

Safety data sheet

Page: 1/15

BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

1. Identification

Product identifier

Mixed Xylene (BYC)

Chemical name: Xylene Mixture (BYC)

CAS Number: 1330-20-7

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Chemical

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Petrochemicals

Telephone: +49 621 60-42151

E-mail address: sds-petrochemicals@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Asp. Tox. 1

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

Flam. Liq. 3
Acute Tox. 5 (Inhalation - vapour)
Acute Tox. 5 (oral)
Skin Irrit. 2
Eye Irrit. 2A
Muta. 1B
Carc. 1B
STOT SE 3 (irritating to respiratory system)
STOT RE 2
Aquatic Acute 2
Aquatic Chronic 3

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H335	May cause respiratory irritation.
H350	May cause cancer.
H340	May cause genetic defects.
H303 + H333	May be harmful if swallowed or if inhaled.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear eye protection.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/gas/mist/vapours.
P243	Take action to prevent static discharges.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P264	Wash contaminated body parts thoroughly after handling.
P242	Use non-sparking tools.
P240	Ground and bond container and receiving equipment.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical attention.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P332 + P313	If skin irritation occurs: Get medical attention.
P331	Do NOT induce vomiting.
P337 + P313	If eye irritation persists: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

P403 + P235	Store in a well-ventilated place. Keep cool.
P233	Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Other hazardsAccording to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

See section 12 - Results of PBT and vPvB assessment.

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

3. Composition/Information on Ingredients

Substances

Chemical nature

hydrocarbons, blend

Xylene

CAS Number: 1330-20-7

EC-Number: 215-535-7

INDEX-Number: 601-022-00-9

Ethylbenzene

CAS Number: 100-41-4

EC-Number: 202-849-4

INDEX-Number: 601-023-00-4

Hazardous ingredients (GHS)

According to UN GHS criteria

Ethylbenzene

Content (W/W): $\geq 44\%$ - $\leq 54\%$	Asp. Tox. 1
CAS Number: 100-41-4	Flam. Liq. 2
EC-Number: 202-849-4	Acute Tox. 4 (Inhalation - vapour)
INDEX-Number: 601-023-00-4	Acute Tox. 5 (oral)
	STOT RE (Auditory organ) 2
	Aquatic Acute 2
	Aquatic Chronic 3
	H225, H332, H303, H304, H373, H412, H401

Xylene

Content (W/W): $\geq 45\%$ - $\leq 53\%$	Asp. Tox. 1
CAS Number: 1330-20-7	Flam. Liq. 3
EC-Number: 215-535-7	Acute Tox. 5 (Inhalation - vapour)
INDEX-Number: 601-022-00-9	Acute Tox. 5 (oral)
	Skin Corr./Irrit. 2
	Eye Dam./Irrit. 2B
	STOT SE 3 (irr. to respiratory syst.)
	STOT RE (Central nervous system, Liver, Kidney) 2
	Aquatic Acute 2
	Aquatic Chronic 3
	H226, H320, H315, H333, H303, H304, H335, H373, H412, H401

Naphtha (petroleum), solvent-refined light

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

Content (W/W): $\geq 0,4\%$ - $\leq 1\%$	Asp. Tox. 1
CAS Number: 64741-84-0	Flam. Liq. 2
EC-Number: 265-086-6	Skin Corr./Irrit. 2
INDEX-Number: 649-278-00-0	Eye Dam./Irrit. 2A
	Muta. 1B
	Carc. 1B
	Repr. 2 (unborn child)
	STOT SE 3 (drowsiness and dizziness)
	STOT RE 1
	Aquatic Acute 1
	Aquatic Chronic 1
	H225, H319, H315, H304, H336, H361, H372, H350, H340, H400, H410

Toluene

Content (W/W): $\geq 0\%$ - $\leq 0,4\%$	Asp. Tox. 1
CAS Number: 108-88-3	Flam. Liq. 2
EC-Number: 203-625-9	Skin Corr./Irrit. 2
INDEX-Number: 601-021-00-3	Repr. 2 (unborn child)
	STOT SE 3 (drowsiness and dizziness)
	STOT RE (Central nervous system) 2
	Aquatic Acute 2
	Aquatic Chronic 3
	H225, H315, H304, H336, H361, H373, H412, H401

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures**Description of first aid measures**

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting due to aspiration hazard.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Hazards: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

| dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:

| water jet

Additional information:

| Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

| Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Advice for fire-fighters

Special protective equipment:

| Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:

| Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

| Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

| High risk of slipping due to leakage/spillage of product.

| Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

| Pack in tightly closed containers for disposal.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools. Avoid contact with the skin, eyes and clothing.

Take off immediately all contaminated clothing.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid all direct contact with the substance/product. Ensure thorough ventilation of stores and work areas. Change clothes immediately after contamination. Refill and handle product only in closed system.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection**Control parameters**Components with occupational exposure limits

100-41-4: Ethylbenzene

108-88-3: Toluene

1330-20-7: Xylene

64741-84-0: Naphtha (petroleum), solvent-refined light

Exposure controlsPersonal protective equipment

Respiratory protection:

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A) Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

fluoroelastomer (FKM) - 0.7 mm coating thickness

Manufacturer's directions for use should be observed because of great diversity of types.

