

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

1.1 Product Identifier

Substance Name: AddX Bio - Lubricant

CAS Number: Glycerol: 56-81-5

EC Number: Glycerol: 200-289-5

REACH Registration Number: Exempted from registration according to the provisions of Article 2(7)(d) and Annex IV of REACH

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

Relevant identified uses: Lubricant - Forestry & Agriculture

Uses advised against: Uses other than those identified above

1.3 Details of the supplier of the safety data sheet

Supplier: AddX International LTD

Street Address: 430 Upper Newtownards Road,
Belfast,
Co. Antrim
BT4 3GY

Telephone: +44 7500 827 531

Email: support@addxfuel.com

1.4 Emergency telephone number

Contact number: +44 7500 827 531

Opening hours: 8.30am—5pm

24 hrs: Contact local emergency services

SECTION 2: Hazards Identification

2.1 Classification of substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

The product is not classified as hazardous according to regulation (EC) No 1272/2008 (CLP). However, a safety data sheet is being supplied upon request as it contains a substance for which there is a workplace exposure limit.

2.1.2 Additional information

The hazardous properties of methanol do not result in classification of the mixture as a whole are not relevant due to the low residual concentration.

2.2 Label Elements

2.2.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

The product is not classified as hazardous according to regulation (EC) No 1272/2008 (CLP).

2.2.2 Precautionary Statements:

IF IN CONTACT WITH EYES: rinse immediately with water for several minutes. Remove contact lenses if possible. If discomfort persists seek medical attention.

2.2.3 Any additional information:

The product is not classified as hazardous according to regulation (EC) No 1272/2008 (CLP). However, a safety data sheet is being supplied upon request as it contains a substance for which there is a workplace exposure limit in accordance with Article 25 of CLP.

2.3 Other Hazards

2.3.1 PBT vPvB

Not applicable as per Regulation No. 1907/2006, Annex XIII

SECTION 3: Composition

Identification Name	CAS No.	EC No.	Index No.	REACH Registration No.	Weight - % Concentration / Range	Classification according to Regulation (EC) No 1278/2008
Glycerol	56-81-5	200-289-5		-	60-70%	Not classified as hazardous according to ECHA C & L Inventory
Methanol	67-56-1	200-659-6	603-001-00-X	-	1-2%	Harmonised classification – flammable liquid 2. Acute toxicity (dermal, oral, inhalation) cat 3.SCL: STOT SE 1; C ≥ 10%: STOT SE 2: 3 % ≤ C < 10 %

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General notes: If exposure is severe or if discomfort persists seek medical advice

Inhalation: Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration and seek medical attention.

Skin contact: Wash immediately with plenty of soap and water.

Eye Contact: **Immediately** rinse flowing water for 10-15 minutes holding eye open. If discomfort persists seek medical attention.

Ingestion: If swallowed, rinse mouth out thoroughly with water. Do not induce vomiting. If person is unconscious do not give anything by mouth. Seek medical attention.

Self-protection of first aider: Wear gloves as a precautionary measure.

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

Not Applicable

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water; alcohol resistant foam; extinguishing powder; carbon dioxide

Unsuitable media: Nothing specified.

5.2 Special hazards arising from the substance or mixture

Not combustible but assists in burning. Acrolein produced at temperatures > 250°C

5.3 Advice for firefighters

Wear breathing apparatus (details)

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Non-emergency personnel

PPE— Face shield; Gloves; Normal precautions

Emergency responders

Standard protective equipment

6.2 Environmental precautions

Although readily biodegradable, prevent, where possible, from entering water course / sewage.

6.3 Methods and material for containment and cleaning up

Small spill: Dilute with water and mop up. Alternatively, apply an absorbent—saw-dust / sand. Collect the used absorbent in closed containers for disposal. Wash down area with water.

Large spill:

Prioritise containment by spreading an absorbent, and dilute with copious amounts of water to minimise contamination. For major spills contact local environment agency.

6.4 Reference to other sections

See section 8.2 for protective equipment and section 13 for information on disposal.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures:

Avoid contact with eyes & skin. Wash hands after use. Wash hands and remove PPE before consuming food or drink.

