

**BYK-MAX HS 4305**

Product code: 000000000000132939

Version 3.0 SDS\_APJ\_MY

Revision Date 10.02.2023

Print Date 09.08.2023

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

Product name : BYK-MAX HS 4305

Recommended use : Additive for plastics

**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**

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 1

Skin sensitisation : Category 1

Specific target organ toxicity - repeated exposure (Oral) : Category 1 (Thyroid)

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 3

**Label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.

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H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure if swallowed.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

:

**Prevention:**

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

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 or doctor/ physician.

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

: Thermoplastic compound for thermal stabilization

**Components**

| Chemical name     | CAS-No.   | Concentration (% w/w) |
|-------------------|-----------|-----------------------|
| potassium bromide | 7758-02-3 | >= 50 -<= 100         |
| copper iodide     | 7681-65-4 | >= 10 -< 12.5         |

**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

: 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

: 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.

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|                                                             |   |                                                                                                                                                                                                          |
|-------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             |   | Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.                                                                |
| If swallowed                                                | : | Keep respiratory tract clear.<br>Do NOT induce vomiting.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician. |
| Most important symptoms and effects, both acute and delayed | : | No information available.<br>No information available.                                                                                                                                                   |
| Notes to physician                                          | : | No information available.                                                                                                                                                                                |

**SECTION 5: Firefighting measures****Extinguishing media**

|                              |   |                                                                             |
|------------------------------|---|-----------------------------------------------------------------------------|
| Suitable extinguishing media | : | Foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical<br><br>Water mist |
|------------------------------|---|-----------------------------------------------------------------------------|

|                                |   |                       |
|--------------------------------|---|-----------------------|
| 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        | : | No hazardous combustion products are known                                |

**Special protective equipment and precautions for fire-fighters**

|                                               |   |                                                                                                                                                                                                                         |
|-----------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Special protective equipment for firefighters | : | Wear self-contained breathing apparatus for firefighting if necessary.<br><br>Use personal protective equipment.                                                                                                        |
| Specific extinguishing methods                | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>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 | : | Use personal protective equipment.<br>Avoid dust formation. |
|------------------------------------------------|---|-------------------------------------------------------------|

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emergency procedures

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.
- 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

- : 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.

Store in original container.

### 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<br>(Form of | Control<br>parameters / | Basis |
|------------|---------|------------------------|-------------------------|-------|
|------------|---------|------------------------|-------------------------|-------|

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|               |           | exposure)                             | Permissible concentration |       |
|---------------|-----------|---------------------------------------|---------------------------|-------|
| copper iodide | 7681-65-4 | TWA<br>(Inhalable fraction and vapor) | 0.01 ppm<br>(Iodine)      | ACGIH |

**Individual protection measures, such as personal protective equipment**

- 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 : Dust impervious protective suit  
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 : > 120 min
- Remarks : When handling hot material, use heat resistant gloves.  
Wear suitable gloves.
- Respiratory protection : Breathing apparatus with 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 : granular
- Colour : white to grey-green
- Odour : odourless
- pH : insoluble
- Melting point/range : No data available
- Boiling point/boiling range : No data available
- Flash point : ca. 276 °C  
Method: derived
- Self-ignition : ca.  
420 °C

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Method: derived

Upper explosion limit / Upper flammability limit : not determined

Lower explosion limit / Lower flammability limit : not determined

Vapour pressure : No data available

Density : 3.0 g/cm<sup>3</sup> (20 °C, 1,013 hPa)Bulk density : 1.1 g/cm<sup>3</sup> (20 °C)  
Method: 34 (bulk density)Solubility(ies)  
Water solubility : partly soluble

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : Not combustible.

Decomposition temperature : not determined

Viscosity  
Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Minimum ignition energy : not determined

**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.  
Dust may form explosive mixture in air.

Conditions to avoid : No data available

Incompatible materials : Alkali metals  
Strong acids and strong bases  
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.

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**Acute toxicity****Product:**

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

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

Remarks : May irritate skin.  
May cause skin irritation and/or dermatitis.

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

Remarks : May cause irreversible eye damage.

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

Remarks : Causes sensitisation.

**Germ cell mutagenicity****Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

**Carcinogenicity****Product:**

Remarks : No data available

**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

**Further information****Product:**

Remarks : No data available

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**SECTION 12: Ecological information****Ecotoxicity****Product:**Toxicity to fish :  
Remarks: No data availableToxicity to daphnia and other :  
aquatic invertebrates Remarks: No data available**Components:****copper iodide:**M-Factor (Acute aquatic : 10  
toxicity)M-Factor (Chronic aquatic : 1  
toxicity)**Persistence and degradability****Product:**

Biodegradability : Remarks: No data available

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

Bioaccumulation : Remarks: No data available

**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.  
Very toxic to aquatic life.  
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****IATA-DGR**

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(copper iodide)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956

**IMDG-Code**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.  
(copper iodide)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

**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

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**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)

ACGIH / TWA : 8-hour, time-weighted average

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

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