

BYK-4509

Version 9

Revision Date 05/12/2022

Print Date 01/15/2024

SECTION 1. IDENTIFICATION

Product name : BYK-4509

Manufacturer or supplier's details

Company : BYK USA Inc.
524 South Cherry Street
Wallingford CT 06492

Telephone : (203) 265-2086
Visit our web site : www.byk.com
E-mail address : BRIEF.BYK.NAFTA@altana.com

Emergency telephone : 203-265-2086; CHEMTREC 1-800-424-9300 / +1
number 703-527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Adhesion Promoter
Restrictions on use : Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 3

Skin irritation : Category 2

Eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
No smoking.
P233 Keep container tightly closed.

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P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

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

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : solution of polyester alkyl ammonium salt

Hazardous components

Component	CAS-No.	Concentration (%)
1-Methoxy-2-propanol	107-98-2	>= 19 - < 20

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SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Remove to fresh air. Administer artificial respiration if necessary. Get medical aid as soon as possible.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Remove contaminated clothing. Wash thoroughly with soap and water.
If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush with plenty of water for at least 20 minutes.
Get medical aid.
Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Do not induce vomiting; aspiration hazard. Dilute with 1-2 glasses of water. Get medical aid. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.
Never give anything by mouth to an unconscious person.
Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No information available.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Foam
Carbon dioxide (CO₂)
Dry chemical
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : No information available.
- Specific hazards during firefighting : High volume water jet
Will not explode on mechanical impact.
Do not allow run-off from fire fighting to enter drains or water

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	courses.
Hazardous combustion products	: Carbon oxides Nitrogen oxides (NO _x)
Further information	: Keep away from heat and sources of ignition. Keep away from oxidizing agents. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus. Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Eliminate all sources of ignition. Ventilate area if indoors. Wear self-contained breathing apparatus and full protective clothing.
	: Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	: Prevent spilled material from entering the ground, water and/or air by using appropriate containment methods. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Stop leak. Dike and contain spill. Absorb with suitable material and remove with sparkless shovel and/or scoop. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

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- Advice on safe handling : Harmful in contact with skin.
 Avoid contact with skin and eyes.
 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 Keep container closed when not in use.
 Ensure all equipment is electrically grounded before beginning transfer operations.
 Containers should be grounded when being emptied.
 Vapours may travel to areas away from work site before igniting/flashing back to Vapour source.
 Avoid formation of aerosol.
 Do not breathe vapours/dust.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Take precautionary measures against static discharges.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Open drum carefully as content may be under pressure.
 Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Avoid exposure to excessive heat, light, and air for prolonged periods of time.
 Keep in a dry, cool and well-ventilated place.
 Keep product and empty container away from heat and sources of ignition.
 Take measures to prevent the build up of electrostatic charge.
 No smoking.
 Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.
 Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from oxidizing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
1-Methoxy-2-propanol	107-98-2	TWA	50 ppm	ACGIH
1-Methoxy-2-propanol		STEL	100 ppm	ACGIH

Engineering measures : Use with local exhaust ventilation.

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Personal protective equipment

- Respiratory protection : Unless air monitoring demonstrates vapor/mist/dust levels are below the PEL/TLV wear a properly fitted respirator (NIOSH approved) or dust mask during exposure. In the case of vapour formation use a respirator with an approved filter.
- Hand protection
Material : Nitrile rubber
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Goggles
Safety glasses with side-shields
Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Clean long legged, long sleeved work clothes.
If splashing is possible, wear chemically resistant protective clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
Colour : light yellow
Odour : characteristic
Odour Threshold : No data available

pH : 7, Concentration: 10 % (68 °F (20 °C)) Method: Universal pH-value indicator

Melting point/range : < 32 °F (< 0 °C)
Method: derived

Initial boiling point and boiling range : > 248 °F (> 120 °C)
Method: derived

Vapour pressure : 12 hPa (68 °F (20 °C))
Method: derived

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Flash point	: 113 °F (45 °C) Method: 48 (Abel-Pensky)
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Evaporation rate	: No data available
Relative vapour density	: No data available
Relative Density/Specific Gravity	: No data available
Density	: 1.111 g/cm ³ (68 °F (20 °C)) Method: 4 (20°C oscillating U-tube)
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Ignition temperature	: > 392 °F (> 200 °C) Method: DIN 51794
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard. No decomposition if stored and applied as directed.
Chemical stability	: Stable; polymerization will not occur No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: 1-Methoxy-2-propanol acetate/DPM may form peroxides of unknown stability. No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.

