with other colors or after drying.^{[11][12]}
- **Student acrylics** have working characteristics similar to professional artist acrylics, but with lower pigment concentrations, less-expensive formulas, and fewer available colors. More expensive pigments are generally replicated by hues. Colors are designed to be mixed, although color strength is lower. Hues may not have the exact mixing characteristics of full-strength colors.^{[11][12]}

4 Varieties

- **Heavy body acrylics** are typically found in the Artist and Student Grade paints. “Heavy Body” refers to the viscosity or thickness of the paint. They are the best choice for impasto or heavier paint applications and will hold a brush or knife stroke and even a medium stiff peak. Gel Mediums (“pigmentless paints”) are also available in various viscosities and used to thicken or thin paints, as well as extend paints and add transparency.^[13]
- Examples of Heavy Body Acrylics are Matisse Structure Acrylic Colors, Lukas Pastos Acrylics, Liquitex Heavy Body Acrylics and Golden Heavy Body Acrylics.
- **Fluid acrylics** – or High Flow, Soft Body acrylics – have a lower viscosity but generally the same pigmentation as the Heavy Body acrylics. Available in either Artist quality or Craft quality, the cost and quality varies accordingly. These paints are good for watercolor techniques, airbrush application, or when smooth coverage is desired. Fluid acrylics can be mixed with any medium to thicken them for impasto work, or to thin them for glazing applications.^[14]
- Examples of fluid acrylics include Lukasacryl Liquid, Lukasacryl Studio and Golden Fluid acrylics.
- **Open acrylics** were created to address the one major difference between oil and acrylic paints: the shortened time it takes acrylic paints to dry. Designed by Golden Artist Colors, Inc. with a hydrophilic acrylic resin, these paints can take anywhere from a few hours to a few days, or even

weeks, to dry completely, depending on paint thickness, support characteristics, temperature, and humidity.^[15]

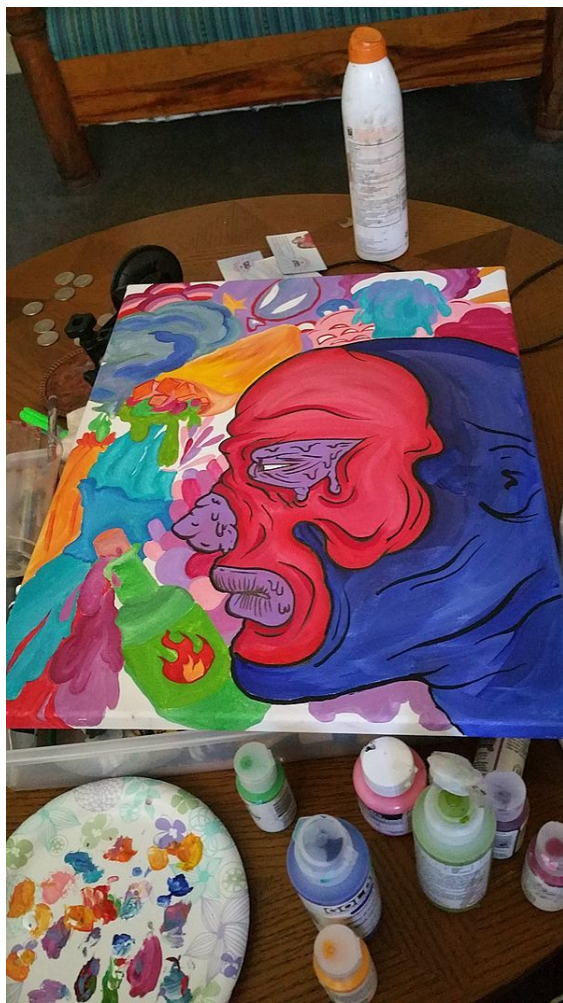
- **Iridescent, pearl and interference acrylic colors** combine conventional pigments with powdered mica (aluminium silicate) or powdered bronze to achieve complex visual effects. Colors have shimmering or reflective characteristics, depending on the coarseness or fineness of the powder. Iridescent colors are used in fine arts and crafts.
- **Acrylic gouache** is like traditional gouache because it dries to a matte, opaque finish. However, unlike traditional gouache, the acrylic binder makes it water-resistant once it dries. Like craft paint, it will adhere to a variety of surfaces, not only canvas and paper. This paint is typically used by watercolorists, cartoonists, or illustrators, and for decorative or folk art applications.
- Examples of acrylic gouache are Lascaux Gouache and Turner Acryl Gouache.
- **Craft acrylics** can be used on surfaces besides canvas, such as wood, metal, fabrics, and ceramics. They are used in decorative painting techniques and faux finishes to decorate objects of ordinary life. Although colors can be mixed, pigments are often not specified. Each color line is formulated instead to achieve a wide range of premixed colors. Craft paints usually employ vinyl or PVA resins to increase adhesion and lower cost.
- **Interactive acrylics** are all-purpose acrylic artists’ colors which have the characteristic fast-drying nature of artists’ acrylics, but are formulated to allow artists to delay drying when they need more working time, or re-wet their work when they want to do more wet blending.
- **Exterior acrylics** are paints that can withstand outdoor conditions. Like craft acrylics, they adhere to many surfaces. They are more resistant to both water and ultraviolet light. This makes them the acrylic of choice for architectural murals, outdoor signs, and many faux-finishing techniques.

