BYK-306

SECTION 1. IDENTIFICATION

Product name : BYK-306

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

Recommended use of the chemical and restrictions on use

Recommended use : Surface Additive

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

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

Specific target organ toxicity - repeated exposure : Category 2 (Kidney, Liver)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
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/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe 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/ protective clothing/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
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 to extinguish.
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 a polyether modified polydimethylsiloxane

Hazardous components

Component	CAS-No.	Concentration (%)
Xylene	1330-20-7	>= 47 - < 48
2-Phenoxyethanol	122-99-6	>= 20 - < 21
Ethyl benzene	100-41-4	>= 19 - < 20
Polyether	-	>= 2 - < 3
Octamethylcyclotetrasiloxane	556-67-2	>= 0.1 - < 1
Toluene	108-88-3	>= 0.1 - < 1

The specific chemical identity/weight percent of proprietary ingredient(s) is a trade secret

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 : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : 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 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	:	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. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Cool closed containers exposed to fire with water spray. Will not explode on mechanical impact. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides silicone compounds formaldehyde
Further information	:	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	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. 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 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 : 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

Advice on safe handling : 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 : 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
Xylene	1330-20-7	TWA	100 ppm 435 mg/m3	OSHA Z-1
Xylene		STEL	150 ppm	OSHA P0

			655 mg/m3	
Xylene		TWA	100 ppm 435 mg/m3	OSHA P0
Xylene		TWA	100 ppm	ACGIH
Xylene		STEL	150 ppm	ACGIH
Ethyl benzene	100-41-4	TWA	20 ppm	ACGIH
Ethyl benzene		TWA	100 ppm 435 mg/m3	OSHA Z-1
Ethyl benzene		TWA	100 ppm 435 mg/m3	OSHA P0
Ethyl benzene		STEL	125 ppm 545 mg/m3	OSHA P0
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	US WEEL
Toluene	108-88-3	TWA	20 ppm	ACGIH
Toluene		TWA	200 ppm	OSHA Z-2
Toluene		CEIL	300 ppm	OSHA Z-2
Toluene		Peak	500 ppm	OSHA Z-2
Toluene		TWA	100 ppm 375 mg/m3	OSHA P0
Toluene		STEL	150 ppm 560 mg/m3	OSHA P0

Engineering measures : Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection

Material : Impervious gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

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

Hygiene measures : 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	:	aromatic
Odour Threshold	:	No data available
pH	:	5, Concentration: 1 % (68 °F (20 °C)) Method: Universal pH-value indicator
Melting point/range	:	< 32 °F (< 0 °C)
Initial boiling point	:	278.60 °F (137.00 °C)
Vapour pressure	:	8.0000000 hPa (68.00 °F (20.00 °C)) Method: calculated
Flash point	:	77.00 °F (25.00 °C) Method: 48 (Abel-Pensky)
Upper explosion limit	:	7.00 %(V)
Lower explosion limit	:	1.20 %(V)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	0.9280 g/cm3 (68.00 °F (20.00 °C)) Method: 4 (20°C oscillating U-tube)
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-	:	No data available

octanol/water

Ignition temperature	:	> 392 °F (> 200 °C) Method: DIN 51 794/ DIN prEN 14 522
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	2 mm2/s (104 °F (40 °C))
Surface tension	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Skin Absorption
Inhalation
Eyes
Ingestion

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : 3,055 mg/kg Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 16.49 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 3,024 mg/kg
Method: Calculation method

Components:

1330-20-7 Xylene:
Acute oral toxicity : LD50 (Rat): 4,300 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)
GLP: no

Acute inhalation toxicity : LC50 (Rat): 5000 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): 1,700 mg/kg

LD50 (Rabbit): > 4,200 mg/kg
GLP: No information available.

122-99-6 2-Phenoxyethanol:
Acute oral toxicity : LD50 (Rat): 1,840 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 (Rabbit): 3,818 mg/kg

100-41-4 Ethyl benzene:
Acute oral toxicity : LD50 (Rat): 3,500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 5,510 mg/kg

108-88-3 Toluene:
Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

1330-20-7 Xylene:
Species: Rabbit
Result: Moderate skin irritation

122-99-6 2-Phenoxyethanol:
Species: Rabbit

Result: Moderate skin irritation

100-41-4 Ethyl benzene:
Species: Rabbit
Result: Moderate skin irritation

556-67-2 Octamethylcyclotetrasiloxane:
Species: Rabbit
Result: slight irritation

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

1330-20-7 Xylene:
Species: Rabbit
Result: Eye irritation

122-99-6 2-Phenoxyethanol:
Species: Rabbit
Result: Eye irritation
Method: OECD Test Guideline 405

100-41-4 Ethyl benzene:
Species: Rabbit
Result: Moderate eye irritation

556-67-2 Octamethylcyclotetrasiloxane:
Species: Rabbit
Result: Mild eye irritation

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

122-99-6 2-Phenoxyethanol:
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

556-67-2 Octamethylcyclotetrasiloxane:
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Carcinogenicity

