MATERIAL SAFETY DATA SHEET
according to the Global Harmonized System

Date of issue: 02/04/2013 Version 1.0

SECTION 1.Identification

Product identifier

Product number	808394
Product name	2-Ethyl-2-(hydroxymethyl)-1,3-propanediol for synthesis

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

Identified uses	Chemical for synthesis

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-751-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) e-mail: mm_sds@merckgroup.com
Emergency telephone	613-996-6666 CANUTEC (Canada) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS-Labeling

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	$CH_3CH_2C(CH_2OH)_3$	$C_6H_{14}O_3$ (Hill)
CAS-No.	77-99-6	
Molar mass	134.17 g/mol	
Remarks	WHMIS hazardous composition: No ingredients are hazardous according to the CPR criteria.	

SECTION 4. First aid measures

Description of first-aid measures

Inhalation
After inhalation: fresh air.

Skin contact
After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact
After eye contact: rinse out with plenty of water.

Ingestion
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Water, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into 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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

Eye/face protection
Safety glasses

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory protection
required when dusts are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	white
Odor	weak characteristic odor
Odor Threshold	No information available.

pH	6.5 at 100 g/l 68 °F (20 °C) (External MSDS)
Melting point	57 - 61 °C
Boiling point/boiling range	565 - 568 °F (296 - 298 °C) at 1,013 hPa
Flash point	354 °F (179 °C) Method: c.c. DIN 51758
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	2 %(V)
Upper explosion limit	11.8 %(V)
Vapor pressure	< 0.1 hPa at 122 °F (50 °C)
Relative vapor density	No information available.
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: -1.48 (experimental) (Lit.) Bioaccumulation is not expected (log Pow <1).
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	157 mPa.s at 167 °F (75 °C)
Explosive properties	Not classified as explosive.
Ignition temperature	707 °F (375 °C) DIN 51794
Bulk density	700 kg/m³

SECTION 10. Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating.
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability

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

Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

Conditions to avoid

Strong heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Exposure to moisture.

Incompatible materials

no information available

Hazardous decomposition products

no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact, Ingestion

Acute oral toxicity
LD50 rat: > 2,500 mg/kg (IUCLID)

Acute inhalation toxicity
LC0 rat: > 0.85 mg/l; 4 h (IUCLID)

Skin irritation
rabbit
Result: No irritation
(External MSDS)

Eye irritation
rabbit
Result: No eye irritation
(External MSDS)

Sensitization
Patch test: human
Result: negative
(IUCLID)

Genotoxicity in vitro
Ames test
Result: negative
(IUCLID)

Mutagenicity (mammal cell test): chromosome aberration.
Result: negative
(IUCLID)

Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.
Further data:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish
LC50 Leuciscus idus (Golden orfe): > 1,000 mg/l; 48 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates
EC0 Daphnia magna (Water flea): > 102 mg/l; 48 h (IUCLID)

Toxicity to algae
IC50 Pseudokirchneriella subcapitata (green algae): > 1,000 mg/l; 72 h
OECD Test Guideline 201

Toxicity to bacteria
EC0 Pseudomonas fluorescens: 10,000 mg/l; 24 h (IUCLID)

Persistence and degradability
Biodegradability
ca. 6 %; 28 d
OECD Test Guideline 301E
Not readily biodegradable.

100 %; 28 d
OECD Test Guideline 302B
Easily eliminable.

Bioaccumulative potential
Partition coefficient: n-octanol/water
log Pow: -1.48
(experimental)
(Lit.) Bioaccumulation is not expected (log Pow <1).

Mobility in soil
No information available.

Other adverse effects
Additional ecological information
Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)
Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)
Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)
Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

Canada

WHMIS Classification

Not controlled under WHIMS (Canada).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Notification status

TSCA:	On TSCA Inventory
DSL:	All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice
Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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