Measures to protect the environment:

Avoid spillage

7.2 Conditions for safe storage, including any incompatibilities

Store in sealed containers, in a cool, dark environment

Standard packaging for lubricants

7.3 Specific end use(s)

Lubricant - Forestry & Agriculture

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits in the country of sale / use

Workplace Exposure Limits (WEL) - UK						
Component	CAS Number	Concentration of mixture (%)	Long Term Exposure Limits (TWA 8hrs)		Short Term Exposure Limits (15 mins)	
			ppm	Mg/m ³	ppm	Mg/m ³
Glycerol (mist)	56-81-5	60-70%	-	10	-	-
Methanol	67-56-1	1-2%	200	266	250	333

Occupational Exposure Limits (OEL) - EU						
Component	CAS Number	Concentration of mixture (%)	Long Term Exposure Limits (TWA 8hrs)		Short Term Exposure Limits (15 mins)	
			ppm	Mg/m ³	ppm	Mg/m ³
Glycerol (mist)	56-81-5	60-70%	-	10	-	-
Methanol	67-56-1	1-2%	200	260	-	-

Remarks	
Long term exposure limit	Time weighted average of 8 hours
Short term exposure limit	15 minute reference period
UK – WEL - Source	http://limitvalue.ifa.dguv.de
EU – OEL - Source	http://limitvalue.ifa.dguv.de

8.2 Exposure Controls

Appropriate engineering controls:

Wash hands before after use and prior to food consumption.

Individual protection measures including PPE

Please refer to section 4.1 and section 7.1

Environmental exposure controls

Not Applicable

SECTION 9: Physical and Chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Brown liquid
Odour:	Bland / Sweet
Odour threshold:	Not applicable
pH:	~7
Boiling Point (Glycerol):	280°C
Flash Point (Glycerol):	200°C
Evaporation rate:	Not Available
Upper Flammable Limit:	Not Determined
Lower Flammable Limit (Glycerol):	0.9%
Vapour Pressure (Glycerol):	0.000106 hPa @ 25°C
Vapour Density:	Not Determined
Relative Density (Glycerol):	1.26 g/m ³
Water Solubility:	Completely miscible
Partition coefficient (Glycerol):	Log Kow -1.76
Auto Ignition (Glycerol):	370°C
Decomposition temperature:	Not Determined
Viscosity:	135-165 cSt @ 40°C
Explosive Properties:	Product is not explosive
Oxidising properties (Glycerol):	Glycerol has a calculated half-life for photo-oxidisation of 7 hours and is not susceptible to hydrolysis
9.2 Other information	No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Substance is stable under normal ambient conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Excessive heating. At temperatures > 250°C Acrolein is produced

10.5 Incompatible materials

Strong oxidising agents + strong bases

10.6 Hazardous decomposition products

Carbon Monoxide; Acrolein

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Oral:

ATE_{mix}: 8182 mg/kg

Glycerol: Oral (LD₅₀): 12600 mg/kg [Rat]

Methanol: Oral (LD₅₀): 300mg/kg [Human – minimum lethal dose]

Dermal:

ATE_{mix}: 19650mg/kg

Glycerol: Dermal (LD₅₀): No data available

Methanol: Dermal (LD₅₀): 393mg/kg [Monkey]

Inhalation (Vapour):

ATE_{mix}: 150mg/L

Glycerol: Inhalation (Vapour) (LD₅₀): No data available

Methanol: Inhalation (Vapour) (LD₅₀): 3mg/L [ATE as per regulation (EC) No 1272/2008 Annex I; Table 3.1.2]

Inhalation (Vapour):**ATE_{mix}:** 25mg/LGlycerol: Inhalation (mist) (LD₅₀): No data availableMethanol: Inhalation (mist) (LD₅₀): 0.5mg/L [ATE as per regulation (EC) No 1272/2008 Annex I; Table 3.1.2]**Skin corrosion/irritation:**

Glycerol: Mild irritant effect reported [Rabbit]

Methanol: Moderate irritant effect reported [Rabbit]

Serious eye damage/ irritation:

Glycerol: Mild irritant effect reported [Rabbit]

Methanol: Moderate irritant effect reported [Rabbit]

Respiratory:

Glycerol: No data available

Methanol: No data available

Germ cell mutagenicity:

Glycerol: No data available

Methanol: No data available

Carcinogenicity:

Glycerol: No data available

Methanol: No data available

Reproductive toxicity:

Glycerol: No data available

Methanol: Some adverse effects observed at LOAEL 1700 mg/kg bw/day (subchronic, mouse)

Summary of evaluation on CMR properties:

Glycerol: The substance does not meet the criteria for classification of CMR

Methanol: The substance does not meet the criteria for classification of CMR

STOT—Single exposure:

Glycerol: Not classified as hazardous.

