

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended 2015/830.

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name:** Papanicolaou Solution 2A  
**Product No.** 3554

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses:** For Laboratory, Research or Manufacturing Use.  
**Uses advised against:** Not determined.

### 1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.  
Sowinskiego 11str., 44-101 Gliwice,  
Poland

**Telephone:** 48 32 239-20-00  
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**Contact person:** Environmental Health & Safety  
**E-mail:** export@avantormaterials.com

E-mail address of person responsible for this SDS: SDS@avantormaterials.com

### 1.4 Emergency telephone number: CHEMTREC: (44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

**Classification according to Regulation (EC) No 1272/2008 as amended.**

#### Physical Hazards

Flammable liquids Category 2 H225: Highly flammable liquid and vapour.

### 2.2 Label Elements



**Signal Word:** Danger

**Hazard Statement(s):** H225: Highly flammable liquid and vapour.

#### Precautionary Statements

**Prevention:** P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241: Use explosion-proof [electrical/ventilating/lighting] equipment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P240: Ground and bond container and receiving equipment.

**Response:** P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

**Storage:** P403+P235: Store in a well-ventilated place. Keep cool.

**2.3 Other hazards** No data available.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Ethanol	<=100%	64-17-5	200-578-6	01-2119457610-43-XXXX	No data available.	#

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

# This substance has workplace exposure limit(s).

### Classification

Chemical name	Classification	Notes
Ethanol	Flam. Liq. 2 H225	No data available.

The full text for all H-statements is displayed in section 16.

CLP: Regulation No. 1272/2008.

## SECTION 4: First Aid Measures

**General:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

### 4.1 Description of first aid measures

**Inhalation:** Move to fresh air.

**Skin Contact:** Get medical attention if symptoms occur. Take off immediately all contaminated clothing. Rinse skin with water [or shower].

**Eye contact:** If eye irritation persists: Get medical advice/attention. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

**Ingestion:** Rinse mouth. Get medical attention if symptoms occur. Never give liquid to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed:** May cause irritation to skin, eyes, and respiratory tract.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Hazards:** No information about adverse effects due to exposure.

**Treatment:** Treat symptomatically. Symptoms may be delayed.

**SECTION 5: Firefighting Measures**

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**5.1 Extinguishing media  
Suitable extinguishing media:**

Water Spray, Fog, CO<sub>2</sub>, Dry Chemical, or Standard Foam

**Unsuitable extinguishing media:**

Avoid water in straight hose stream; will scatter and spread fire.

**5.2 Special hazards arising from the substance or mixture:**

Vapours may cause a flash fire or ignite explosively. Prevent buildup of vapours or gases to explosive concentrations.

**5.3 Advice for firefighters  
Special fire fighting procedures:**

No data available.

**Special protective equipment for firefighters:**

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**SECTION 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

**6.2 Environmental Precautions:**

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**6.3 Methods and material for containment and cleaning up:**

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. In case of leakage, eliminate all ignition sources. Dyke far ahead of larger spill for later recovery and disposal.

**6.4 Reference to other sections:**

No data available.

**SECTION 7: Handling and Storage:**

**7.1 Precautions for safe handling:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Use non-sparking tools. Use explosion-proof [electrical/ventilating/lighting] equipment. Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. See Section 8 of the SDS for Personal Protective Equipment. Do not eat, drink or smoke when using the product. Wash at the end of each work shift and before eating, smoking or using the toilet.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in a well-ventilated place. Store in a cool place.

**7.3 Specific end use(s):** No data available.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

#### Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Ethanol	TWA	1.000 ppm 1.920 mg/m3	UK, EH40 Workplace Exposure Limits (WELs) (2007)

#### Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
METHYL ETHYL KETONE (Butan-2-one: Sampling time: End of shift.)	70 umol/L (Urine)	UKEH40BMGV (12 2011)

### 8.2 Exposure controls

**Appropriate Engineering Controls:** No special requirements under ordinary conditions of use and with adequate ventilation.

#### Individual protection measures, such as personal protective equipment

**General information:** Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:** Use personal protective equipment as required.

#### Skin protection

**Hand Protection:** Material: Chemical resistant gloves

**Other:** Wear suitable protective clothing.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Hygiene measures:** When using do not smoke. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product.

