SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2021
Date Updated: April 14, 2021

SECTION 1. - - - - - - - - - PRODUCT AND COMPANY IDENTIFICATION- - - - - - - - - -

Product Name	Polyoxyethylene-80 (TWEEN 80)
Product Code(s)	TB0562
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Inc.
Address	20 Konrad Crescent, Markham, Ontario, Canada, L3R 8T4
Telephone	(905) 474 4493
Fax	(905) 474 5794
For Chemical Emergency Phone#	(416) 995 9730

SECTION 2. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

Classification of the substance or mixture
Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements
Not a hazardous substance or mixture

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

Chemical Name	EC No.	CAS-No	Weight
Polyoxyethylene-80 (TWEEN 80)	500-019-9	9005-65-6	<= 100%

No components need to be disclosed according to the applicable regulations.

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -

If inhaled
If breathed in, move person into fresh air.

In case of skin contact
Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
rinse out with plenty of water. Remove contact lenses.

If swallowed
make victim drink water (two glasses at most). Consult doctor if feeling unwell.

SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Nature of decomposition products not known.
Combustible liquid.

Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Explosion data - sensitivity to mechanical impact
no data available

Explosion data - sensitivity to static discharge
no data available

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

Personal precautions
Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

Precautions for safe handling
For precautions see section 2.

Conditions for safe storage
Tightly closed.
Storage class (TRGS 510): 10: Combustible liquids

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Eye/Face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin and body protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Change contaminated clothing. Wash hands after working with substance.

Control of environmental exposure
Do not let product enter drains.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

Appearance

Form	viscous

Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	> 100 °C > 212 °F at 1,013 hPa
Flash point	> 113 °C (> 235 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	< 1 hPa at 20 °C (68 °F)
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative density	1.064 g/cm3
Odour	no data available
Odour Threshold	no data available
Evapouration rate	no data available

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

Reactivity
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions
No data available

Conditions to avoid
Strong heating.

Materials to avoid
No data available

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.
Other decomposition products - No data

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

Acute toxicity
LD50 Oral - Rat - 34,500 mg/kg
Remarks: (RTECS)
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
Remarks: (External MSDS)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
Remarks: (External MSDS)

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available
Ames test
Salmonella typhimurium
Result: negative
(National Toxicology Program)
Mutagenicity (mammal cell test):
Result: negative
(National Toxicology Program)

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Additional Information
RTECS: WG2932500

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

Toxicity
No data available

Persistence and degradability

Biodegradability	Result: 52 % - Not readily biodegradable. (OECD Test Guideline 301C)
Chemical Oxygen Demand (COD)	1,750 mg/g Remarks: (External MSDS)

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No data available

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

Product
Waste material must be disposed of in accordance with the national and loc No mixing with other waste. Handle uncleaned containers like the product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Contaminated packaging
Dispose of as unused product.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

Further information
Not classified as dangerous in the meaning of transport regulations.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - -

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

Issuing Date: 14-Apr-2021

End of SDS

CERTIFICATE OF ANALYSIS

Product	Polyoxyethylene-80 (TWEEN 80)
Grade	Biotech Grade
Product Code	TB0562
Formula	N/A
MW	N/A
CAS#	9005-65-6
Lot No	

Test Items	Specifications	Actual Results
Appearance	Yellow to amber viscous liquid	
Hydroxyl Number	65 -80 mgKOH/g	
Moisture (KF)	≤3.0%	
Heavy metals	≤10ppm	
Acid Value	≤2 mgKOH/g	
Saponification Value	45-55 mgKOH/g	

Storage: 18~25^{o}C.

20 Konrad Cres. Markham Ontario L3R 8T4 Canada
Tel: (905) 474 4493, (800) 313 7224 Fax: (905) 474 5794
Email: order@biobasic.com Web: www.biobasic.com