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Ensure adequate ventilation. Avoid inhalation of vapour. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid	
Colour:	clear	
	colourless	
Odour:	aromatic, of xylene	
Odour threshold:	not determined	
pH value:	not applicable, of low solubility	
Melting point:	< -52 °C	(OECD Guideline 102)
Boiling point:	138 °C	(measured)
	(1.013,25 hPa)	
Flash point:	28,5 °C	(ISO 13736, closed cup)
	The statements are based on the properties of the individual components.	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	Flammable.	

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

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Date of print 26.05.2024

Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	463 °C	(DIN EN 14522)
Vapour pressure:	9,04 hPa (20 °C) dynamic 11,58 hPa (25 °C) dynamic 35,94 hPa (50 °C) dynamic	(OECD Guideline 104) (OECD Guideline 104) (OECD Guideline 104)
Density:	0,866 g/cm ³ (20 °C)	(OECD Guideline 109)
Relative density:	0,866 (20 °C)	
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(estimated)
Solubility in water:	of low solubility < 0,2 g/l (20 °C)	(OECD Guideline 105)
Partitioning coefficient n-octanol/water (log Kow):	2,8 - 6,5 (23 °C)	(OECD Guideline 117)
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	The value was determined by calculation from the detected kinematic viscosity.	
Viscosity, kinematic:	0,8 mm ² /s (23 °C)	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	(other)

Other information

Self heating ability: It is not a substance capable of spontaneous heating.

pKA:

The substance does not dissociate.

Hygroscopy:

Non-hygroscopic

10. Stability and Reactivity

Reactivity

Vapours may form explosive mixture with air.

Corrosion to metals:	No corrosive effect on metal.	
Reactions with water/air:	Reaction with:	water
	Flammable gases:	no
	Toxic gases:	no
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Violent reaction under influence of oxidizing agents. Formation of explosive gas/air mixtures. Vapours may form ignitable mixture with air.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid direct sunlight. Heating may cause pressure build-up and possible rupture of the container.

Incompatible materials

Substances to avoid:
strong oxidizing agents

Hazardous decomposition products

:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single skin contact. Of low toxicity after single ingestion. Of low toxicity after short-term inhalation. The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation

Assessment of irritating effects:

Causes serious eye irritation. Causes skin irritation. Causes temporary irritation of the respiratory tract. The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Germ cell mutagenicity

Assessment of mutagenicity:

Capable of causing genetic defects. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Naphtha (petroleum), solvent-refined light

Assessment of mutagenicity:

Capable of causing genetic defects. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity:

Contains a component that causes cancerogenicity in animals. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Naphtha (petroleum), solvent-refined light

Assessment of carcinogenicity:

The substance caused cancer in animal studies. The product has not been tested. The statement has been derived from the properties of the individual components.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Possible narcotic effects (drowsiness or dizziness).

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Repeated exposure may affect certain organs. The substance can cause changes in the following organs after repeated exposure to large quantities: Liver Kidney May cause damage to the nervous system. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Ethylbenzene

Assessment of repeated dose toxicity:

The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies. The substance may cause deafness after repeated inhalation. The substance may cause deafness after repeated ingestion.

Information on: Xylene

Assessment of repeated dose toxicity:

Repeated exposure may affect certain organs. Damages the central nerve system. The substance can cause changes in the following organs after repeated exposure to large quantities: Liver Kidney

Aspiration hazard

May be fatal if swallowed and enters airways.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Information on: Xylene

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Ethylbenzene

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product contains (a) poorly biodegradable component(s). The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulative potential

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Adsorption to solid soil phase is possible.

Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels.

13. Disposal Considerations

Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport

ADR

UN number or ID number: UN3295

UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es): 3

Packing group: III

Environmental hazards: no

Special precautions for user: Tunnel code: D/E

RID

UN number or ID number: UN3295

UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es): 3

Packing group: III

Environmental hazards: no

Special precautions for user: None known

Inland waterway transport

ADN

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 05.01.2024

Version: 3.0

Product: **Mixed Xylene (BYC)**

(ID no. 30510031/SDS_GEN_00/EN)

Date of print 26.05.2024

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UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es): 3
Packing group: III
Environmental hazards: no
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number or ID number: UN 3295
UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es): 3
Packing group: III
Environmental hazards: no
Marine pollutant: NO
Special precautions for user: EmS: F - E; S - D

Air transport

IATA/ICAO

UN number or ID number: UN 3295
UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

Transport hazard class(es): 3
Packing group: III
Environmental hazards: No Mark as dangerous for the environment is needed
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Asp. Tox.	Aspiration hazard
Flam. Liq.	Flammable liquids
Acute Tox.	Acute toxicity
Skin Irrit.	Skin irritation
Eye Irrit.	Eye irritation
Muta.	Germ cell mutagenicity
Carc.	Carcinogenicity
STOT SE	Specific target organ toxicity — single exposure
STOT RE	Specific target organ toxicity — repeated exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Repr.	Reproductive toxicity
H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs (Auditory organ) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.
H226	Flammable liquid and vapour.
H320	Causes eye irritation.
H315	Causes skin irritation.
H333	May be harmful if inhaled.
H335	May cause respiratory irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H350	May cause cancer.
H340	May cause genetic defects.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.