**Environmental Controls:** No data available.

## SECTION 9: Physical And Chemical Properties

### 9.1 Information on basic physical and chemical properties

**Appearance**

<b>Physical state:</b>	Liquid
<b>Form:</b>	Fluid
<b>Colour:</b>	Various
<b>Odour:</b>	Odour of alcohol
<b>Odour Threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Freezing point:</b>	0 °C
<b>Boiling Point:</b>	78 °C
<b>Flash Point:</b>	12 °C
<b>Evaporation Rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Flammability limit - upper (%)</b>	15,0 %(V)
<b>Flammability limit - lower (%)</b>	3,5 %(V)
<b>Vapour pressure:</b>	57 hPa (20 °C)
<b>Vapour density (air=1):</b>	No data available.
<b>Density:</b>	0,8378 g/ml
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Completely soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Autoignition Temperature:</b>	not applicable
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidising Properties:</b>	No data available.

**9.2 Other information**

<b>VOC content:</b>	997,2 g/l ~87,23 %
<b>Minimum ignition temperature:</b>	425 °C

**Metal corrosion:**

**SECTION 10: Stability and Reactivity**

<b>10.1 Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>10.2 Chemical Stability:</b>	Material is stable under normal conditions.
<b>10.3 Possibility of Hazardous Reactions:</b>	Hazardous polymerization does not occur.
<b>10.4 Conditions to Avoid:</b>	Heat, sparks, flames.
<b>10.5 Incompatible Materials:</b>	None known.
<b>10.6 Hazardous Decomposition Products:</b>	Not determined.

**SECTION 11: Toxicological Information**

**Information on likely routes of exposure**

<b>Inhalation:</b>	None known or expected under normal use.
<b>Skin Contact:</b>	None known or expected under normal use.
<b>Eye contact:</b>	None known or expected under normal use.
<b>Ingestion:</b>	No adverse effects due to ingestion are expected.

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Oral

<b>Product:</b>	Not classified for acute toxicity based on available data.
<b>Specified substance(s)</b>	
Ethanol	LD 50 (Rat): 6.200 mg/kg LD 50 (Guinea Pig): 5.600 mg/kg LD 50 (Rabbit): 6.300 mg/kg

##### Dermal

<b>Product:</b>	Not classified for acute toxicity based on available data.
<b>Specified substance(s)</b>	
Ethanol	LDLo (Rabbit) : 20.000 mg/kg

##### Inhalation

<b>Product:</b>	No data available.
<b>Specified substance(s)</b>	
Ethanol	LC 50 (Mouse, 4 h): 0,039 mg/l

##### Repeated dose toxicity

<b>Product:</b>	None known.
<b>Specified substance(s)</b>	
Ethanol	No data available.

##### Skin Corrosion/Irritation:

<b>Product:</b>	Not known.
<b>Specified substance(s)</b>	
Ethanol	No data available.

##### Serious Eye Damage/Eye Irritation:

<b>Product:</b>	Not known.
<b>Specified substance(s)</b>	
Ethanol	No data available.

##### Respiratory or Skin

##### Sensitisation:

<b>Product:</b>	Not a skin nor a respiratory sensitizer.
<b>Specified substance(s)</b>	
Ethanol	No data available.

##### Germ Cell Mutagenicity

##### In vitro

<b>Product:</b>	No mutagenic components identified
<b>Specified substance(s)</b>	
Ethanol	No data available.

**In vivo**

**Product:** No mutagenic components identified  
**Specified substance(s)**  
Ethanol No data available.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.  
**Specified substance(s)**  
Ethanol No data available.

**Reproductive toxicity**

**Product:** No components toxic to reproduction  
**Specified substance(s)**  
Ethanol No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** None known.  
**Specified substance(s)**  
Ethanol No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.  
**Specified substance(s)**  
Ethanol No data available.

**Aspiration Hazard**

**Product:** Not classified  
**Specified substance(s)**  
Ethanol No data available.

**Other Adverse Effects:** None known.

<b>SECTION 12: Ecological Information</b>
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**General information:** Not regulated

**12.1 Toxicity**

**Acute toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**

Ethanol  
LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 8.140 mg/l Mortality  
LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 12.000 - 16.000 mg/l (Static) Mortality  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 13.480 mg/l (Static) Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

Ethanol  
LC 50 (Brine shrimp (*Artemia franchiscana*), 48 h): 25,5 mg/l (Static) Mortality  
LC 50 (Water flea (*Daphnia magna*), 96 h): > 100 mg/l (Static) Mortality

EC 50 (Water flea (Daphnia magna), 48 h): > 10.000 mg/l (Static) Intoxication  
 EC 50 (Water flea (Daphnia obtusa), 48 h): 10.100 - 11.200 mg/l (Static) Intoxication  
 LC 50 (Water flea (Daphnia magna), 48 h): 7.560 - 12.600 mg/l (Static) Mortality

**Chronic toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**

Ethanol No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

Ethanol No data available.

