PRO Inhibitor 1L

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 27/01/2025 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : PRO Inhibitor 1L
Type of product : Solution
Product group : Trade product
Other means of identification : Code 50080056
EAN13: 5051258067753

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

Relevant identified uses

Intended for general public
Main use category : Professional use,Consumer use
Use of the substance/mixture : Corrosion inhibitors
scale inhibitor
Function or use category : Corrosion inhibitors

Uses advised against

Restrictions on use : Not suitable for use in PRIMATIC single feed cylinders

1.3. Details of the supplier of the safety data sheet

Supplier
Primaflow Limited
Votec House
Hambridge Lane
RG14 5TN Newbury
T 0800 694 5000
www.pro-heat.co.uk

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Precautionary statements (CLP) : P102 - Keep out of reach of children.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2',2"-nitrilotriethanol	CAS-No.: 102-71-6 EC-No.: 203-049-8 REACH-no: 01-2119486482-31	< 3	Not classified
Disodium molybdate	CAS-No.: 7631-95-0 EC-No.: 231-551-7 REACH-no: 01-2119489495-21	< 3	Not classified
MPG (propane-1,2-diol)	CAS-No.: 57-55-6 EC-No.: 200-338-0 REACH-no: 01-2119456809-23, UK-01-6702687939-4	< 1	Not classified
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	< 0.004	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	(0.036 ≤ C ≤ 100) Skin Sens. 1A; H317

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice. If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
Symptoms/effects after skin contact : Contact during a long period may cause light irritation.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : Ingestion may cause nausea and vomiting.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Cover spill with non combustible material, e.g.: sand/earth.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

MPG (propane-1,2-diol) (57-55-6)	
United Kingdom - Occupational Exposure Limits	
Local name	Propane-1,2-diol
WEL TWA (OEL TWA)	10 mg/m³ particulates 474 mg/m³ total vapour and particulates
	150 ppm total vapour and particulates
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

DNEL and PNEC

2,2',2''-nitrilotriethanol (102-71-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	7.5 mg/kg bodyweight/day
Long-term - local effects, dermal	140 µg/cm²
Long-term - local effects, inhalation	1 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	3.3 mg/kg bodyweight/day
Long-term - systemic effects, dermal	2.66 mg/kg bodyweight/day
Long-term - local effects, dermal	70 µg/cm²
Long-term - local effects, inhalation	0.4 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.32 mg/l
PNEC aqua (marine water)	0.032 mg/l
PNEC aqua (intermittent, freshwater)	5.12 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.7 mg/kg dwt
PNEC sediment (marine water)	0.17 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.151 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

Disodium molybdate (7631-95-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	23.97 mg/m³

Disodium molybdate (7631-95-0)	
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	7.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	7.15 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	25.5 mg/l
PNEC aqua (marine water)	4.89 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	45300 mg/kg dwt
PNEC sediment (marine water)	5080 mg/kg dwt
PNEC (Soil)	
PNEC soil	20.39 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	46.57 mg/l

MPG (propane-1,2-diol) (57-55-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	168 mg/m³
Long-term - local effects, inhalation	10 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	50 mg/m³
Long-term - local effects, inhalation	10 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	260 mg/l
PNEC aqua (marine water)	26 mg/l
PNEC aqua (intermittent, freshwater)	183 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	572 mg/kg dwt
PNEC sediment (marine water)	57.2 mg/kg dwt
PNEC (Soil)	
PNEC soil	50 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	20000 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses (EN 166). Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves against chemicals (EN 374)

Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	light yellow.
Appearance	:	Liquid.
Odour	:	mild. aromatic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	≈ 8.2 (8 – 8.5)
Viscosity, kinematic	:	Not available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	≈ 1.04 (1.05 – 1.09)
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2,2',2''-nitrilotriethanol (102-71-6)	
LD50 oral rat	6400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Disodium molybdate (7631-95-0)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:

MPG (propane-1,2-diol) (57-55-6)	
LD50 oral rat	22000 mg/kg bodyweight Animal: rat
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
LC50 Inhalation - Rat	> 44.9 mg/l air Animal: rat, Guideline: other:

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Not classified
pH: ≈ 8.2 (8 – 8.5)
Serious eye damage/irritation : Not classified
pH: ≈ 8.2 (8 – 8.5)
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

2,2',2''-nitrilotriethanol (102-71-6)	
NOAEL (chronic, oral, animal/male, 2 years)	63 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity : Not classified

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
NOAEL (animal/female, F1)	56.6 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

2,2',2''-nitrilotriethanol (102-71-6)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Disodium molybdate (7631-95-0)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0.1 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

MPG (propane-1,2-diol) (57-55-6)	
NOAEL (subchronic, oral, animal/male, 90 days)	443 mg/kg bodyweight Animal: cat, Animal sex: male

Aspiration hazard : Not classified

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

2,2',2''-nitrilotriethanol (102-71-6)	
LC50 - Fish [1]	11800 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	609.88 mg/l Test organisms (species): Ceriodaphnia dubia
EC50 72h - Algae [1]	512 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	216 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC chronic fish	> 1 mg/l Test organisms (species): other:

MPG (propane-1,2-diol) (57-55-6)	
LC50 - Fish [1]	51600 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	51400 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	24200 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	19300 mg/l Test organisms (species): Skeletonema costatum
EC50 96h - Algae [1]	19000 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

MPG (propane-1,2-diol) (57-55-6)	
EC50 96h - Algae [2]	19100 mg/l Test organisms (species): Skeletonema costatum

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
LC50 - Fish [1]	≈ 16.7 mg/l Test organisms (species): Cyprinodon variegatus
LC50 - Fish [2]	2.15 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	2.94 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	2.9 mg/l Test organisms (species): Daphnia magna

12.2. Persistence and degradability

PRO Inhibitor 1L	
Persistence and degradability	Not rapidly degradable

2,2',2''-nitrilotriethanol (102-71-6)	
Persistence and degradability	Not rapidly degradable

Disodium molybdate (7631-95-0)	
Persistence and degradability	Not rapidly degradable

MPG (propane-1,2-diol) (57-55-6)	
Persistence and degradability	Not rapidly degradable

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Clean with water.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not applicable	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not applicable	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not applicable	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not applicable	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items: Triethanolamine (102-71-6).

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant

Abbreviations and acronyms:	
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

Safety Data Sheet (SDS), EU

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