Methanol: Specific concentration limit for methanol is ≥3% (Annex VI of CLP)

STOT—Repeat exposure:

Glycerol: No data available

Methanol: No data available

Aspiration hazard: Not considered to be an aspiration hazard

12.1 Toxicity

Glycerol: Not classified as hazardous to the aquatic environment

Methanol: Not classified as hazardous to the aquatic environment

Acute (short term) toxicity:**Algae/Aquatic plants:**

Glycerol: Toxicity threshold 2900mg/L (cell multiplication inhibition test)

Methanol: EC₅₀ 22000mg/L

Crustaceans: Glycerol: EC₅₀ (24hr) 10000 mg/L

Methanol: EC₅₀ (4 days) 18260mg/L

Fish: Glycerol: LC₅₀ (4 days) 54000mg/L

Methanol: LC₅₀ (4 days) 15400 mg/L

Other organisms: Glycerol: No data available

Methanol: LC₅₀/EC₅₀ 20000mg/L (for microorganisms)

Chronic (long-term) toxicity:

Algae/Aquatic plants: Glycerol: No data available

Methanol: No data available

Crustaceans: Glycerol: No data available

Methanol: EC₁₀ / LC₁₀ or NOEC for freshwater invertebrates 208 mg/L

Fish: Glycerol: No data available

Methanol: EC₁₀ / LC₁₀ or NOEC for freshwater fish 450 mg/L

Other organisms: Glycerol: No data available

Methanol: No data available

12.2 Persistence and degradability

Product is readily bio-degradable based on OECD 301F analysis

Physical– and photo-chemical elimination: The calculated half-life for photo-oxidisation of Glycerol in air is 6.8hrs. Methanol has a half-life in air of 17.2 days.

Biodegradation: Product is readily bio-degradable based on OECD 301F analysis

12.3 Bio-accumulative potential

Partition coefficient n-octanol/water (log Kow): Glycerol: Log Kow = -1.76

Methanol: Log Kow = -0.77

Bioconcentration factor (BCF): No data available

12.4 Mobility in soil

Known or predicted distribution to environmental compartments: From the EQC model (Mackay level III), it can be deduced that 100% of Glycerol will end up in the water phase. Negligible amounts will be distributed towards soil, air and sediment

Surface tension: Glycerol: 63.4 mN/m @ 20°C

Adsorption / Desorption: No data available

12.5 Results of PBT and vPvB assessment: Product does not meet the criteria for PBT and vPvB in accordance with Annex XIII (REACH)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product / packaging disposal

Treat contaminated packages in the same way as the product itself. Dispose of in accordance to all local, national and international regulations.

Waste treatment-relevant information

Smaller quantities can be disposed with house-hold waste. For large quantities consult the appropriate local waste disposal expert. Dispose of in accordance to all local, national and international regulations.

Sewage disposal-relevant information

Do not allow large undiluted quantities to reach sewage systems

SECTION 14: Transport information

14.1 UN number: Not classified ADR/RID

14.2 UN proper shipping name: Not classified IMDG

14.3 Transport hazard class(es): Not applicable

14.4 Packing group: Not applicable

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user: Not applicable

SECTION 15: Regulatory information

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

The product is not classified as hazardous according to regulation (EC) No 1272/2008 (Classification, Labelling and Packaging Regulation (CLP))

15.2 Chemical Safety Assessment

The product is not classified as hazardous and is exempted from REACH registration.

SECTION 16: Other information

Revisions

Key for abbreviations.

PBT: Substance with persistent bio-accumulative and toxic properties

vPvB: Substance with very persistent and very bio-accumulative properties

Key references / sources

Regulation (EC) No 1272/2008 (CLP)

Regulation (EC) No 1907/2006 (REACH)

Classification logic:

Classification according to regulation 1272/2008/EC	Calculation method	Conclusion
Acute Toxicity Oral	Additivity formulae	ATEmix = 8182mg/kg – Not classified
Acute Toxicity Dermal	Additivity formulae	ATEmix = 19650mg/kg – Not Classified
Acute Toxicity Inhalation (vapour)	Additivity formulae	ATEmix = 150mg/L – Not Classified
Acute Toxicity Inhalation (mist)	Additivity formulae	ATEmix = 25mg/L – Not Classified
STOT SE1	Specific concentration limit Annex VI $\geq 10\%$ methanol	2% methanol – doesn't trigger classification
STOT SE2	Specific concentration limit Annex VI; $\geq 3\%$ methanol	2% methanol – doesn't trigger classification

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