

# SAFETY DATA SHEET

## Section 1 - Chemical Product and Company Information



### PANNIER CORPORATION

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**Product Name:** 1178 AAK Acetone Pigmented Ink

**Product Use:** Ink

**Not recommended for:** Consumer Use

## Section 2 - Hazards Identification

### GHS Ratings

Flammable liquid	2	Flash point < 23°C and initial boiling point > 35°C (95°F)
Skin corrosive	3	Reversible adverse effects in dermal tissue, Draize score: >= 1.5 < 2.3
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days
Skin sensitizer	1	Skin sensitizer
Reproductive toxin	1B	Presumed, Based on experimental animals

### GHS Hazards

H225	Highly flammable liquid and vapor
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.

### GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233	Keep container tightly closed
P240	Ground/bond container and receiving equipment
P241	Use explosion-proof electrical/ventilating/light/manufacture/equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash contact area thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required
P321	Specific treatment (see supplemental first aid instruction on this label)
P363	Wash contaminated clothing before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention

P337+P313	If eye irritation persists, get medical advice/attention
P370+P378	In case of fire: Use ... for extinction
P405	Store locked up
P403+P235	Store in a well-ventilated place. Keep cool
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**Signal Word: Danger**



**Acute Toxicity**

N/A

**Conditions Aggravated**

N/A

**Chronic Effects**

N/A

### Section 3 - Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Acetone	67-64-1	60.00% - 70.00%
Titanium (IV) dioxide	13463-67-7	10.00% - 20.00%
Isopropanol	67-63-0	1.00% - 5.00%
Cellulose Nitrate	9004-70-0	1.00% - 5.00%
Methyl ethyl ketone	78-93-3	4.00%
Cyclohexanone	108-94-1	1.00% - 5.00%
1-Methyl-2-pyrrolidone	872-50-4	1.00%
Dibutyl phthalate	84-74-2	0.80%

### Section 4 - First Aid Measures

**INHALATION** - Move affected person to fresh air, rest in a half upright position, and loosen clothing . If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Seek medical advice after significant exposure.

**EYE CONTACT** - Flush with large amounts of water for at least 15 minutes . Lift eyelids occasionally. Get prompt medical attention.

**SKIN** - Wash thoroughly with soap and water immediately. Remove all contaminated clothing immediately. Seek medical advice if irritation persists.

**INGESTION** - Seek medical advice. The decision to induce vomiting or not must be made by a physician after careful consideration of all materials ingested. Risk of aspiration into lungs.

### Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**

Carbon Dioxide---Dry Chemical---Foam---Water Fog  
Use water for cooling material stored in vicinity of fire.

### **Explosion Hazards**

Vapors are heavier than air and may travel along the ground to an ignition source some distance from material handling point. Ignition sources include pilot lights, smoking, heaters, electric motors, sparks from electrical switches and static discharges.

CAUTION: Never use cutting torch on empty containers! Residual solvent vapor in empty container may explode. Application to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain Medical Attention.

### **Hazardous Combustion Products**

N/A

### **Recommended Fire Equipment**

Use self-contained breathing apparatus with a full-face piece operated in a pressure-demand or other positive pressure mode. Wear protective clothing.

## Section 6 - Accidental Release Measures

**Non-emergency personnel:** Evacuate and isolate the area and prevent access. Remove ignition sources. No flares, smoking or flames in hazard area. Notify management. Avoid breathing vapor or mist and put on protective equipment. Control source of the leak. Ventilate.

**Emergency responders:** See section 8 for any specialized clothing recommendations. Also reference the information for non-emergency personnel

**Environmental precautions:** Prevent further leakage or spillage if possible. Do not allow the material to spread to drains, sewers, water supplies, or soil.

**Small Spill:** Stop leak if possible and move containers from the spill area. Water soluble: dilute with water and mop up. Water Insoluble: Cover spill area with a suitable absorbent inert material (Kitty Litter, Oil-Dri, etc.) and dispose of in an appropriate metal waste container. Dispose of material through a licensed waste disposal contractor.

**Large Spill:** Stop leak if possible and move containers from the spill area. Approach release from upwind. Contain spillage and with non-combustible absorbent material and place in appropriate disposal container according to local regulations. Dispose of material through a licensed waste disposal contractor. Report spill to appropriate governing agencies if applicable.

## Section 7 - Handling and Storage

### **Precautions for Safe Handling**

Keep away from food, drink and heat. Keep away from sources of ignition. No smoking. Do not breathe vapor. Avoid contact with skin and eyes. Never use pressure to empty. Take precautionary measures against static discharges .

