

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

SECTION 1: Identification of the hazardous chemical and of the supplier**Product identifier**

Product name : BYK-MAX AF 4160

Recommended use : Anti-fogging agent

Manufacturer or supplier's details

Company : BYK Netherlands BV

Address : Danzigweg 23
7418 EN Deventer

Telephone : +49 281 670-23532

Telefax : +49 281 670-23533

E-mail address : GHS.BYK@altana.com

Emergency telephone number : +60 3 6207 4347 (Malay and English)
+65 3158 1074 (All languages)**SECTION 2: Hazards identification****Classification of the hazardous chemical**

Skin corrosion/irritation : Category 2

Serious eye damage/eye
irritation : Category 2Hazardous to the aquatic
environment - chronic hazard : Category 3**Label elements**

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.**Response:**P332 + P313 If skin irritation occurs: Get medical advice/
attention.P337 + P313 If eye irritation persists: Get medical advice/
attention.

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

Disposal:

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

Other hazards which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture
 Chemical nature : Additive concentrate

Components

Chemical name	CAS-No.	Concentration (% w/w)
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	95-38-5	>= 1 -< 2.5
vinyl acetate	108-05-4	>= 0.25 -< 0.5
2-ethylhexanoic acid and its salts	3164-85-0	>= 0.1 -< 0.25

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 : If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

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.

Most important symptoms and effects, both acute and delayed : No information available.
 No information available.

Notes to physician : No information available.

SECTION 5: Firefighting measures
Extinguishing media

Suitable extinguishing media : Foam
 Carbon dioxide (CO₂)
 Dry chemical

Unsuitable extinguishing : High volume water jet

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

media

Physicochemical hazards arising from the chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Fire will produce dense black smoke containing hazardous combustion products (see section 10).

Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : 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.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing dust.

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 : Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Avoid formation of respirable particles. Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

Storage

Conditions for safe storage, including any incompatibilities

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection
Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
vinyl acetate	108-05-4	TWA	10 ppm 35 mg/m ³	MY PEL
		TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH

Individual protection measures, such as personal protective equipment (PPE)

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

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

Hand protection

Remarks : Wear suitable gloves.

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 : pellet

Colour : white

Odour : characteristic

Odour Threshold : Not applicable

pH : 7 (20 °C)
Concentration: 1 %

Melting point/ range : No data available
: Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Combustible Solids

BYK-MAX AF 4160

Product code: 00000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	No data available
Density	:	0.92 g/cm ³ (20 °C, 1,013 hPa) Method: measured
Bulk density	:	430 - 560 kg/m ³ Method: 34 (bulk density)
Solubility(ies)	:	
Water solubility	:	insoluble
Solubility in other solvents	:	insoluble
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable

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.
Conditions to avoid	:	No data available
Incompatible materials	:	None known.
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

Information on likely routes of exposure : None known.

Acute toxicity**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

Components:**vinyl acetate:**

Acute dermal toxicity : LD50 (Rabbit): 7,440 mg/kg
GLP: no

Skin corrosion/irritation**Product:**

Remarks : May irritate skin.
May cause skin irritation in susceptible persons.

Components:**vinyl acetate:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

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

Remarks : Causes serious eye irritation.

Components:**vinyl acetate:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
GLP : yes

Respiratory or skin sensitisation**Components:****vinyl acetate:**

Test Type : Mouse Local Lymph Node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : Not a skin sensitizer.
GLP : yes

Further information**Product:**

Remarks : No data available

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

SECTION 12: Ecological information**Ecotoxicity****Product:**Toxicity to fish :
Remarks: No data availableToxicity to daphnia and other :
aquatic invertebrates : Remarks: No data available**Components:****2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**M-Factor (Acute aquatic : 10
toxicity)M-Factor (Chronic aquatic : 1
toxicity)**vinyl acetate:**Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 12.6 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yesToxicity to algae/aquatic : (Pseudokirchneriella subcapitata (green algae)): 12.7 mg/l
plants : Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes**Persistence and degradability****Product:**

Biodegradability : Remarks: No data available

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

Components:**vinyl acetate:**Partition coefficient: n- : log Pow: 0.73 (20 °C)
octanol/water : pH: 7
GLP: No information available.**Mobility in soil**

No data available

Other adverse effects**Product:**

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal information

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
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.

SECTION 14: Transport information

International Regulations

UNRTDG

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable

IATA-DGR

UN/ID No. : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Packing instruction (cargo aircraft) : Not applicable
Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
EmS Code : Not applicable
Marine pollutant : Not applicable

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

Not applicable for product as supplied.

Special precautions for user

Not applicable

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

SECTION 15: Regulatory information
Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

SECTION 16: Other information

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
 MY PEL : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

ACGIH / TWA : 8-hour, time-weighted average
 ACGIH / STEL : Short-term exposure limit
 MY PEL / TWA : Eight-hour time-weighted average airborne concentration

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;

BYK-MAX AF 4160

Product code: 000000000000131529

Version 4.0 SDS_APJ_MY

Revision Date 18.10.2024

Print Date 23.10.2024

vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

MY / EN