

## Safety data sheet

### according to UK REACH (SI 2020/1577) as amended

Printing date 17.04.2025

Version number 2 (replaces version 1)

Revision: 17.04.2025

#### \* SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Basic Yellow 40 Solution
- **Product Code:** 50-4201
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture** Laboratory chemicals
- **Uses advised against**  
Processes involving extreme heat use advised against.  
Processes involving the use of incompatible substances - refer to section 10.  
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).  
Any use involving aerosol formation or vapour release in excess of the assigned Workplace Exposure Limit where workers are exposed without suitable Respiratory Protective Equipment.  
Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
Severn Biotech Ltd.  
Unit 2,  
Park Lane,  
Kidderminster,  
Worcestershire.  
DY11 6TJ  
UK  
Tel: 0044 1562 825286  
Fax: 0044 1562 825284  
email: info@severnbiotech.com
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**  
Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

#### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to GB-CLP**  
Flam. Liq. 2 H225 Highly flammable liquid and vapour.  
Eye Irrit. 2 H319 Causes serious eye irritation.
- **2.2 Label elements**
- **Labelling according to GB-CLP** The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

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**Hazard statements**

H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P370+P378 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

**2.3 Other hazards**
**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### \* SECTION 3: Composition/information on ingredients

**3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	Ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2; H319: C ≥ 50 %	50 – 100%
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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### \* SECTION 4: First aid measures

**4.1 Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Check for and remove any contact lenses.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.  
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

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**\* SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
Flammable. Vapors may travel to source of ignition and flash back.  
Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear fully protective suit.  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Absorb gas/vapours with water spray.  
Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

**\* SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Keep away from ignition sources.  
Keep ignition sources away - no smoking.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow product to reach sewage system or any water course in the undiluted form.  
Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**  
Contain and collect spillage with non-combustible, absorbent material e.g.sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.  
Allow to evaporate.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**\* SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Welding and other hot work operations in the work area must only be permitted under supervision.

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Keep away from heat and direct sunlight.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Vapour is heavier than air. Beware of accumulation in pits and confined spaces.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.

Store only in the original receptacle.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:**

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

Store in cool, dry conditions in well sealed receptacles.

Store in a bunded area.

Protect from heat and direct sunlight.

· **Storage class:** 3

· **7.3 Specific end use(s)** No further relevant information available.

## \* SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 64-17-5 Ethanol**

WEL Long-term value: 1920 mg/m<sup>3</sup>, 1000 ppm

· **DNELs**

**CAS: 64-17-5 Ethanol**

Oral	Long-term systemic effects	87 mg/kg bw/day (general population)
Dermal	Long-term systemic effects	206 mg/kg bw/day (general population)
		343 mg/kg bw/day (worker)
Inhalative	Long-term systemic effects	114 mg/m <sup>3</sup> (general population)
		380 mg/m <sup>3</sup> (worker)
	Short-term local effects	950 mg/m <sup>3</sup> (general population)
		1,900 mg/m <sup>3</sup> (worker)

· **PNECs**

**CAS: 64-17-5 Ethanol**

Freshwater	960 µg/L
Freshwater - Intermittent releases	2.75 mg/L
Marine water	790 µg/L
Sewage Treatment Plant	580 mg/L
Sediment (freshwater)	3.6 mg/kg

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Sediment (marine water)	2.9 mg/kg
Soil	630 µg/kg
Secondary poisoning	380 – 720 mg/kg food

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

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

· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Pregnant women should strictly avoid inhalation or skin contact.

Take note of assigned Workplace Exposure Limits.

Ensure that eyewash stations and safety showers are close to the workstation location.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A for organic vapours

· **Hand protection**



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

Break-through time: > 480 minutes

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Tightly sealed goggles conforming to EN166.

· **Body protection:**



Flame retardant antistatic protective clothing.

Body protection must be chosen depending on product properties, activity and possible exposure.

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- **Environmental exposure controls** Do not let product enter drains. Risk of explosion.
- **Risk management measures** The operators shall be instructed adequately.

## \* SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

· Physical state	Liquid
· Colour:	Yellow
· Odour:	Alcohol-like
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	78 °C (CAS: 64-17-5 Ethanol)
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	2.5 Vol % (CAS: 64-17-5 Ethanol)
· Upper:	13 Vol % (CAS: 64-17-5 Ethanol)
· Flash point:	13 °C (CAS: 64-17-5 Ethanol)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	59 hPa (CAS: 64-17-5 Ethanol)
· Density and/or relative density	
· Density at 20 °C:	0.83 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not determined.

