

BYK-4511

Version 5

Revision Date 06/05/2012

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : BYK-4511
Product Use Description : Adhesion Promoter

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

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Telephone : (203) 265-2086
Visit our web site : www.byk.com
E-mail address : ehs.byk.usa@altana.com
Emergency telephone number : CHEMTREC 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid
Colour : light yellow
yellow
Odour : solvent-like pleasant

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR1910.1200)

Potential Health Effects

Eyes : Contact will probably cause irritation.

Skin : Contact will probably cause irritation. Absorption has caused same symptoms as inhalation.

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

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

Other Acute Effects : If absorbed, ingested, or inhaled, Methanol can cause metabolic acidosis, blurred vision and blindness (temporary or permanent). In extreme ingestion cases, Methanol has caused death. Methanol may cause dermatitis by skin contact. ACGIH TLV-TWA for methanol = 200 ppm (skin)

Chronic Exposure : Absorption of Methanol by inhalation and/or repeated skin contact has been known to cause damage to the liver, kidney,

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blood and/or bone marrow.
Methanol may cause dermatitis by skin contact. Animal studies have shown Methanol to be teratogenic and fetotoxic. Methanol had positive results in in-vivo mutagenicity studies. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.
Studies suggest that 2-Methoxy-1-propanol acetate is teratogenic in animals. There is also evidence of fetotoxicity. Animal studies show that 1-Methoxy-2-propanol acetate has caused damage to the respiratory system.

Aggravated Medical Condition : May be aggravating to some skin conditions
asthma-type conditions
pre-existing liver and/or kidney disorders

Primary Routes of Entry : Inhalation
Ingestion
Eyes
Skin Absorption
Skin contact

Carcinogenicity:

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.

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

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.

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

Environmental Effects

Environmental Effects : No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Solution of a copolymer with functional groups

Hazardous components

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Component	CAS-No.	Weight percent
1-Methoxy-2-propanol acetate	108-65-6	30.00 - 60.00
Methanol	67-56-1	1.00 - 5.00
2-Methoxy-1-propanol acetate (impurity)	70657-70-4	0.10 - 1.00

SECTION 4. FIRST AID MEASURES**First aid procedures**

- Inhalation : Remove to fresh air. Administer artificial respiration if necessary. Get medical aid as soon as possible.
- Skin contact : Remove contaminated clothing. Wash thoroughly with soap and water. If irritation develops, get medical aid.
- Eye contact : Immediately flush with plenty of water for at least 20 minutes. Get medical aid.
- Ingestion : 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.

Notes to physician

- Risks : No information available.
- Treatment : In case of contact with water material splits off (also in gastrointestinal tract) methanol; therefore consider poisoning on methanol and also observe known period of latency of several days!

SECTION 5. FIREFIGHTING MEASURES**Flammable properties**

- Flash point : 24 °C (75 °F)
Method: 48 (Abel-Pensky)
- Ignition temperature : > 200 °C (> 392 °F)
- Lower explosion limit : no data available

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Upper explosion limit	: no data available
Suitable extinguishing media	: Foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	: No information available.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.
Specific hazards during firefighting	: Will not explode on mechanical impact. Cool closed containers exposed to fire with water spray.
Hazardous decomposition products due to incomplete combustion.	: Carbon oxides silicone compounds formaldehyde nitrogen oxides (NO _x)
Further information	: Keep away from heat and sources of ignition. Keep away from oxidizing agents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Eliminate all sources of ignition. Ventilate area if indoors. Wear self-contained breathing apparatus and full protective clothing.
Environmental precautions	: Prevent spilled material from entering the ground, water and/or air by using appropriate containment methods.
Methods for containment	: Stop leak. Dike and contain spill.
Methods for cleaning up	: Absorb with suitable material and remove with sparkless shovel and/or scoop.
Additional advice	: No further information is available.

SECTION 7. HANDLING AND STORAGE
Handling

Handling	: Harmful in contact with skin. Avoid contact with skin and eyes. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Keep away from oxidizing agents. Containers should be grounded when being emptied. Ensure all equipment is electrically grounded before beginning transfer operations. Vapors may travel to areas away from work site before
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igniting/flashing back to vapor source.*
 Keep container closed when not in use.
 Handle as an industrial chemical.

Advice on protection against fire and explosion : Product can separate methanol

Storage

Further information on storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place.

Protect from moisture.

Advice on common storage : Keep product and empty container away from heat and sources of ignition.
 Take precautionary measures against static discharges.
 Keep in a dry, cool and well-ventilated place.
 Keep away from strong acids.
 Keep away from strong bases.
 Avoid exposure to excessive heat, light, and air for prolonged periods of time.

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

Components	CAS-No.	Value	Control parameters	Update	Basis
1-Methoxy-2-propanol acetate	108-65-6	TWA	50 ppm	2008-01-01	US WEEL
Methanol	67-56-1	TWA	200 ppm	2007-01-01	ACGIH
		STEL	250 ppm	2007-01-01	ACGIH
		TWA	200 ppm 260 mg/m ³	1997-08-04	OSHA P1
		TWA	200 ppm 260 mg/m ³	1989-01-19	OSHA P0
		STEL	250 ppm 325 mg/m ³	1989-01-19	OSHA P0

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		TWA	200 ppm 260 mg/m ³	2005-09-01	NIOSH REL
		ST	250 ppm 325 mg/m ³	2005-09-01	NIOSH REL

Engineering measures

Engineering measures : Use with local exhaust ventilation.

