SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

VMC 090

1. Product and company identification

Product number **VMC 090**

Trade name: Viskoflex

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

General use: Solvent, Cleaning agent.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: PANNIER CORPORATION
Street/POB-No.: 207 Sandusky Street
Postal Code, city: Pittsburgh,PA 15212-5823
USA
WWW: www.pannier.com
E-mail: sales@pannier.com
Telephone: (412) 323-4900

Emergency phone numbers

INFOTRAC: 24-hour telephone number: 1-800-535-5053

2. Hazards identification

Emergency overview

Appearance: Form: liquid
Color: colorless
Odor: like solvent

Classification: Flammable Liquid - Category 2; Eye Irritation - Category 2A;
Specific Target Organ Toxicity (Single Exposure) - Category 3;

Hazard symbols:

Signal word: **Danger**

Hazard statements: Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing vapors.
Wash hands and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use ... to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may have a narcotic effect.
Repeated exposure may cause skin dryness or cracking. Danger of cutaneous absorption.
see section 11: Toxicological information

3. Composition / Information on ingredients

RTECS-Number: EL6475000

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 78-93-3	Methyl ethyl ketone	90 - 100 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.

4. First aid measures

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. Keep airway open.
Seek medical treatment in case of troubles.

Following skin contact: Wash with plenty of water. Change contaminated clothing.
In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After swallowing: Danger of aspiration! Do not induce vomiting.
Give activated carbon (20-40 g in a suspension of 10%).
Do not give fatty oils and milk.
Keep airway open. Immediately get medical attention.
Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

May cause drowsiness or dizziness.
Causes serious eye irritation.
Following skin contact: Danger of cutaneous absorption.
Repeated exposure may cause skin dryness or cracking.
After ingestion: Nausea and vomiting. Danger of aspiration!
Even very small amounts of this product that enters the lungs as a result of vomiting may lead to inflammation of the lungs or a pulmonary edema.

Information to physician

Treat symptomatically.
After ingestion of high quantities: Gastric lavage
As a laxative, affected person should drink sodium sulfate (1 tablespoon in 1/4 L water).

5. Fire fighting measures

Flash point/flash point range:
24.8 °F (DIN 51755)

Auto-ignition temperature: no data available

Suitable extinguishing media:
Water fog, foam, powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:
High power water jet

Specific hazards arising from the chemical

Combustible. Highly flammable liquid and vapor.
Vapors are heavier than air and will travel at floor level.
Explosive mixtures with air may even form at room temperature.
Hazardous vapors may form during fires.
In case of fire may be liberated: Peroxides, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:
Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Do not expose to high temperature. Danger of bursting and explosion. Cool exposed containers with water spray.
Move undamaged containers from immediate hazard area if it can be done safely.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions: Eliminate all ignition sources if safe to do so.
Do not breathe vapor or spray. Avoid contact with the substance.
Provide adequate ventilation. Keep unprotected people away.
When using do not smoke. Avoid sparks.
Keep unprotected people away.
Cordon off downwind area at risk and warn inhabitants.

Environmental precautions:
Do not empty into drains. Danger of explosion !
In case of release, notify competent authorities.

Methods for clean-up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Final cleaning.

Additional information: Take precautionary measures against static discharges.
Use explosion-proof equipment and non-sparking tools/utensils.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe vapors.
Avoid contact with skin and eyes. Wear protective equipment.
Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.

Precautions against fire and explosion:
Keep away from sources of ignition. - No smoking.
Take precautionary measures against static discharges.
Use only explosion-protected equipment/instruments. Do not weld.
In partially filled containers explosive mixtures may form.

Storage

Requirements for storerooms and containers:
Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position. Explosion protection required.

Hints on joint storage: Do not store together with combustible or self-igniting materials or any highly flammable solids.
Keep away from: strong oxidizing agents, strong acids, strong alkalis. Keep away from food, drink and animal feedingstuffs.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
78-93-3	Methyl ethyl ketone	USA: ACGIH: STEL	885 mg/m³; 300 ppm
		USA: ACGIH: TWA	590 mg/m³; 200 ppm
		USA: NIOSH: STEL	885 mg/m³; 300 ppm
		USA: NIOSH: TWA	590 mg/m³; 200 ppm
		USA: OSHA: TWA	590 mg/m³; 200 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
78-93-3	Methyl ethyl ketone	USA: ACGIH-BEI, urine	2 mg/L	MEK	end of exposure or end of shift

Engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
For this environment make sure that the goggles have only indirect ventilation or no ventilation. As appropriate chose anti-fog coated lens.