**Toxicity to aquatic plants**

**Product:** No data available.

**Specified substance(s)**

Ethanol No data available.

**12.2 Persistence and Degradability**

**Biodegradation**

**Product:** There is no data on the degradability of this product.

**Specified substance(s)**

Ethanol No data available.

**BOD/COD Ratio**

**Product:** Not determined.

**Specified substance(s)**

Ethanol No data available.

**12.3 Bioaccumulative Potential**

**Product:** Not known.

**Specified substance(s)**

Ethanol No data available.

**12.4 Mobility in Soil:**

No data available.

**Known or predicted distribution to environmental compartments**

Ethanol No data available.

**12.5 Results of PBT and vPvB assessment:**

Not available.

Ethanol No data available.

**12.6 Other Adverse Effects:**

The environmental hazard of the product is considered to be limited.

**12.7 Additional Information:**

No data available.

## SECTION 13: Disposal Considerations

### 13.1 Waste treatment methods

- General information:** Dispose of waste and residues in accordance with local authority requirements.
- Disposal methods:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

## SECTION 14: Transport Information

### ADR

- 14.1 UN Number: UN 1993
- 14.2 UN Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.(ETHYL ALCOHOL, METHYL ISOBUTYL KETONE)
- 14.3 Transport Hazard Class(es)
- Class: 3
- Label(s): 3
- Hazard No. (ADR): 33
- Tunnel restriction code: (D/E)
- 14.4 Packing Group: II
- 14.5 Environmental Hazards: No
- 14.6 Special precautions for user: Not determined.

### RID

- 14.1 UN Number: UN 1993
- 14.2 UN Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.
- 14.3 Transport Hazard Class(es)
- Class: 3
- Label(s): 3
- 14.4 Packing Group: II
- 14.5 Environmental Hazards: No
- 14.6 Special precautions for user: Not determined.

### IMDG

- 14.1 UN Number: UN 1993
- 14.2 UN Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.(ETHYL ALCOHOL, METHYL ISOBUTYL KETONE)
- 14.3 Transport Hazard Class(es)
- Class: 3
- Label(s): 3
- EmS No.: F-E, S-E
- 14.4 Packing Group: II
- 14.5 Environmental Hazards: No
- 14.6 Special precautions for user: Not determined.

**IATA**

14.1 UN Number: UN 1993  
 14.2 Proper Shipping Name: Flammable liquid, n.o.s.(Ethyl alcohol, Methyl isobutyl ketone)  
 14.3 Transport Hazard Class(es):  
     Class: 3  
     Label(s): 3  
 14.4 Packing Group: II  
 14.5 Environmental Hazards: No  
 14.6 Special precautions for user: Not determined.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:** not applicable

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**EU Regulations**

**Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer:** none

**Regulation (EC) No. 850/2004 on persistent organic pollutants:** none

**Regulation (EC) No. 689/2008 Import and export of dangerous chemicals:** none

**Regulation (EC) No. 1907/2006 REACH Annex XIV Substance subject to authorisation, as amended:** none

**Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:**

Chemical name	CAS-No.	Concentration
Ethanol	64-17-5	80 - 90%
METHYL ETHYL KETONE	78-93-3	0,1 - 1,0%

**Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:** none

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:** none

**Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:**

Chemical name	CAS-No.	Concentration
Ethanol	64-17-5	80 - 90%
METHYL ETHYL KETONE	78-93-3	0,1 - 1,0%

**EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:** none

**Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:**

Chemical name	CAS-No.	Concentration
Ethanol	64-17-5	80 - 90%
METHYL ETHYL KETONE	78-93-3	0,1 - 1,0%

**15.2 Chemical safety assessment:**

No Chemical Safety Assessment has been carried out.

<b>SECTION 16: Other Information</b>
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**Revision Information:** Not relevant.

**References**

PBT PBT: persistent, bioaccumulative and toxic substance.  
vPvB vPvB: very persistent and very bioaccumulative substance.

**Key literature references and sources for data:** No data available.

**Wording of the H-statements in sections 2 and 3**

H225 Highly flammable liquid and vapour.

**Training information:** No data available.

**Issue Date:** 22.11.2017

**SDS No.:**

**Disclaimer:**

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