Storage temperature-

Minimum: do not freeze  
Maximum: 40°C (104°F)

Storage Period- See technical data sheet.

## Section 8 - Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Acetone 67-64-1	1000 ppm TWA; 2400 mg/m <sup>3</sup> TWA	500 ppm STEL 250 ppm TWA	NIOSH: 250 ppm TWA; 590 mg/m <sup>3</sup> TWA
Titanium (IV) dioxide 13463-67-7	15 mg/m <sup>3</sup> TWA (total dust)	10 mg/m <sup>3</sup> TWA	N/A
Isopropanol 67-63-0	400 ppm TWA; 980 mg/m <sup>3</sup> TWA	400 ppm STEL 200 ppm TWA	NIOSH: 400 ppm TWA; 980 mg/m <sup>3</sup> TWA 500 ppm STEL; 1225 mg/m <sup>3</sup> STEL
Cellulose Nitrate 9004-70-0	N/A	N/A	N/A
Methyl ethyl ketone 78-93-3	200 ppm TWA; 590 mg/m <sup>3</sup> TWA	300 ppm STEL 200 ppm TWA	NIOSH: 200 ppm TWA; 590 mg/m <sup>3</sup> TWA 300 ppm STEL; 885 mg/m <sup>3</sup> STEL
Cyclohexanone 108-94-1	50 ppm TWA; 200 mg/m <sup>3</sup> TWA	50 ppm STEL 20 ppm TWA	NIOSH: 25 ppm TWA; 100 mg/m <sup>3</sup> TWA
1-Methyl-2-pyrrolidone 872-50-4	Not Established	Not Established	Not Established
Dibutyl phthalate 84-74-2	5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA	NIOSH: 5 mg/m <sup>3</sup> TWA

**Engineering Controls:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other controls to keep air containment concentration below current applicable OSHA permissible exposure limit or ACGIH TLV limit, and volatiles below lower explosive limit. Heavy solvent vapors should be removed from the lower levels of area, and all ignition sources (non-explosion proof equipment) should be eliminated if flammable mixtures will be encountered. Remove decomposition products formed during welding or flame cutting of surfaces coated with this product. For baking finishes - vent vapors emitted on heating.

**Environmental Controls:** Emissions should comply with environmental protection legislation.

### **Individual Protection Measures:**

**Hygiene measures-** Wash hands, forearms, etc. after handling chemical products, before eating, smoking, and using the lavatory, and the end of the work period. Use appropriate techniques when removing potentially contaminated clothing and wash before reusing. Know the locations of eyewash and safety showers.

**Respiratory Protection-** Provide adequate ventilation to keep exposure below permissible limits. If a risk assessment deems necessary, operator is to use a properly fitted, air purifying or supplied air respirator. Respirator selection must be based on known/ anticipated exposure levels, the hazards of the product, and the safe working limits of the respirator.

Skin and Body Protection- Wear chemical resistant gloves (nitrile) and paint suits when necessary, based on risk assessment. The most suitable glove must be chosen in consultation with the gloves supplier who can inform about the breakthrough time of the glove material. PPE for the body should be selected based on the risks of the task being performed and approved by a specialist. Appropriate footwear should also be approved.

Eye/Face Protection- Wear approved chemical safety goggles where exposure to vapor or contact with eyes is possible. Eye wash stations should also be made available. If inhalation hazard exists, a risk assessment will determine if a full-face respirator may be required

## Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties:

<b>Vapor Pressure:</b> N/A	<b>Vapor Density:</b> N/A
<b>Freezing Point:</b> Not determined	<b>Partition coefficient:</b> Not determined
<b>Viscosity:</b> Not determined	<b>pH:</b> N/A
<b>% Weight Solids</b> 25.84	<b>% Volume Solids</b> 9.38
<b>VOC Wt/Gal (wet)</b> 6.08	<b>U.S. VOC Wt/Gal (wet)</b> 1.06
<b>Specific Gravity (SG)</b> 0.983	<b>Odor:</b> Sweet
<b>Odor Threshold:</b> Not determined	<b>Color:</b> White
<b>Boiling Point:</b> 56°C	<b>Flash Point:</b> 1°F,-17°C
<b>LEL/UEL:</b> 1% - 13%	<b>Autoignition Temperature:</b> 170°C
<b>Evaporation Rate (nBuAc=1):</b> Not determined	

## Section 10 - Stability and Reactivity

### Stability and reactivity profile

This material is considered stable  
Hazardous polymerization will not occur.

