

**BYK-141**

Product code: 00000000000101053

Version 4.0 SDS\_APJ\_MY

Revision Date 11.08.2023

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

Product name : BYK-141

Recommended use : Defoamer

**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

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.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**P210 Keep away from heat/ sparks/ open flames/ hot surfaces.  
No smoking.  
P273 Avoid release to the environment.**Response:**

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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 : Solution of foam destroying polymers and polysiloxanes

### Components

| Chemical name  | CAS-No.    | Concentration (% w/w) |
|--|------------|-----------------------|
| Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified | 64742-95-6 | >= 50 -<= 100         |
| iso-butanol  | 78-83-1    | >= 12.5 -< 20         |

## 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.

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

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Carbon dioxide (CO<sub>2</sub>)  
 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.

Hazardous combustion products : Carbon oxides

### 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.

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.

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Do not breathe vapours/dust.  
 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.

**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 exposure) | Control parameters / Permissible concentration | Basis  |
|-------------|---------|-------------------------------|--|--------|
| iso-butanol | 78-83-1 | TWA                           | 50 ppm<br>152 mg/m <sup>3</sup>                | MY PEL |
|             |         | TWA                           | 50 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**

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|  |   |  |
|--|---|--|
| Appearance                                       | : | liquid   |
| Colour   | : | colourless   |
| Odour  | : | aromatic   |
| Odour Threshold                                  | : | No data available  |
| pH   | : | 7 (20 °C)<br>Concentration: 1 %<br>Method: Universal pH-value indicator    |
| Melting point/range                              | : | < 0 °C<br>Method: derived  |
| Initial boiling point                            | : | 106.00 °C<br>Method: derived   |
| Flash point                                      | : | 28.00 °C<br><br>Method: 48 (Abel-Pensky) DIN 51755                         |
| Evaporation rate                                 | : | No data available  |
| Flammability (liquids)                           | : | Sustains combustion  |
| Upper explosion limit / Upper flammability limit | : | 10.70 %(V)   |
| Lower explosion limit / Lower flammability limit | : | 1.00 %(V)  |
| Vapour pressure                                  | : | 6 hPa (20.00 °C)<br>Method: derived  |
| Relative vapour density                          | : | No data available  |
| Relative density                                 | : | No data available  |
| Density  | : | 0.8660 g/cm <sup>3</sup> (20.00 °C)<br>Method: 4 (20°C oscillating U-tube) |
| 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<br>Method: DIN 51794  |
| Decomposition temperature                        | : | No data available  |
| Viscosity  |   |  |
| Viscosity, dynamic                               | : | No data available  |

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Viscosity, kinematic : 4 mm<sup>2</sup>/s ( 40.00 °C)  
Surface tension : 24.00 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.  
Incompatible materials : Acids  
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): 4,610.00000 mg/kg  
Method: OECD Test Guideline 401

**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

**iso-butanol:**

Acute oral toxicity : LD50 (Rat, male): > 2,830 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes  
Acute dermal toxicity : LD50 (Rabbit, male): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**Skin corrosion/irritation****Product:**

Species : Rabbit  
Assessment : No skin irritation

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Method : OECD Test Guideline 404  
Result : No skin irritation

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

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

**iso-butanol:**

Species : Rabbit  
Result : Skin irritation

**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

**iso-butanol:**

Species : Rabbit  
Result : Eye irritation  
Method : OECD Test Guideline 405  
GLP : yes

**Respiratory or skin sensitisation****Product:**

Remarks : No data available

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

Test Type : Maximisation Test  
Exposure routes : Dermal  
Species : Guinea pig

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Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.

**iso-butanol:**

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

**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:**

Germ cell mutagenicity - Assessment : Classified based on benzene content &lt; 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 &lt; 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

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**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.

**iso-butanol:**

No aspiration toxicity classification

**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

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

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata): 2.6 mg/l  
plants : Exposure time: 72 h

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Method: OECD Test Guideline 201

GLP: yes

**iso-butanol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,430 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): 1,100 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Test Type: static test

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,799  
plants : mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 20 mg/l  
aquatic invertebrates : End point: Reproduction  
(Chronic toxicity) : Exposure time: 21 d  
Test Type: semi-static test

**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

**iso-butanol:**

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

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: No data available

**Components:****iso-butanol:**

Partition coefficient: n- : log Pow: 1  
octanol/water : Method: OECD Test Guideline 117  
GLP: yes

**Mobility in soil**

No data available

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### Other adverse effects

#### **Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic 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.  
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, Isobutanol)  
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, Isobutanol)  
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.

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**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.

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**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; TECL - 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

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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.

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