

GENERAL HEALTH & SAFETY For Oil Painting

Below are essential safety guidelines for working with oil paints, solvents, and mediums.

VENTILATION when using solvents or mediums:

Good airflow is essential when using traditional solvents (like turpentine), mediums, or varnishes.

These products release VOCs (Volatile Organic Compounds) into the air as they evaporate.

Proper ventilation helps these fumes disperse and escape from the room, preventing build-up that can cause headaches, dizziness, or respiratory irritation.

How to ventilate your studio:

- Work in a space with fresh air circulation
- Open a window or keep a door ajar to maintain cross-ventilation
- Use a fan to actively move air toward an open window if needed
- Ensure ventilation throughout your painting session, not just at the start

This applies regardless of your studio's size; even small spaces require adequate airflow.

Understanding VOC levels: Higher VOC numbers mean more fumes are released into the air. For reference, here are typical levels in common products:

- Gum Turpentine - VOC 865 g/litre
- White Spirit - VOC 795 g/litre
- Odourless Mineral Spirit - VOC 767 g/litre
- Acrylic Gesso - VOC 49.3 g/litre (Liquitex brand - much lower than solvents)

Even "odourless" mineral spirits contain significant VOCs and require proper ventilation.

Important: Do not sleep in a space where you paint or store traditional mediums, varnishes, or solvents. Prolonged exposure to VOC fumes, even at low levels, can affect your health over time.

FIRE HAZARDS

Oil painting materials pose serious fire risks if not handled properly. Follow these precautions carefully:

General fire safety:

- Keep all flammable materials (solvents, mediums, oily rags) away from candles, heaters, radiators, stoves, and other heat sources
- Never heat solvents or place them near open flames
- Solvent vapours are highly flammable and can ignite
- Store flammable solvents in metal storage containers, away from heat sources
- Ensure you have a working smoke detector in your studio
- Keep a fire extinguisher nearby (ABC-type suitable for flammable liquids)

Oily rags and spontaneous combustion: This is one of the most underestimated fire risks in oil painting.

Drying oils (linseed oil, walnut oil, safflower oil, etc.) dry through oxidation - a chemical reaction that generates heat.

When oil-soaked rags or paper towels are bunched up or piled together, the heat cannot escape. It builds up inside the bundle until the temperature becomes high enough to spontaneously ignite the material, even without any external flame or spark.

To prevent spontaneous combustion:

- Never leave oily rags or paper towels bunched up, piled, or in a regular waste bin
- Lay rags flat to dry in a well-ventilated area, away from flammable materials
- Place them in a sealed metal oily-waste container (purpose-made bins with self-closing lids)

- Empty your oily-waste container regularly

This risk applies to any material soaked in drying oils, including rags used for cleaning brushes, wiping palettes, or applying oil mediums.

Solvents:

If you use odourless mineral spirits or turpentine, keep the lid on when not in use. Avoid breathing in evaporating fumes. Never heat solvents or place them near open flames.

OMS (Odourless Mineral Spirits) are less harmful but still contain VOCs.

Skin contact:

Prevention:

- Avoid direct eye contact with solvents, mediums, and paints
- Consider using a barrier cream on your hands before painting for added protection
- If you have any open cuts, wounds, or broken skin, always wear protective gloves (nitrile gloves work well)

If contact occurs:

- Wipe off any paint, solvent, or medium immediately with a clean cloth or kitchen roll
- Do not let solvents sit on your skin, prolonged contact can cause irritation, dryness, or allergic reactions
- Wash your hands thoroughly with soap and warm water
- Soap breaks down oils effectively, so regular hand soap works well (specialist soaps like Master's Brush Cleaner are particularly good for removing paint)

What NOT to do:

- Never use solvents as a hand cleaner - this strips your skin's natural oils and increases absorption of harmful chemicals
- Solvents can cause dermatitis and other skin conditions with repeated exposure

Brush cleaning:

Solvent-free method (recommended): The safest way to clean your brushes is to avoid solvents altogether. Instead:

- Wipe excess paint onto kitchen roll or Scott's Shop towel
- Clean brushes with a drying oil such as safflower oil
- Massage the oil through the bristles to break down the paint
- Wipe again with kitchen roll
- Wash thoroughly with soap (such as Master's Brush Cleaner) and warm water
- Reshape bristles and lay flat to dry

If using solvents: If you choose to use turpentine or mineral spirits for brush cleaning:

- Keep your solvent jars stable and away from the edges of tables to prevent spills
- Wipe excess paint onto kitchen roll before dipping brushes into the solvent
- Use the minimum amount of solvent necessary
- Keep the lid on the jar when not actively cleaning brushes to prevent fume buildup

Allergies and sensitivities:

Some people are sensitive to certain mediums or solvents. Symptoms may include headaches, skin irritation, or breathing difficulties.

For example, Liquin Original (An alkyd medium) contains petroleum distillates.

Some alkyd mediums contain 2-Butanone Oxime (an anti-skinning agent), which can cause skin reactions.

Check manufacturers' safety sheets

If you're unsure about a product, check the manufacturer's guidelines. Most materials have a UK Safety Data Sheet (SDS) that explains their

safe use, or Material Safety Data Sheets (MSDS) which list hazards of product components.

Food and drink:

Don't eat or drink while painting. Keep beverages covered and away from your workspace. Always wash your hands before eating or smoking, as paint residue can transfer from your hands.

(I absolutely love a brew and a biscuit doing research, but I don't eat or drink in the oil painting studio)

Toxic Pigments:

Most pigments are safe, but some artist-quality pigments contain heavy metals such as Lead, Cadmium and Cobalt.

Manufacturers will always label any of these products with a warning.

For example, GOLDEN and other manufacturers entered into an agreement with the State of California that products containing more than 2.5 parts per million cadmium and/or 10 parts per million lead must be labeled. See:

<https://goldenartistcolors.com/resources/health-safety-faq>

Some manufacturers make synthetic alternatives that replicate the colour eg: Winsor & Newton Cadmium-Free Red.

Storage:

Store paints, mediums, and solvents out of reach of children and pets. Keep lids secure. Label jars clearly if you decant any materials. Keep flammable solvents in a metal storage.

Disposal:

Do not pour solvents or paint sludge down the sink. Let the paint settle in the jar, then pour the clear solvent back into a clean bottle for reuse. Allow the paint sludge to dry before disposing of it in the general waste.

N.B. If you are pregnant or have respiratory conditions, consider using water-mixable oils. Avoid solvents or paints containing heavy metals, which are often labelled as toxic. Ensure your working area has good ventilation.

DISCLAIMER: *This guide provides general safety information for working with oil painting materials. It is the responsibility of each individual to read and follow all manufacturer safety data sheets (SDS/MSDS) for specific products. If materials are used incorrectly or safety guidelines are not followed, serious health risks may occur. In case of accidental ingestion, eye contact, or adverse reaction, seek immediate medical attention. This guide is for educational purposes only and does not replace professional safety training or medical advice. Will Kemp Art School (Benny Browne & Co Ltd) assumes no liability for injuries or damages resulting from the use or misuse of art materials.*