SAFETY DATA SHEET
CYCLO® BATTERY CLEANER & LEAK DETECTOR

According to Regulation (EU) No 453/2010

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name CYCLO® BATTERY CLEANER & LEAK DETECTOR
Product No. C120

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

Identified uses Cleaner for batteries leak detector.

1.3. Details of the supplier of the safety data sheet

Supplier
Tri Continental
Streliska 150/A
2000 Maribor,
Slovenia
011 386 2 3200100
E mail Address ehs@cyclo.com

1.4. Emergency telephone number

001 312 906 6194

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Flam. Aerosol 1 - H222+H229
Human health	Not classified.
Environment	Not classified.

Classification (1999/45/EEC) F+;R12.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

See section 11 for additional information on health hazards.

Environment

The product is not expected to be hazardous to the environment.

Physical and Chemical Hazards

Aerosol containers can explode when heated, due to excessive pressure build-up. The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008

Signal Word	Danger	
Hazard Statements		
	H222+H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Precautionary Statements		
	P102	Keep out of reach of children.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Pressurized container: Do not pierce or burn, even after use.
	P410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
	P501	Dispose of contents/container in accordance with international regulations.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

BUTANE **1-5%**

CAS-No.: 106-97-8 **EC No.: 203-448-7**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Gas 1 - H220	F+;R12

PROPANE **1-5%**

CAS-No.: 74-98-6 **EC No.: 200-827-9**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Gas 1 - H220	F+;R12

NONYL PHENOL ETHOXYLATE 9-10 MOL **< 1%**

CAS-No.: 9016-45-9 **EC No.: 500-024-6**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Xn;R22.
Skin Irrit. 2 - H315	Xi;R36/38.
Eye Irrit. 2 - H319	N;R51/53.
Aquatic Chronic 2 - H411	

MORPHOLINE **< 1%**

CAS-No.: 110-91-8 **EC No.: 203-815-1**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226	R10
Acute Tox. 4 - H302	C;R34
Acute Tox. 4 - H312	Xn;R20/21/22
Acute Tox. 4 - H332	
Skin Corr. 1B - H314	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact

Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. 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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation

Vapours may cause drowsiness and dizziness.

Ingestion

May cause stomach pain or vomiting.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

Prolonged contact may cause redness and/or tearing.

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

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use: Water spray, foam, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

Aerosol cans may explode in a fire. Vapours are heavier than air and may spread near ground to sources of ignition.

Specific hazards

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO_2).

5.3. Advice for firefighters

Special Fire Fighting Procedures

Containers close to fire should be removed immediately or cooled with water. Use water to keep fire exposed containers cool and disperse vapours.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Provide ventilation and confine spill. Do not allow runoff to sewer.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide good ventilation. Avoid inhalation of vapours and spray mists. Keep away from heat, sparks and open flame.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C. Store in a cool place.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
BUTANE	WEL	600 ppm	1450 mg/m3	750 ppm	1810 mg/m3	
MORPHOLINE	WEL	10 ppm	36 mg/m3	20 ppm	72 mg/m3	Sk

WEL = Workplace Exposure Limit.
Sk = Can be absorbed through skin.

8.2. Exposure controls

Protective equipment

Engineering measures

Provide adequate ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit. In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapour cartridge.

Hand protection

Use suitable protective gloves if risk of skin contact. Use protective gloves made of: Nitrile. or Viton rubber (fluor rubber).

Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Solubility	Soluble in water.
Initial boiling point and boiling range (°C)	-42ºC
Melting point (°C)	
Not available.	
Relative density	0.98 @ 20 (°C)
Bulk Density	
Not available.	
Vapour density (air=1)	>1
Vapour pressure	
Not available.	
Evaporation rate	
Not available.	
Evaporation Factor	
Not available.	
pH-Value, Conc. Solution	
Not available.	
pH-Value, Diluted Solution	
Not available.	
Viscosity	
Not available.	
Solubility Value (G/100G H2O@20°C)	
Not available.	
Decomposition temperature (°C)	
Not available.	
Odour Threshold, Lower	
Not available.	
Odour Threshold, Upper	
Not available.	
Flash point (°C)	-104ºC
Auto Ignition Temperature (°C)	
Not available.	
Flammability Limit - Lower(%)	1.9
Flammability Limit - Upper(%)	9.5
Partition Coefficient (N-Octanol/Water)	
Not available.	
Comments	Information given concerns the concentrated solution.