IARC	Group 2B: Possibly carcinogenic to humans	
	Ethyl benzene	100-41-4
	Cumene	98-82-8
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	Reasonably anticipated to be a human carcinogen	
	Cumene	98-82-8

Reproductive toxicity

Components:

122-99-6 2-Phenoxyethanol:

Effects on foetal development : Species: Rat
Application Route: Oral
Duration of Single Treatment: 14 d
General Toxicity Maternal: No observed adverse effect level: 300 mg/kg body weight
Teratogenicity: No observed adverse effect level: 1,000 mg/kg body weight
Method: OECD Test Guideline 414

Species: Rabbit
Application Route: Dermal
Duration of Single Treatment: 14 d
General Toxicity Maternal: No observed adverse effect level: 300 mg/kg body weight
Teratogenicity: No observed adverse effect level: 600 mg/kg body weight

Repeated dose toxicity

Product:

Remarks: Absorption of ingredients (solvents) by inhalation and/or repeated skin contact has caused injury to liver, kidney, brain, respiratory system, blood, and/or bone marrow in laboratory animals
Animal studies have shown Xylene to cause fetotoxic effects at dosage levels at or near maternal toxicity levels.
Excessive inhalation of Xylene has caused hearing loss in laboratory animals. Hexane used in conjunction w/Xylene greatly increased this effect. Chronic skin contact w/Xylene has caused dermatitis. Ingestion of Ethanol can increase effects of overexposure to Xylene.
Ethylbenzene is an IARC Group 2B carcinogen based on animal studies (increased tumors in rats and mice).

Inhalation (300 ppm)/ingestion (1600 mg/kg) dosages of Octamethylcyclotetrasiloxane has caused liver weight increases in laboratory animals. Liver weight changes via inhalation were reversible. A reproductive study (rats, inhalation: 700 ppm/70 days) showed a statistically significant reduction in mean litter size and implantation sites. The relevance of this data to humans is uncertain.

Components:

122-99-6 2-Phenoxyethanol:
Species: Rat
NOAEL: 700 mg/kg
Application Route: Oral
Method: OECD Test Guideline 408

Species: Rat
NOAEL: 0.0482 mg/l
Application Route: Inhalation
Method: OECD Test Guideline 412
Target Organs: Respiratory organs

Experience with human exposure

Product:

Inhalation:

Symptoms:	High concentrations of vapors may be irritating to the respiratory tract. May cause headaches, dizziness, nausea and vomiting. May cause 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:	May irritate the digestive tract and cause same symptoms as inhalation; high dosages may result in unconsciousness.

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 components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

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 : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

EPA Hazardous Waste Code(s) : D001: Ignitable
D018: Benzene

Waste from residues : 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 1993
Proper shipping name	:	Flammable liquid, n.o.s. (Xylene, Ethylbenzene)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (XYLENE, Ethylbenzene)
	:	)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	no
Remarks	:	IMDG Code segregation group - none

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 1993
Proper shipping name	:	Flammable liquids, n.o.s. (Xylene, Ethylbenzene)
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID
ERG Code	:	128
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)

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Xylene	1330-20-7	100	211

SARA 304 - Emergency Release Notification

Calculated RQ exceeds reasonably attainable upper limit.

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

Calculated RQ exceeds reasonably attainable upper limit.

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 product contains the following 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.

Xylene	1330-20-7	47.3 %
2-Phenoxyethanol	122-99-6	20 %
Ethyl benzene	100-41-4	19.3 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Xylene	1330-20-7	47.3 %
2-Phenoxyethanol	122-99-6	20 %
Ethyl benzene	100-41-4	19.3 %

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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Xylene	1330-20-7	47.3 %
2-Phenoxyethanol	122-99-6	20 %
Ethyl benzene	100-41-4	19.3 %

Non-volatile (Wt) : 11.5 - 13.5 %
Method: 24 (30min/150°C)
DIN EN ISO 3251
Non-volatile information is not a specification.

Massachusetts Right To Know

Xylene	1330-20-7
Ethyl benzene	100-41-4
Benzene	71-43-2

Pennsylvania Right To Know

Xylene	1330-20-7
2-Phenoxyethanol	122-99-6
Ethyl benzene	100-41-4
Polyether modified polydimethylsiloxane	-
Cumene	98-82-8
Toluene	108-88-3

New Jersey Right To Know

Xylene	1330-20-7
2-Phenoxyethanol	122-99-6
Ethyl benzene	100-41-4
Polyether modified polydimethylsiloxane	-
Polyether	-
Toluene	108-88-3

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : 800963-5205

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Ethyl benzene, Cumene, Benzene, which is/are known to the State of California to cause cancer, and Toluene, Benzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

CONEG Heavy Metal: We confirm that we use packaging and/or packaging components in which the sum of the incidental concentration levels of lead, mercury, cadmium and hexavalent chromium do not exceed 100 parts per million by weight.

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	:	We certify that all of the components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

Revision Date : 07/13/2020

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.