

Windscreen washer fluid Borygo -22°C

This Safety Data Sheet complies with Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

Section 1. Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier
Windscreen washer fluid Borygo -22°C
1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: liquid for washing and spraying vehicle windscreens and headlamps.

Uses advised against: not determined.

1.3. Details of the supplier of the safety data sheet

Boryszew S.A.

ERG Boryszew Branch in Sochaczew

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1.4. Emergency telephone number

112 (general emergency telephone number)

Section 2. Hazards identification
2.1. Classification of mixture

Name of the mixture	Classification according to 1272/2008/EEC Regulation:
Windscreen washer fluid Borygo -22°C	Flam. Liq. 3; H 226

Hazards for human health or life:

The product is not classified as hazardous for human.

Environmental hazards:

The product is not classified as hazardous for the environment.

Other hazards:

Flammable liquid and vapour

Flammable liquid and vapour. Vapours form explosive mixtures with air. Vapours are heavier than air and accumulate near the ground and in the lower parts of the rooms. Containers exposed to fire or high temperatures may explode.

2.2. Label elements

According to the Regulation (EC) 1272/2008:



Pictograms:

Warning phrase: Note

H Phrases: H226 – Highly flammable liquid and vapour.

P statements: P 102 - Keep out of the reach of children

P 210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P 404 - Store in a closed container.

P 403 + P 235 – Store in a well ventilated place. Store in a well-ventilated place.

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P 501 - Dispose of the contents / container to a centre of separate waste collection.

Additional Information:

Contains: anionic surfactants (<5%), non-ionic surfactants (<5%), aroma.

2.3. Other hazards

No information on meeting the PBT or vPvB criteria according to Annex XIII of the REACH Regulation. Relevant studies were not conducted.

Section 3. Composition / information on ingredients
3.1. Substances

Not applicable

3.2. Mixture

Substance name	Concentration range [%]	CAS Number	EC Number	Hazard symbols****
				Regulation (EC) 1272/2008
Methanol*	< 3	67-56-1	200-659-6	Flam. Liq. 2; H225 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT SE 1; H370
Ethanol**	26 - 28	64-17-5	200-578-6	Flam Liq. 2; H225
Butane-2-on***	< 0.2	78-93-3	201-159-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 EUH 066 STOT SE 3; H336

* Registration number for methanol: 01-2119433307-44-XXXX

** Registration number for ethanol: 01-2119457610-43-XXXX

*** Registration number for butane-2-on: 01-2119457290-43-XXXX

****See section 16

Section 4. First-aid measures
4.1. Description of first aid measures

Inhalation: provide adequate ventilation in work areas. Bring the injured person into fresh air, keep calm and provide rest. Contact the doctor immediately.

Skin: Remove contaminated clothing immediately. Wash contaminated skin with plenty of running water with soap. Consult a dermatologist if skin irritation symptoms persist.

Eyes: Remove contact lenses. Rinse eyes with plenty of clean water as soon as possible, holding the eyelids open (for at least 15 minutes). Do not use strong water jet during eye rinsing. Consult an ophthalmologist if eye irritation symptoms persist.

Swallowing: induce vomiting immediately. Rinse mouth with water. Consult a doctor immediately z lekarzem, show this container or label. Never give anything to drink to an unconscious person. As part of pre-medical assistance, a conscious patient may be given: adults - 100-150 ml of 40% ethylene alcohol (specific antidote - blocks the mechanism of methanol), children - for every 10 kg body weight, 1 tablespoon of vodka in half a glass of water with sugar.

Other directions: take usual precautions as applied for chemicals handling. In case of any alarming symptoms call a doctor.

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

Contact with eyes: redness, lacrimation, burning sensation.

In contact with skin: redness, drying and cracking of skin, symptoms similar to if swallowed in case of prolonged contact with the product.

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After inhalation: in the case of high concentration of vapours the product may cause headaches, dizziness, impaired balance, symptoms similar to if swallowed.
If swallowed: nausea, vomiting, impaired balance and coordination, blurred vision, blackout, impaired speech, death.