Personal protective equipment

Eye protection : Goggles
Safety glasses with side-shields

Hand protection : Nitrile rubber

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Colour : light yellow
yellow

Odour : solvent-like pleasant

Odor Threshold : no data available

Flash point : 24 °C (75 °F)
Method: 48 (Abel-Pensky)

Ignition temperature : > 200 °C (> 392 °F)

Lower explosion limit : no data available

Upper explosion limit : no data available

pH : no data available

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Melting point/range	: < 0 °C (< 32 °F)
Initial boiling point	: ca.146 °C (295 °F) no data available
Vapour pressure	: ca.3.37 hPa no data available
Evaporation rate	: no data available
Density	: 1.025 g/cm ³ at 20 °C (68 °F) (1,013 hPa) Method: DIN EN ISO 2811-3
Bulk density	: not applicable
Water solubility	: immiscible
Partition coefficient: n-octanol/water	: no data available
Viscosity, dynamic	: at 20 °C (68 °F) no data available
Viscosity, kinematic	: at 40 °C (104 °F) no data available
Relative vapour density	: no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Exposure to air or moisture over prolonged periods. Prolonged heat/light/air exposure
Materials to avoid	: Strong oxidizing agents Acids and bases
Hazardous decomposition products	: Methanol
Chemical stability	: Stable; polymerization will not occur
Further information	: hydrolyzes

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (Product)	: no data available
Acute oral toxicity (Component)	: Component: 108-65-6 1-Methoxy-2-propanol acetate LD50 rat Dose: 8,532 mg/kg

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	Component: 67-56-1 Methanol LD50 rat Dose: 5,628 mg/kg
Acute dermal toxicity (Component)	: Component: 108-65-6 1-Methoxy-2-propanol acetate LD50 rabbit Dose: > 5,000 mg/kg
	Component: 67-56-1 Methanol LD50 rabbit Dose: > 20,000 mg/kg
Acute inhalation toxicity (Component)	: Component: 108-65-6 1-Methoxy-2-propanol acetate LC50 rat Dose: > 100 ppm Exposure time: 4 h
	Component: 67-56-1 Methanol LC50 rat Dose: 64000 ppm
Skin irritation (Product)	: no data available
Skin irritation (Component)	: Component: 108-65-6 1-Methoxy-2-propanol acetate rabbit Result: Moderate skin irritation
	Component: 67-56-1 Methanol rabbit Result: Moderate skin irritation
Eye irritation (Product)	: no data available
Eye irritation (Component)	: Component: 108-65-6 1-Methoxy-2-propanol acetate rabbit Result: Eye irritation
	Component: 67-56-1 Methanol rabbit Result: Eye irritation
Sensitisation (Product)	: no data available
Further information (Product)	: Impurity/hydrolysis product: Attention! Product may hydrolyse in gastro-intestinal tract and produce methanol. According to literature methanol (67-56-1) irritates mucuous membranes, has skin drying and narcotic effects up to coma or death. Absorption by the skin is possible. Possibility of damage to heart, kidneys, liver and optic nerves

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(blindness) over a period of time.

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information (Product) : There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of in accordance with applicable local/municipal, state/provincial and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Container sizes: 55 gallon drums, 5 or 6-gallon pails, 2oz/16oz samples)

DOT UN Number : 1993
 Proper shipping name : FLAMMABLE LIQUID, N.O.S.
 (1-Methoxy-2-propanol acetate, Methanol)
 Class : 3
 Packing group : III
 Emergency Response : 128
 Guidebook Number

IATA UN Number : 1993
 Description of the goods : FLAMMABLE LIQUID, N.O.S.
 (1-Methoxy-2-propanol acetate, Methanol)
 Class : 3
 Packing group : III
 ICAO-Labels : 3
 Packing instruction (cargo aircraft) : 366
 Packing instruction (passenger aircraft) : 355
 Package Instruction (Limited quantity) : Y344

IMDG UN Number : UN 1993
 Description of the goods : FLAMMABLE LIQUID, N.O.S.
 (1-Methoxy-2-propanol acetate, Methanol)
 Class : 3
 Packing group : III
 IMDG-Labels : 3
 EmSNumber1 : F-E
 EmSNumber2 : S-E
 Marine pollutant : no

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SECTION 15. REGULATORY INFORMATION

HMIS Classification : Health hazard: 3
Chronic Health Hazard: *
Flammability: 3
Reactivity: 0
PPI:B

National Fire Protection Association (NFPA) Class : IC

Emergency Planning Community Right-To-Know (EPCRA)

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

If listed below, this product contains toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SARA 313 Components : Methanol 67-56-1 2.9%

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Toxic Substances Control Act (TSCA)

TSCA Status : 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

Clean Air Act & Related Information

Non-volatile (Wt) : 34.5 %
Method: 22 (10min/150°C)
DIN EN ISO 3251

Non-volatile information is not a specification.

Hazardous Air Pollutants Methanol 67-56-1

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If not listed above, this product does not contain HAPs at 1% or 0.1% or greater. Refer to Section 3 for HAP weight percentage.

Resource Conservation and Recovery Act

EPA Hazardous Waste Code(s) : D001 Ignitable

State Laws

Massachusetts Right To Know Components : Methanol 67-56-1

Pennsylvania Right To Know Components : 1-Methoxy-2-propanol acetate 108-65-6
Methanol 67-56-1

New Jersey Right To Know Components : 1-Methoxy-2-propanol acetate 108-65-6
Methanol 67-56-1

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : 800963-5740

California Prop. 65 Components : **WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.**

Methanol 67-56-1

CONEG Heavy Metal: We certify that this product does not contain Lead, Mercury, Cadmium or hexavalent chromium in the sum concentration of 100 ppm by weight or greater.

Canadian Environmental Protection Act

Domestic Substances List
DSL Status : Not listed

CEPA Category : Polymer
Weight percent : 37 %
NSN Filed : None
Max. NSN Required : Schedule 10

WHMIS Classification : B2
D1A
D2A
D2B

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SECTION 16. OTHER INFORMATION

Further information

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.