9.2. Other information

Not known.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid exposing aerosol containers to high temperatures or direct sunlight. Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhalation

May cause irritation to the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin contact

Liquid may irritate skin.

Eye contact

Spray and vapour in the eyes may cause irritation and smarting.

Route of entry

Inhalation.

Toxicological information on ingredients.

CYCLO® BATTERY CLEANER & LEAK DETECTOR

MORPHOLINE (CAS: 110-91-8)

Acute toxicity:

Acute Toxicity (Oral LD50)

1900 mg/kg Rat

REACH dossier information

Harmful if swallowed.

Acute Toxicity (Dermal LD50)

0.5 mL/kg bw Rabbit

REACH dossier information

Harmful in contact with skin.

Harmful by inhalation.

Skin Corrosion/Irritation:

Dose

0.5ml 3 min Rabbit

Erythema\eschar score

Severe erythema (beef redness) to eschar formation preventing grading of erythema (4).

REACH dossier information

Corrosive to skin.

Serious eye damage/irritation:

Skin corrosive; corrosivity to eyes is assumed. No testing is needed.

Respiratory or skin sensitisation:

Skin sensitisation

Guinea pig maximization test (GPMT): Guinea Pig

REACH dossier information

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

REACH dossier information

Inconclusive.

Inconclusive data.

Genotoxicity - In Vivo

Chromosome aberration:

REACH dossier information

Negative.

This substance has no evidence of mutagenic properties.

Carcinogenicity:

Carcinogenicity

NOAEC >543 mg/m3 Inhalation.

REACH dossier information

No evidence of carcinogenicity in animal studies

IARC Carcinogenicity

IARC Group 3 Not classifiable as to its carcinogenicity to humans.

NTP - Carcinogenicity

Reasonably anticipated human carcinogen.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Not available.

Reproductive Toxicity - Development

Maternal toxicity: NOAEL 75 mg/kg/day Oral Rat

REACH dossier information

Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

LOAEL 500 mg/kg Oral Rat

REACH dossier information

Not classified as a specific target organ toxicant after repeated exposure.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Acute Fish Toxicity

Not considered toxic to fish.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

Acute Toxicity - Fish

LC50 96 hours 380 mg/l Onchorhynchus mykiss (Rainbow trout)

REACH dossier information

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours 45 mg/l Daphnia magna

REACH dossier information

Acute Toxicity - Aquatic Plants

EC50 96 hours 28 mg/l Selenastrum capricornutum

REACH dossier information

12.2. Persistence and degradability

Degradability

There are no data on the degradability of this product.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

Phototransformation

Not determined.

Stability (Hydrolysis)

Not determined.

Biodegradation

Water Degradation (93%%) 28 days

REACH dossier information

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

Bioaccumulation factor

BCF < 2.8 Cyprinus carpio (Common carp)

REACH dossier information

Partition coefficient

log Pow -0.84@25°C

REACH dossier information

12.4. Mobility in soil

Mobility:

The product is soluble in water.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

Adsorption/Desorption Coefficient

Not available.

Henry's Law Constant

0.0116 Pa m3/mol @25°C

REACH dossier information

Surface tension

Not available.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

Ecological information on ingredients.

MORPHOLINE (CAS: 110-91-8)

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Do not puncture or incinerate even when empty.

13.1. Waste treatment methods

Make sure containers are empty before discarding (explosion risk). Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950

14.2. UN proper shipping name

Proper Shipping Name	AEROSOLS

14.3. Transport hazard class(es)

ADR/RID/ADN Class	2
ADR/RID/ADN Class	Class 2: Gases
ADR Label No.	2.1
IMDG Class	2.1
ICAO Class/Division	2.1

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	N/A
IMDG Packing group	N/A
ICAO Packing group	N/A

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-D, S-U
Tunnel Restriction Code	(D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information required. Not relevant

SECTION 15: REGULATORY INFORMATION

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

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

National Regulations

Workplace Exposure Limits 2005 (EH40)

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date	October 2013
Revision	2
Supersedes date	July 2012
Date	October 2010

Risk Phrases In Full

R34	Causes burns.
R12	Extremely flammable.
R10	Flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Statements In Full

H220	Extremely flammable gas.
H222+H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.