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Conditions to avoid	: Prolonged heat/light/air exposure Heat, flames and sparks.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: No data available

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Ingestion

Eyes

Skin Absorption

Skin contact

Acute toxicity**Product:**

Acute oral toxicity : Remarks: No data available

Components:**107-98-2 1-Methoxy-2-propanol:**

Acute oral toxicity	: LD50 (Rat, male and female): 4,016 mg/kg Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral) GLP: yes
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Acute inhalation toxicity	: LC50 (Rat): 1500 ppm
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Acute dermal toxicity	: LD50 (Rabbit): 13,000 mg/kg
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Skin corrosion/irritation**Product:**

Remarks: No data available

Remarks: May cause skin irritation in susceptible persons.

Components:**107-98-2 1-Methoxy-2-propanol:**

Species: Rabbit

Method: Directive 67/548/EEC, Annex V, B.4.

Result: No skin irritation

GLP: yes

Serious eye damage/eye irritation**Product:**

Remarks: Causes serious eye irritation.

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Components:**107-98-2 1-Methoxy-2-propanol:**

Species: Rabbit

Result: No eye irritation

Method: Directive 67/548/EEC, Annex V, B.5.

GLP: yes

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Components:**107-98-2 1-Methoxy-2-propanol:**

Test Type: Maximisation Test

Exposure routes: Dermal

Species: Guinea pig

Method: Directive 67/548/EEC, Annex V, B.6.

Result: Does not cause skin sensitisation.

GLP: yes

Germ cell mutagenicity**Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Carcinogenicity**Product:**

Remarks: No data available

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Product:**

Effects on fertility : Remarks: No data available

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Effects on foetal development : Remarks: No data available

STOT - single exposure**Product:**

Remarks: No data available

STOT - repeated exposure**Product:**

Remarks: No data available

Repeated dose toxicity**Product:**

Remarks: Solvent absorption by inhalation and/or repeated skin contact may cause injury to liver, kidney and respiratory system.

Aspiration toxicity**Product:**

No data available

Experience with human exposure**Product:**

Inhalation:

Symptoms:

High concentrations are irritating to the respiratory tract. Has caused headaches, dizziness, nausea, vomiting and CNS depression (drowsiness, loss of coordination and fatigue).

Skin contact:

Symptoms:

Contact will probably cause irritation.

Eye contact:

Symptoms:

Contact will probably cause irritation.

Ingestion:

Symptoms:

Ingestion will probably irritate the digestive tract; high dosages may cause CNS depression.

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Further information**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : Remarks: No data available

Persistence and degradability**Product:**

Biodegradability : Remarks: No data available

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : There is no data available for this product.
No data available

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

EPA Hazardous Waste Code(s) : D001: Ignitable

Waste from residues : Dispose of in accordance with applicable local/municipal, state/provincial and federal regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 3092
Proper shipping name : 1-Methoxy-2-propanol, solution
Class : 3
Packing group : III
Labels : Flammable Liquids
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355

IMDG-Code

UN number : UN 3092
Proper shipping name : 1-METHOXY-2-PROPANOL, SOLUTION
Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

UN/ID/NA number : UN 3092
Proper shipping name : 1-Methoxy-2-propanol, solution
Class : 3

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Packing group : III
Labels : FLAMMABLE LIQUID
ERG Code : 129
Marine pollutant : no
Container sizes: 55 gallon drums, 5 or 6-gallon pails, 2oz/16oz samples

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****US. EPA CERCLA Hazardous Substances (40 CFR 302)**

This material does not contain any components with a CERCLA RQ.

SARA 304 - Emergency Release Notification

This material does not contain any components with a section 304 EHS RQ.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

This material does not contain any components with a SARA 302 RQ.

SARA 311/312 Hazards : Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

Massachusetts Right To Know

1-Methoxy-2-propanol

107-98-2

Pennsylvania Right To Know

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Polymer	-
1-Methoxy-2-propanol	107-98-2

New Jersey Right To Know

Polymer	-
1-Methoxy-2-propanol	107-98-2

New Jersey Trade Secret : 800963-5379
Registry Number for the product (NJ TSRN)

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b) : Not applicable

TSCA Inventory Active List All components of this product are listed active and/or are exempt

DSL : The following component(s) is/are not listed on the DSL:

CEPA Category	: Polymer
Weight percent	: 81.0 %
NSN Filed	: Schedule 9
Max. NSN Required	: Schedule 10

SECTION 16. OTHER INFORMATION

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.