Skin protection: Wear suitable protective clothing.
In case of handling larger quantities: Flame-resistant antistatic protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Butyl caoutchouc (butyl rubber)-Layer thickness: 0,7 mm.
Breakthrough time: >240 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.
Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Avoid generation of vapors/aerosols.
Do not breathe vapor or spray. Avoid contact with skin and eyes.
When using do not eat, drink or smoke. Change contaminated clothing.
After work, wash hands and face.
Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Safety shower and eye wash station should be easily accessible to the work area.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: liquid Color: colorless
Odor:	like solvent
Odor threshold:	no data available
pH value:	at 68 °F: 7
Melting point/freezing point:	-122.8 °F
Initial boiling point and boiling range:	175.28 °F (1013 hPa)
Flash point/flash point range:	24.8 °F (DIN 51755)
Evaporation rate:	no data available
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 1.80 Vol-% UEL (Upper Explosive Limit): 11.50 Vol-%
Vapor pressure:	at 68 °F: 105 hPa at 122 °F: 370 hPa
Vapor density:	no data available
Density:	at 68 °F: 0.805 g/mL
Solubility:	at 68 °F: soluble in organic solvents
Water solubility:	at 68 °F: 292 g/L
Partition coefficient: n-octanol/water:	0.29 log P(o/w) (experimental) Bio-accumulation is not to be expected (log P(o/w) <1).
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	at 68 °F: 0.4 mPa*s
Explosive properties:	Vapors may form explosive mixtures with air.
Ignition temperature:	957.2 °F (DIN 51794)
Refraction index:	at 68 °F: 1.38
Additional information:	Molar mass: 72,11 g/mol Relative vapor density at 68 °F (air=1): 2,48

10. Stability and reactivity

Reactivity: Highly flammable liquid and vapor.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions
Do not expose to high temperature. Danger of bursting and explosion.

Conditions to avoid: Keep away from heat sources, sparks and open flames.
Protect against direct sunlight.

Incompatible materials: Strong oxidizing agents, strong acids, strong alkalis.
Exothermic reactions with: Chromium trioxide, oxidizing agents, alcali hydroxide. Release of: peroxides.
Ignition hazard! Release of highly flammable gas/vapor.
Danger of explosion with: hydrogen peroxide, nitric acid, sulphuric acid.

Unsuitable materials: various plastics

Hazardous decomposition products:
In case of fire may be liberated: Peroxides, carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
Information about Methyl ethyl ketone:
LD50, Rat, oral: >2600 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
Information about Methyl ethyl ketone:
LD50, Rat, dermal: 5000 mg/kg
Rabbit, dermal: >8000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
Information about Methyl ethyl ketone: LC50 Rat, inhalative: 12000 mg/L/4h

Skin corrosion/irritation: Lack of data.
Information about Methyl ethyl ketone:
Specific symptoms in animal studies: mild irritant (Rabbit).

Eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.
Information about Methyl ethyl ketone: Sensitization: not sensitising (guinea pig).

Germ cell mutagenicity/Genotoxicity: Lack of data. Information about Methyl ethyl ketone:
Bacterial mutagenicity: Negative in the Ames test.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: After absorption of large quantities:
CNS disorders, inebriation, blood pressure drop, narcosis, cardiac arrhythmias.
Chronic uptake results in damage of: liver.

Symptoms

In case of inhalation: Mucous membrane irritation, cough, shortage of breath, dizziness.