### · 9.2 Other information

#### · Appearance:

NOTE: The physical data presented above are typical values and should not be construed as a specification.

· **Form:** Fluid

#### · Important information on protection of health and environment, and on safety.

· **Ignition temperature:**

Product is not self-igniting.

· **Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Solvent content:**

· **VOC (EC)**

95.98 %

· **Change in condition**

· **Evaporation rate**

Not determined.

### · Information with regard to physical hazard classes

· Explosives	Not applicable
· Flammable gases	Not applicable
· Aerosols	Not applicable
· Oxidising gases	Not applicable
· Gases under pressure	Not applicable

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· <b>Flammable liquids</b>	Highly flammable liquid and vapour.
· <b>Flammable solids</b>	Not applicable
· <b>Self-reactive substances and mixtures</b>	Not applicable
· <b>Pyrophoric liquids</b>	Not applicable
· <b>Pyrophoric solids</b>	Not applicable
· <b>Self-heating substances and mixtures</b>	Not applicable
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Not applicable
· <b>Oxidising liquids</b>	Not applicable
· <b>Oxidising solids</b>	Not applicable
· <b>Organic peroxides</b>	Not applicable
· <b>Corrosive to metals</b>	Not applicable
· <b>Desensitised explosives</b>	Not applicable

#### \* SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Forms explosive gas mixture with air.
- **10.4 Conditions to avoid** Heat and static discharge.
- **10.5 Incompatible materials:** Strong acids and oxidising agents
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

#### \* SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

##### · **LD/LC50 values relevant for classification:**

**CAS: 64-17-5 Ethanol**

Oral	LD50	> 10,000 mg/kg (rat)
Dermal	LD50	> 10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 100 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**  
Prolonged or repeated skin contact may irritate and cause dermatitis.  
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: The substance may have effects on the respiratory tract and lungs, resulting in chronic inflammation and impaired function.  
Prolonged and direct contact may cause liver and kidney damage.

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· **Additional toxicological information:**

ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.

EFFECTS OF SHORT-TERM EXPOSURE: The product is irritating to the eyes and the respiratory tract. May cause effects on the central nervous system.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients are listed.

## \* SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

**CAS: 64-17-5 Ethanol**

EC50 (96 h) 454 mg/l (Bacteria)

· **12.2 Persistence and degradability** The organic portion of the product is biodegradable.

· **12.3 Bioaccumulative potential** Contains components with the potential to bioaccumulate.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## \* SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· **Uncleaned packaging:**

· **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

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Do not mix with other waste streams.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

#### SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR/RID/ADN, IMDG, IATA** UN1170

· **14.2 UN proper shipping name**

· **ADR/RID/ADN** UN1170 ETHANOL (ETHYL ALCOHOL) mixture

· **IMDG** ETHANOL (ETHYL ALCOHOL) mixture

· **IATA** ETHANOL mixture

· **14.3 Transport hazard class(es)**

· **ADR/RID/ADN**

· **Class** 3 (F1) Flammable liquids.

· **Label** 3

· **IMDG, IATA**

· **Class** 3 Flammable liquids.

· **Label** 3

· **14.4 Packing group**

· **ADR/RID/ADN, IMDG, IATA** II

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

· **Hazard identification number (Kemler code):** Warning: Flammable liquids.

· **Hazchem Code:** 33

· **EMS Number:** •2YE

· **Stowage Category:** F-E,S-D

· **Stowage Category** A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR/RID/ADN**

· **Limited quantities (LQ)** 1L

· **Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category** 2

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· <b>Tunnel restriction code</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1170 ETHANOL (ETHYL ALCOHOL) MIXTURE, 3, II

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

- **Regulated explosives precursors**

None of the ingredients are listed.

- **Regulated poisons**

None of the ingredients are listed.

- **Reportable explosives precursors**

None of the ingredients are listed.

- **Reportable poisons**

None of the ingredients are listed.

- **Control Of Major Accident Hazards Regulations 2015 (COMAH)**
- **Named dangerous substances - ANNEX I** None of the ingredients are listed.
- **COMAH category** P5c
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

- **National regulations:**

- **Information about limitation of use:**

Class	Share in %
Wasser	3.6
NK	87.3

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Relevant phrases**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

- **Training hints**

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

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- **Department issuing SDS:** Product safety department.

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

- **\* Data compared to the previous version altered.**

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