### The following materials should be avoided in contact with the mixture

Oxidizing agents  
Strong bases  
Reducing agents  
Strong acids

### Hazardous decomposition products

Carbon oxides  
Titanium/titanium oxides

## Section 11 - Toxicological Information

### Mixture Toxicity

Inhalation Toxicity LC50: 67mg/L

### Component Toxicity

LC<sub>50</sub> and LD<sub>50</sub> toxicity for this product are merely estimates and have yet to be determined. For individual component ecotoxicity, please refer to Section 11.

### Possible Routes of Entry

Inhalation	Skin Contact	Eye Contact	Ingestion			
<b><u>Potential Target Organs</u></b>						
Eyes	Kidneys	Liver	Lungs	Central Nervous System	Skin	GI Tract
Respiratory System						

**Effects of Overexposure**

Not Available

**The following components are possible carcinogens**

**\*Materials labeled a carcinogen in dust form are supplied in solution, thus eliminating the hazard.**

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
13463-67-7	Titanium (IV) dioxide	10 to 20%	Titanium (IV) dioxide: (*dust) NIOSH: potential occupational carcinogen IARC: Possible human carcinogen OSHA: listed

## Section 12 - Ecological Information

**Mixture Ecotoxicity**

Toxicity- Do not release into environment. May cause long term adverse effects.

Persistence and degradability- N/A

Bioaccumulative potential- N/A

Mobility in Soil- N/A

**Component Ecotoxicity**

Acetone	96 Hr LC50 Oncorhynchus mykiss: 4.74 - 6.33 mL/L; 96 Hr LC50 Pimephales promelas: 6210 - 8120 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L 48 Hr EC50 Daphnia magna: 10294 - 17704 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 - 12700 mg/L
Isopropanol	96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11130 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L 48 Hr EC50 Daphnia magna: 13299 mg/L 96 Hr EC50 Desmodesmus subspicatus: >1000 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L
Methyl ethyl ketone	96 Hr LC50 Pimephales promelas: 3130 - 3320 mg/L [flow-through] 48 Hr EC50 Daphnia magna: >520 mg/L; 48 Hr EC50 Daphnia magna: 5091 mg/L; 48 Hr EC50 Daphnia magna: 4025 - 6440 mg/L [Static]
Cyclohexanone	96 Hr LC50 Pimephales promelas: 481 - 578 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 8.9 mg/L
1-Methyl-2-pyrrolidone	96 Hr LC50 Lepomis macrochirus: 832 mg/L [static]; 96 Hr LC50 Pimephales promelas: 1072 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 1400 mg/L [static] 48 Hr EC50 Daphnia magna: 4897 mg/L 72 Hr EC50 Desmodesmus subspicatus: >500 mg/L

Dibutyl phthalate

96 Hr LC50 Pimephales promelas: 0.71 - 1.2 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 0.31 - 5.45 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: >1.24 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 1.24 - 5.3 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 1.38 - 1.74 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 0.42 - 1.28 mg/L [static]  
48 Hr EC50 Daphnia magna: 2.99 mg/L [Static]; 48 Hr EC50 Daphnia magna: 3.4 mg/L  
72 Hr EC50 Desmodesmus subspicatus: 1.2 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: 0.4 mg/L [static]

## Section 13 - Disposal Considerations

Dispose of in accordance with federal, state and local regulations. Controlled incineration is recommended for disposal of unused product. Prevent contamination of soil, drains and surface waters. Dispose of large containers to a licensed reconditioner. Dispose of small containers in compliance with local regulations.

## Section 14 - Transport Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	PRINTING INK	UN1210	II	3
DOT - LQ	PRINTING INK, LTD QTY <1 gal / inner package, up to 66 lbs			
IATA	PRINTING INK Pkg Instr: Y341/353/364	UN1210	II	3
IMDG	PRINTING INK EmS: F-E, S-D	UN1210	II	3

## Section 15 - Regulatory Information

The following chemicals are listed in California Title 8 CCR Sections as Hazardous

Substances 108-94-1 Cyclohexanone  
78-93-3 Methyl ethyl ketone  
67-63-0 Isopropanol  
67-64-1 Acetone

The following chemicals are listed in Section 64 of the Canadian Environmental Protection Act, 1999 (CEPA)

- None

The following chemicals are classified by China - Environmental Quality Standards for Surface Water

- None

The following chemicals have been listed by the EU-End of Life Vehicles (2000/53/EC) (ELV):

