SAFETY DATA SHEET
MONO PROPYLENE GLYCOL

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

1.1. Product identifier

Product name	MONO PROPYLENE GLYCOL
Product number	0382
REACH registration number	01-2119456809-23-xxxx
CAS number	57-55-6
EC number	200-338-0

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

Identified uses	Manufacture of substance Distribution of substance Formulation and (re)packing of substances and mixtures Uses in coatings Use in cleaning agents Use as binders and release agents Use as a functional fluid Laboratories Polymer processing Rubber production and processing Water treatment Mining chemicals Agrochemical uses De-icing and anti-icing applications Other consumer uses

1.3. Details of the supplier of the safety data sheet

Supplier	Fluid Science Limited Unit 5 Pride Point Ashcroft Road Knowsley Ind. Park Kirkby L33 7TW +44 (0)1244837860 (General Enquiries)
Contact person	sales@fluidscienceltd.com

1.4. Emergency telephone number

Emergency telephone	0870 190 6777 (National Chemical Emergency Centre) +44 (0)1270 502891

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

2.2. Label elements

EC number	200-338-0
Hazard statements	NC Not Classified

2.3. Other hazards

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SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	MONO PROPYLENE GLYCOL
REACH registration number	01-2119456809-23-xxxx
CAS number	57-55-6
EC number	200-338-0
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Treat symptomatically
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
Skin contact	Rinse immediately with plenty of water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	No additional symptoms or effects are anticipated.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Carbon monoxide (CO). Carbon dioxide (CO2). Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Solvent vapours may form explosive mixtures with air.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Cool containers exposed to flames with water until well after the fire is out. Wear self contained breathing apparatus
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid contact with eyes and prolonged skin contact. Take care as floors and other surfaces may become slippery.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid release to the environment. Do not let the product or washing down water enter natural water courses or the sewer.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Wash thoroughly after dealing with a spillage. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Take care as floors and other surfaces may become slippery. Contain spillage - Do not wash spillage down drain.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid the formation of mists.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions No special storage precautions required. Keep away from heat, sparks and open flame. Keep container tightly closed. Take precautionary measures against static discharges.

Storage class Chemical storage.

7.3. Specific end use(s)

Usage description The information contained within this Safety Data Sheet is given as a guide to the precautions required to maintain a safe work environment.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate
Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m³ total vapour and particulates

WEL = Workplace Exposure Limit

DNEL Industry - Inhalation; Long term : 168 mg/m³
Consumer - Inhalation; Long term : 50 mg/m³

PNEC
- Fresh water; 260 mg/l
- marine water; 26 mg/l
- STP; 20000 mg/l
- Sediment; Freshwater 572 mg/kg
- Sediment; Marine water 57.2 mg/kg
- Soil; 50 mg/kg

8.2. Exposure controls

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Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. All handling should only take place in well-ventilated areas.
Eye/face protection	Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374.
Other skin and body protection	Provide eyewash station. Wear apron or protective clothing in case of contact.
Hygiene measures	Provide eyewash station. Wash contaminated clothing before reuse. Wash promptly if skin becomes contaminated.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Respirators must conform to BS EN 149 and be regularly maintained in accordance with relevant legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Colourless liquid.
Colour	Colourless.
Odour	No characteristic odour.
Initial boiling point and range	187.4°C @ 760 mm Hg
Flash point	103°C Pensky-Martens closed cup.
Evaporation rate	0.02
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 2.6 Upper flammable/explosive limit: 12.5
Vapour pressure	0.3 mbar @ °C
Vapour density	2.62
Relative density	1.04 @ 20°C
Partition coefficient	: -1.07
Auto-ignition temperature	371°C
Viscosity	48.6 mPa s @ 25°C

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Avoid the following conditions: Heat, sparks, flames.

10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with strong oxidising agents. Avoid contact with acids. bases

10.5. Incompatible materials

Materials to avoid Strong acids. Strong oxides. bases

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. aldehydes organic acids, alcohols ethers

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Other health effects There is no evidence that the product can cause cancer.

Inhalation No significant hazard at normal ambient temperatures. Heating may generate the following products: Toxic gases or vapours. Vapour may irritate respiratory system/lungs.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin contact Skin irritation should not occur when used as recommended. Product has a defatting effect on skin.

Eye contact May cause temporary eye irritation.

Acute and chronic health hazards This product has low toxicity. Only large quantities are likely to have adverse effects on human health.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: >44,000 (rainbow trout) mg/l, Fish

Acute toxicity - aquatic invertebrates LC50 Criodaphnia dubia (water flea), static, 48hr 18,340 mg/l
LC50 Mysidopsis bahia (saltwater mysid), static, 96hr 18800 mg/l
EC_{50}, 48 hours: >4,850 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 96 hours: 19000 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms NOEC, >: > 20000 mg/l,
Pseudomonas putida, 18hr

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, : 13020 mg/l,
Ceridaphnia (water flea), static renewal, 7d

12.2. Persistence and degradability

Persistence and degradability The product has proven to be degradable under anaerobic conditions. Readily biodegradable. Biodegradeability after 28 days was found to be > 80%

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating. BCF: ~ 0.09,

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Partition coefficient : -1.07

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Contaminated packages must be completely emptied before sending away for laundering and re-use.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Recycle containers wherever possible. This product is not classified as hazardous waste.

Waste class EWC NUMBER: Allocation of a waste code number in accordance with the European Waste Catalogue, should be carried out in agreement with an EA authorised waste disposal company.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

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EU legislation	Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1272/2008 CLP. Regulation (EC) No 1907/2006 REACH.
Guidance	Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
Present.

US - TSCA
Present.

SECTION 16: Other information

General information	Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Labels should not be removed from containers until they have been cleaned and no product remains within.
Key literature references and sources for data	Manufacturer's Material Safety Data Sheet
Revision comments	Updated company address.
Issued by	Compliance Department
Revision date	18/10/2018
Revision	9
Supersedes date	12/05/2016
SDS number	0382
SDS status	Approved.
Risk phrases in full	Not classified.

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