5 Differences between acrylic and oil paint

The vehicle and binder of oil paints is linseed oil or another drying oil, whereas acrylic paint has water as the vehicle for an emulsion (suspension) of acrylic polymer, which serves as the binder. Thus, oil paint is said to be “oil-based”, whereas acrylic paint is “water-based” (or sometimes “water-borne”).



Examples of acrylic wash over other colors. Notice how the two different colors would be difficult to converge even in wet conditions.



A demonstration of blending with acrylic paint. No retarders were used.

The main practical difference between most acrylics and oil paints is the inherent drying time. Oils allow for more time to blend colors and apply even glazes over underpaintings. This slow-drying aspect of oil can be seen as an advantage for certain techniques, but it impedes an artist trying to work quickly. The fast evaporation of wa-

ter from regular acrylic paint films can be slowed with the use of **acrylic retarders**. Retarders are generally glycol or glycerin-based additives. The addition of a retarder slows the evaporation rate of the water.

Oil paints may require the use of solvents such as mineral spirits or **turpentine** to thin the paint and clean up. These solvents generally have some level of toxicity and are often found objectionable. Relatively recently, water-miscible oil paints have been developed for artists' use. Oil paint films can become increasingly yellow and brittle with time; they lose much of their flexibility in a few decades. Additionally, the rules of "**fat over lean**" must be employed to ensure the paint films are durable.

Oil paint has a higher pigment load than acrylic paint. As linseed oil contains a smaller molecule than acrylic paint, oil paint is able to absorb substantially more pigment. Oil provides a refractive index that is less clear than acrylic dispersions, which imparts a unique "look and feel" to the resultant paint film. Not all the pigments of oil paints are available in acrylics.

Due to acrylic paint's more flexible nature and more consistent drying time between layers, an artist does not have to follow the same rules of oil painting, where more medium must be applied to each layer to avoid cracking. It usually takes 15-20 minutes for one to two layers of acrylic paint to dry. Although canvas needs to be properly primed before painting with oil to prevent it from eventually rotting the canvas, acrylic can be safely applied straight to the canvas. The rapid drying of acrylic paint tends to discourage blending of color and use of **wet-in-wet** technique as in oil painting. Even though acrylic retarders can slow drying time to several hours, it remains a relatively fast-drying medium and adding too much acrylic retarder can prevent the paint from ever drying properly.

Meanwhile, acrylic paint is very elastic, which prevents cracking from occurring. Acrylic paint's binder is acrylic polymer emulsion – as this binder dries, the paint remains flexible.^[16]

Another difference between oil and acrylic paints is the versatility offered by acrylic paints. Acrylics are very useful in mixed media, allowing the use of pastel (oil & chalk), charcoal and pen (among others) on top of the dried acrylic painted surface. Mixing other bodies into the acrylic is possible—sand, rice, and even pasta may be incorporated in the artwork. Mixing artist or student grade acrylic paint with household acrylic emulsions is possible, allowing the use of premixed tints straight from the tube or tin, and thereby presenting the painter with a vast color range at their disposal. This versatility is also illustrated by the variety of additional artistic uses for acrylics. Specialized acrylics have been manufactured and used for **linoblock printing** (acrylic **block printing** ink has been produced by Derivan since the early 1980s), **face painting**, **airbrushing**, **watercolor-like** techniques, and **fabric screen printing**.

6 Notes and references

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7 External links

- National Acrylic Painter’s Association

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