- None

The following chemicals are listed in the EU-Substances of Very High Concern (2008/67/ED) (SVHC):

872-50-4 1-Methyl-2-pyrrolidone

The following chemicals are listed in the EU-Restriction of the use of certain Hazardous Substances (2011/65/EU) (RoHS):

84-74-2 Dibutyl phthalate

The following chemicals are listed under the European Union- Waste Electrical and Electronic Equipment (2012/19/EU) (WEEE)

- None

The following chemicals are included in the Global Automotive Declarable Substance List (GADSL)

872-50-4 1-Methyl-2-pyrrolidone

The following substances are required for notification by the Japanese Enforcement Order of the Industrial Safety and Health Law (ISHL):

- 108-94-1 Cyclohexanone
- 78-93-3 Methyl ethyl ketone
- 9004-70-0 Cellulose Nitrate
- 67-63-0 Isopropanol
- 13463-67-7 Titanium (IV) dioxide
- 67-64-1 Acetone

The following chemicals are listed on the Massachusetts Right-to-Know Hazardous Substances List.

- 872-50-4 1-Methyl-2-pyrrolidone
- 108-94-1 Cyclohexanone
- 78-93-3 Methyl ethyl ketone
- 9004-70-0 Cellulose Nitrate
- 67-63-0 Isopropanol
- 13463-67-7 Titanium (IV) dioxide
- 67-64-1 Acetone

The following chemicals are listed on the New Jersey Right-to-Know Hazardous Substances List.

- 872-50-4 1-Methyl-2-pyrrolidone
- 108-94-1 Cyclohexanone
- 78-93-3 Methyl ethyl ketone
- 9004-70-0 Cellulose Nitrate
- 67-63-0 Isopropanol
- 13463-67-7 Titanium (IV) dioxide
- 67-64-1 Acetone

The following chemicals are listed on the Pennsylvania Right-to-Know Hazardous Substances List.

- 872-50-4 1-Methyl-2-pyrrolidone
- 108-94-1 Cyclohexanone
- 78-93-3 Methyl ethyl ketone
- 9004-70-0 Cellulose Nitrate
- 67-63-0 Isopropanol
- 13463-67-7 Titanium (IV) dioxide
- 67-64-1 Acetone

The following chemicals are listed by the State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

- 872-50-4 1-Methyl-2-pyrrolidone 1 % Carcinogen
- 13463-67-7 Titanium (IV) dioxide 10 to 20 % Carcinogen

Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) requires certain facilities manufacturing, processing, or otherwise using listed toxic chemicals to report their environmental releases of such chemicals annually. The following chemicals are listed:

- 872-50-4 1-Methyl-2-pyrrolidone 1 %

Under Section 12(b) of the Toxic Substances Control Act (TSCA), exporters may need to notify the U.S. Environmental Protection Agency if they export or intend to export a product containing a chemical substance that is present on this list. The following substances are contained within this material:

- None

The following chemicals are listed as a *Hazardous Air Pollutant* under listed under the U.S. CAA (Clean Air Act)

- None

**Country**

**Regulation**

**All Components Listed**



Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Canadian Domestic Substances List (DSL)	Yes
Canada	Canadian Non-Domestic Substances List (NSDL)	No
China	Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Europe	REACH Registered or Pre-Registered Substances and Intermediates	Yes
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	Yes
Japan	Japan Inventory of Industrial Safety and Health Law Substances (ISHL)	No
Korea	Korean Existing Chemical Inventory (KECI)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes
USA	Toxic Substances and Control Act (TSCA)	Yes

**EU Risk Phrases**

Not Available

**Safety Phrase**

Not Available

**Section 16 - Other Information**

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard . A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria . The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders . The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

**Hazardous Material Information System (HMIS)**

HEALTH	2
FLAMMABILITY	4
PHYSICAL HAZARD	0
PERSONAL PROTECTION	G

**HMIS & NFPA Hazard Rating**

**Legend**

\* = Chronic Health Hazard

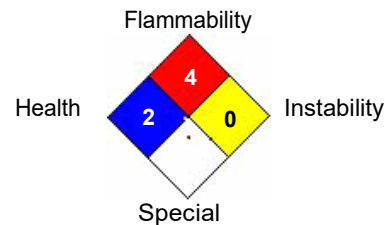
0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

**National Fire Protection Association (NFPA)**



The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Date revised: 2017-01-27

Date Prepared: 6/27/2018

Revision No:

Reviewer ID: KVosecky