

### Description

The 434 *Acetone* is an ACS grade, super-fast drying, VOC-exempt, zero-residue solvent. The fast evaporation rate of the 434 makes it a good thinner choice for spray application that require quicker drying times.

### Applications & Usages

Acetone is very useful for 3D printing because it can be used to improve adherence of the ABS plastic to the printing bed. The acetone vapors can also be used to smooth out the surface of finished 3D printed pieces.

Acetone solvent is an approved solvent for the maintenance and cleaning of oxygen valve according to the Praxair Class 2 standard. It can be used as a diluent to meet VOC regulations or to remove organic residues.

### Benefits and Features

- **Enhances adhesion to the print bed for 3D printing**
- **Smooth finishing of 3D printed pieces**
- **Highly miscible with other common organic solvents**
- **Fast evaporation rate**
- **VOC exempt diluent**
- **ACS Grade**

### Principal Components

Name	CAS Number
acetone	67-64-1

### Properties

<i>Physical Property</i>	<i>Method</i>	<i>Value</i>
Reagent Grade Assay		≥99.5% weight
Color		Clear
Odor	—	Ketone, nail polish remover
Other Threshold		62 ppm
Density at 25 °C [77 °F]		0.792 g/mL
Viscosity at 25 °C [77 °F]	Brookfield SP1	0.5 cP [0.0005 Pa·s]
Flash Point	Closed cup	-17 °C [1.4 °F]
Freezing Point	Tag closed cup	-94 °C [-137 °F]
Boiling Point		56 °C [133 °F]
Vapor Pressure at 25 °C [77 °F]		24.3 kPa [182 mm of Hg]
Relative Evaporation Rate (BuAc = 1)		6.3
Volatile Organic Compound (VOC)		VOC exempt
MIR value		0.43 g O <sub>3</sub> /g of product

<i>Solvation Parameters</i>	<i>Values</i>	
Solubility in water	Highly soluble	
Hansen Solubility Parameters <sup>a)</sup>	[MPa] <sup>1/2</sup>	(cal/cm <sup>3</sup> ) <sup>1/2</sup>
Total	20.1	9.8
<i>Non-Polar</i>	15.6	7.6
<i>Polar</i>	10.3	5.1
<i>Hydrogen Bonding</i>	6.8	3.3

a) Hansen parameters calculate using component literature values and volume fraction composition.

## Compatibility

**Substrate Compatibility:** The 434 is compatible with most substrate materials found on printed circuit assemblies. Its etching action can remove the need for surface preparation steps for plastics. The high solvent power can also cut through residual contaminants.

**ATTENTION!** Use with care on thin plastics or parts that are chemically sensitive. If this diluent is too active, dilute or substitute it with a diluent with less solvent power.

**Solvent Miscibility:** The 434 is highly miscible with other common organic solvent. It can be mixed with

- Water
- Alcohols
- Aldehydes
- Aromatic and Aliphatic Hydrocarbons
- Ethers
- Glycols
- Glycol Ethers
- Ketones

## Health, Safety, and Environmental Awareness

Please see the 434 **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

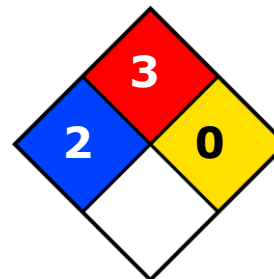
**Health and Safety:** This liquid is highly flammable and should be kept away from flames and other ignition sources. Avoid breathing in fumes or direct contact with the material.

**Environmental Impact:** The 434 has is a VOC-exempt solvent in the USA and Canada. It is RoHS compliant.

### HMIS® RATING

<b>HEALTH:</b>	<b>* 2</b>
<b>FLAMMABILITY:</b>	<b>3</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

### NFPA® 704 CODES



*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

### Thinning Instructions

Make necessary adjustments according to your paint and spray gun equipment usage instructions. A 1:1 paint to acetone dilution is a common starting point. If sagging is observed, reduce the thinner ratio.

**ATTENTION!** It is preferable to use this thinner system in a temperature controlled environment. Avoid high temperatures or humidity, which can lead to dry spray and blushing respectively.

### Packaging and Supporting Products

<i>Cat. No.</i>	<i>Packaging</i>	<i>Net Volume</i>		<i>Net Weight</i>		<i>Packaging Weight</i>	
<b>434-1L</b>	Can	945 mL	31.9 fl oz	746 g	1.64 lb	5.5 kg <sup>a)</sup>	11.5 lb <sup>a)</sup>
<b>434-4L</b>	Can	3.78 L	1 gal	2.98 kg	6.58 lb	3.8 kg	8.38 lb

*Contact MG Chemicals if custom packaging or sizes are required*

a) Pack of five bottles