

BYKETOL-OK

Product code: 00000000000101541

Version 7.0 SDS_APJ_MY

Revision Date 31.07.2023

Print Date 09.08.2023

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

Product name : BYKETOL-OK
Recommended use : Leveling Additive

Manufacturer or supplier's details

Company : BYK-Chemie GmbH
Address : Abelstrasse 45
46483 Wesel
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**

Flammable liquids : Category 3
Skin sensitisation : Category 1
Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)
Aspiration hazard : Category 1
Hazardous to the aquatic environment - chronic hazard : Category 2

Label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements :

Prevention:
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
 No smoking.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.

Response:
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P331 Do NOT induce vomiting.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P391 Collect spillage.

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 : Combination of high boiling aromatics, ketones and esters

Components

Chemical name	CAS-No.	Concentration (% w/w)
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	>= 50 -<= 100
2,6-dimethylheptan-4-one	108-83-8	>= 20 -< 25
Hydrocarbons, terpene processing by-products	68956-56-9	>= 3 -< 5
ethyl lactate	97-64-3	>= 1 -< 3
butyl glycollate	7397-62-8	>= 1 -< 3

SECTION 4: First aid measures

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Symptoms of poisoning may appear several hours later.
 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 on skin, rinse well with water.
 If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.

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- 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.
- 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 : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet

Physicochemical hazards arising from the chemical

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

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.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

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.

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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

Handling

Precautions for safe handling

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : Avoid formation of aerosol. 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. 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. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Storage

Conditions for safe storage, including any incompatibilities

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. 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	Control parameters /	Basis

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		exposure)	Permissible concentration	
2,6-dimethylheptan-4-one	108-83-8	TWA	25 ppm 145 mg/m ³	MY PEL
		TWA	25 ppm	ACGIH

Individual protection measures, such as personal protective equipment

- Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
- Skin protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hand protection
Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0.4 mm
- Remarks : Wear suitable gloves.
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- 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 : colourless
- Odour : aromatic
- Odour Threshold : No data available
- pH : 5 (20 °C)
Concentration: 1 %
Method: Universal pH-value indicator
- Melting point/freezing point : < 0 °C
Method: derived
- Initial boiling point and boiling range : 154.00 °C
Method: derived
- Flash point : 43.00 °C

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Method: 48 (Abel-Pensky) DIN 51755

Evaporation rate	:	No data available
Flammability (liquids)	:	Sustains combustion
Upper explosion limit / Upper flammability limit	:	7.50 %(V)
Lower explosion limit / Lower flammability limit	:	1.00 %(V)
Vapour pressure	:	4 hPa (20 °C) Method: derived
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.8600 g/cm ³ (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
Auto-ignition temperature	:	> 200 °C Method: DIN 51794
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	2 mm ² /s (40.00 °C)
Surface tension	:	< 25.00 mN/m, ring dynamometer

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.

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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 : None known.

Acute toxicity**Product:**

Acute oral toxicity : LD50 (Rat, male and female): 5,000.000000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit, male and female): > 3,160 mg/kg
Method: OECD Test Guideline 402

2,6-dimethylheptan-4-one:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 14 mg/l
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: no

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

ethyl lactate:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5.4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

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Skin corrosion/irritation**Product:**

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

Remarks : May cause skin irritation and/or dermatitis.

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

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

2,6-dimethylheptan-4-one:

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

butyl glycollate:

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

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

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

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

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

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2,6-dimethylheptan-4-one:

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

butyl glycollate:

Species : Rabbit
Result : Risk of serious damage to eyes.
Method : OECD Test Guideline 405
GLP : yes

Respiratory or skin sensitisation**Product:**

Remarks : Causes sensitisation.

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Test Type : Maximisation Test
Exposure routes : Dermal
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

2,6-dimethylheptan-4-one:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.
GLP : yes

butyl glycollate:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
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

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

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Germ cell mutagenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity**Product:**

Remarks : No data available

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity**Product:**

Effects on fertility : Remarks: No data available

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 : No data available

Aspiration toxicity**Product:**

No data available

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

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.

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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

Toxicity to daphnia and other aquatic invertebrates :
Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : LL50 (Fish): 9.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.2 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata): 2.6 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

2,6-dimethylheptan-4-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 30 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 37.2 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : (Pseudokirchneriella subcapitata (green algae)): 46.9 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

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ethyl lactate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 320 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 683 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata): 2,300 mg/l
plants : Exposure time: 72 h
Method: OECD Test Guideline 201

Persistence and degradability**Product:**

Biodegradability : Remarks: No data available

Components:**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F

2,6-dimethylheptan-4-one:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D
GLP: no

butyl glycollate:

Biodegradability : aerobic
Result: Readily biodegradable.
Method: OECD Test Guideline 301B
GLP: yes

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

Mobility in soil

No data available

Other adverse effects**Product:**

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

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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.
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.
(Solvent naphtha, Diisobutyl ketone)
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.
(SOLVENT NAPHTHA, Diisobutyl ketone)
Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : yes
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.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

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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
 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; 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

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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