DISPERBYK-110

Version 17 Revision Date 08/20/2021 Print Date 09/29/2022

SECTION 1. IDENTIFICATION

Product name : DISPERBYK-110

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 : Wetting & Dispersing Additive

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Skin corrosion : Category 1B

Serious eye damage : Category 1

Carcinogenicity : Category 2

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

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.

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.
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/ protective clothing/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing 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 polymeric phosphoric acid ester

Hazardous components

HMIRA# 11269 Filing Date 03.05.2017

Component	CAS-No.	Concentration (%)
Phosphoric acid polyester	-	>= 51 - < 52
1-Methoxy-2-propanol acetate	108-65-6	>= 24 - < 25
Solvent naphtha, petroleum, light aromatic	64742-95-6	>= 22 - < 23
Phosphoric acid (residual)	7664-38-2	>= 1 - < 2

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.
Consult a physician.
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 : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
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 induce vomiting.
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 Sulphur oxides Oxides of phosphorus
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. 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.
To avoid spills during handling keep bottle on a metal tray.
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.
Store in original container.

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 metals.
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

		exposure)	Permissible concentration	
1-Methoxy-2-propanol acetate	108-65-6	TWA	50 ppm	US WEEL
Phosphoric acid (residual)	7664-38-2	TWA	1 mg/m3	ACGIH
Phosphoric acid (residual)		STEL	3 mg/m3	ACGIH
Phosphoric acid (residual)		TWA	1 mg/m3	OSHA Z-1
Phosphoric acid (residual)		TWA	1 mg/m3	OSHA P0
Phosphoric acid (residual)		STEL	3 mg/m3	OSHA P0
Phosphoric acid (residual)		TWA	1 mg/m3	NIOSH REL
Phosphoric acid (residual)		ST	3 mg/m3	NIOSH REL

Hazardous components without workplace control parameters

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
Remarks : Impervious gloves 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 Threshold : No data available

pH : 3, Concentration: 1 % (68 °F (20 °C)) Method: Universal pH-value indicator

Melting point/freezing point	:	< 32 °F (< 0 °C) Method: derived
Initial boiling point and boiling range	:	294.80 °F (146.00 °C) Method: derived
Vapour pressure	:	5 hPa (68.00 °F (20.00 °C)) Method: derived
Flash point	:	107.60 °F (42.00 °C) Method: 48 (Abel-Pensky)
Upper explosion limit	:	10.80 %(V)
Lower explosion limit	:	1.00 %(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	:	1.0250 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-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	:	> 20.000 mm2/s (68.00 °F (20.00 °C))

27.000 mm2/s (104.00 °F (40.00 °C))

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	:	1-Methoxy-2-propanol acetate may form peroxides of unknown stability. Gives off hydrogen by reaction with metals. Vapours may form explosive mixture with air. 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 Metals
Hazardous decomposition products	:	None expected

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Components:

- Phosphoric acid polyester:
Acute oral toxicity : LD50 Oral (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

108-65-6 1-Methoxy-2-propanol acetate:
Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 100 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Acute oral toxicity : LD50 (Rat): > 4,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3670 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 3,480 mg/kg

7664-38-2 Phosphoric acid (residual):
Acute oral toxicity : LD50 (Rat): 1,530 mg/kg

Skin corrosion/irritation

Product:

Species: EPISKIN human epidermis skin constructs
Assessment: Causes burns.
Method: OECD Test Guideline 431
Result: Causes burns.
GLP: yes

Remarks: Extremely corrosive and destructive to tissue.

Components:

- Phosphoric acid polyester:
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

108-65-6 1-Methoxy-2-propanol acetate:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Species: Rabbit
Result: Moderate skin irritation

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

- Phosphoric acid polyester:
Species: Rabbit
Result: Eye irritation
Assessment: Irritating to eyes.
GLP: yes

108-65-6 1-Methoxy-2-propanol acetate:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Species: Rabbit
Result: Eye irritation

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

108-65-6 1-Methoxy-2-propanol acetate:
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

- Phosphoric acid polyester:
Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse (male and female)
Method: Mutagenicity (micronucleus test)
Result: negative
GLP: yes

Carcinogenicity

IARC	Group 2B: Possibly carcinogenic to humans	
	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

Repeated dose toxicity

Product:

Remarks: Solvent absorption by inhalation and/or repeated skin contact may cause injury to liver, kidney and respiratory system.
Inhalation of Naphtha has caused fetotoxic effects at maternally toxic doses in laboratory animals.
Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage.
Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.
Cumene is an IARC 2B and NTP Group 2 Carcinogen. Cumene has caused tumors in rats and mice (lung, liver and kidney). Proposed cancer causing mechanisms for lung and liver tumors are similar to human metabolic pathways. The relevance of kidney tumors in humans is uncertain.

Components:

- Phosphoric acid polyester:
Species: Rat, male and female
LOAEL: 4,000 mg/kg
Application Route: Oral
Method: OECD Test Guideline 407
GLP: yes

Aspiration toxicity

Components:

64742-95-6 Solvent naphtha, petroleum, light aromatic:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be

regarded as if it causes a human aspiration toxicity hazard.

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:	Skin contact may provoke the following symptoms:, Burn

Ingestion:

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

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

No data available

Persistence and degradability

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	:	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 2920
Proper shipping name	:	Corrosive liquid, flammable, n.o.s. (Orthophosphoric acid, 1-Methoxy-2-propanol acetate)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	Corrosive, Flammable Liquids
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 2920
Proper shipping name	:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Orthophosphoric acid, 1-Methoxy-2-propanol acetate)
	:	)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	8 (3)
EmS Code	:	F-E, S-C
Marine pollutant	:	no
Remarks	:	IMDG Code segregation group 1 - Acids

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 2920
Proper shipping name	:	Corrosive liquid, flammable, n.o.s. (Orthophosphoric acid, 1-Methoxy-2-propanol acetate)
Class	:	8
Subsidiary risk	:	3
Packing group	:	II
Labels	:	CORROSIVE, FLAMMABLE LIQUID
ERG Code	:	132
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)

Calculated RQ exceeds reasonably attainable upper limit.

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 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.

1,2,4-Trimethylbenzene	95-63-6	8 %
Cumene	98-82-8	.5 %

Clean Air Act

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

Cumene	98-82-8	.5 %

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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Non-volatile (Wt) : 50 - 54 %
Method: 22 (10min/150°C)
DIN EN ISO 3251
Non-volatile information is not a specification.

Massachusetts Right To Know

Phosphoric acid (residual)	7664-38-2

Pennsylvania Right To Know

Phosphoric acid polyester	-
1-Methoxy-2-propanol acetate	108-65-6
Solvent naphtha, petroleum, light aromatic	64742-95-6
Phosphoric acid (residual)	7664-38-2
Cumene	98-82-8
Naphthalene	91-20-3

New Jersey Right To Know

Phosphoric acid polyester	-
1-Methoxy-2-propanol acetate	108-65-6
Solvent naphtha, petroleum, light aromatic	64742-95-6
Phosphoric acid (residual)	7664-38-2

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : 800963-5115

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Cumene, Naphthalene, Ethyl benzene, 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.

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 : 08/20/2021

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.