In case of ingestion: Nausea and vomiting. Danger of aspiration!
Even very small amounts of this product that enters the lungs as a result of vomiting may lead to inflammation of the lungs or a pulmonary edema.
After contact with skin: May cause irritations. Danger of cutaneous absorption.
Repeated exposure may cause skin dryness or cracking.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Information about methyl ethyl ketone:
Fish toxicity:
LC50 Pimephales promelas : 3220 mg/L/96h.
Daphnia toxicity:
EC50 Daphnia magna: 5091 mg/L/48h.
Algae toxicity:
IC5 Scenedesmus quadricauda : >= 4300 mg/L/7d.
Bacterial toxicity:
EC5 Pseudomonas putida : 1150 mg/L/16h.

Mobility in soil

no data available

Persistence and degradability

Further details: Information about methyl ethyl ketone:
Abiotic degradation: quickly degradable (Air).
DOC reduction: >70%; BOD >60%; BOD5/COD ratio: >50%
Product is readily biodegradable.

Additional ecological information

Oxygen demand:
BOD: (Methyl ethyl ketone, of ThOD/5d) 76 %
COD: (Methyl ethyl ketone, of ThOD) 95 %
ThOD: (Methyl ethyl ketone) 2,44 g/g

Volatile organic compounds (VOC):
maximum 100 % by weight = 805 g/L

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

Product

Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Identification numbers:	UN1263
Proper shipping name:	UN 1263, Paint related material
DOT hazard class or division:	3
PG:	II
Label codes:	3
Special provisions:	149, 367, B52, IB2, T4, TP1, TP8, TP28
Packaging - Exceptions:	150
Packaging - Non-bulk:	173
Packaging - Bulk:	242
Quantity limitations - Passenger aircraft / rail:	5 L
Quantity limitations - Cargo only:	60 L
Vessel stowage - Location:	B

Sea transport (IMDG)

UN number:	UN 1263
Proper shipping name:	UN 1263, Paint related material
IMDG:	Class 3, Subrisk -
Packing Group:	II
EmS:	F-E, S-E
Special provisions:	163, 367
Limited quantities:	5 L
EQ:	E2
Contaminated packaging - Instructions:	P001
Contaminated packaging - Provisions:	PP1
IBC - Instructions:	IBC02
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	T4
Tank instructions - Provisions:	TP1, TP8, TP28
Stowage and handling:	Category B.
Properties and observations:	Miscibility with water depends upon the composition.
Marine pollutant:	No
Segregation group:	none

Air transport (IATA)

UN/ID number:	UN 1263
Proper shipping name:	UN 1263, Paint related material
ICAO/IATA:	Class 3
PG:	II
Hazard:	Flamm. liquid
EQ:	E2
Passenger Ltd.Qty.:	Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger:	Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo:	Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisioning:	A3 A72 A192
ERG:	3L

15. Regulatory information

U.S. Federal Regulations

Product:

TSCA Inventory: listed
TSCA HPVC: not listed
Other Environmental Laws:
CERCLA: RQ 5000 lbs.
RCRA Hazardous Wastes: Code U159
RCRA Groundwater Monitoring: Methods 8015, 8240 / PQL 10, 100
NIOSH Recommendations:
Occupational Health Guideline: 0069*

Methyl ethyl ketone:

TSCA Inventory: listed
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NIOSH Recommendations:
Occupational Health Guideline: 0069*

U.S. State Regulations

Delaware Air Quality Management List:
DRQ: 5000 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List: Title 585/Title 586: -
Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9
Minnesota Haz. Substance:
Codes: ANO - Ratings: 9.7 - Status: Air Pollutant Title III. TRI.
New Jersey RTK Hazardous Substance:
DOT: 1193 - Sub No.: 1258 - TPQ: -
New York List of Hazardous Substances:
RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: E
Washington Air Contaminant:
TWA: 200 ppm - 590 mg - STEL: 300 ppm - 885 mg

National regulations - Canada

DSL: not listed
NDSL: listed

National regulations - Great Britain

Hazchem-Code: •3YE

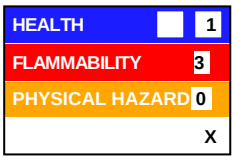
16. Other information

Text for labeling: Contains 90 - 100 % Methyl ethyl ketone. Safety data sheet available on request.

Hazard rating systems:

NFPA Hazard Rating:
Health: 1 (Slight)
Fire: 3 (Serious)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 3 (Serious)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor



Literature: ICSC 0166

Date of first version: 6/15/2015

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.