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

Decision on suitable treatment is made by the doctor after assessing the condition of the affected person.

Section 5. Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media: carbon dioxide, dry powders, alcohol-resistant foams, water spray.
Unsuitable extinguishing media: do not use water in full jets.

5.2. Special hazards associated with the product

During combustion, toxic fumes containing carbon oxides may be produced. Do not inhale fumes, which may be hazardous to health.

5.3. Advice for firefighters

Alert everyone in the vicinity of the incident. Evacuate all persons not taking part in fire-fighting action from the danger area, if necessary, call the rescue teams. Persons participating in fire fighting activities should be trained, wear protective clothing and a self-contained breathing apparatus.

Section 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Restrict access to the area until appropriate cleaning activities have been completed. Ensure that the incident and its effects are eliminated by trained personnel only.

For large releases isolate the affected area. Avoid contact with skin and eyes. Do not walk on spilled material - risk of slipping.

Provide adequate ventilation. Avoid breathing fire vapours. Wear appropriate personal protective equipment. Restrict smoking and using open fire.

6.2. Environmental precautions

Do not allow the product to enter the sewage and drainage systems, and also the ground and surface water.

6.3. Methods and material for containment and cleaning up

Place damaged packaging place in a tight, closed replacement container. Collect with non-flammable liquid-absorbing material (e.g. sand, earth, all-purpose binders, silica, vermiculite, etc.) and put into labelled containers. Treat collected material as waste. Ventilate and clean the affected area using large amount of water.

6.4. References to other sections

Personal protective measures - see section 8. Waste handling - see section 13.

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Section 7. Handling and storage of the substances and mixtures**7.1. Precautions for safe handling**

Follow general occupational health and safety regulations for chemicals handling and good manufacturing practice; strictly adhere to the established procedures and all manufacturer's recommendations. Use in an appropriately ventilated place. Do not eat, drink or smoke when using the substance. Avoid contact with fire and sources of ignition. Do not allow the substance to enter sewage systems.

7.2. Conditions for safe storage, including any incompatibilities

Keep only in the original containers, tightly closed packaging, in a dry, cool and well-ventilated place. Do not store with food and animal feed. Seal the container after opening and store in an upright position to prevent leakage. Do not use empty packaging for other purposes. Avoid direct sunlight. Keep away from heat and fire. Recommended storage temperature below 30°C.

7.3. Special end-use

The liquid is intended for washing and spraying vehicle windscreens.

Section 8. Exposure controls/personal protection**8.1. Control parameters**

Maximum acceptable concentration (mg/m³) in the workplace effective in Poland:

Specifications	MAC	STEL	TWA	ACB
Ethanol CAS: 64-17-5	1,900 mg/m ³	-	-	-
Methanol CAS: 67-56-1	100 mg/m ³	300 mg/m ³	-	6 mg/l*
Butane-2-on CAS: 78-93-3	450 mg/m ³	900 mg/m ³	-	-

* analyte - methanol; biological material - urine.

Ethanol

DNEL_{inhal} = 1,900 mg/m³

DNEL_{systemic} (skin) = 343 mg/kg b.d./day

DNEL_{systemic} (inhalation) = 206 mg/kg b.d./day

DNEL_{systemic} (oral) = 87 mg/kg b.d./day

PNEC_{water} = 0.96 mg/l

PNEC_{seawater} = 0.76 mg/l

PNEC_{sludge} = 2.9 mg/kg

PNEC_{earth} = 0.63 mg/kg

Methanol

DNEL_{systemic} (skin) = 40 mg/kg b.d./day (personnel)

DNEL_{systemic} (inhalation) = 260 mg/m³/day (personnel)

PNEC_{water} = 154 mg/l

PNEC_{seawater} = 15.4 mg/l

PNEC_{sludge} = 570 mg/kg

PNEC_{earth} = 23.5 mg/kg

8.2. Exposure controls

Follow general occupational health and safety rules. Local exhaust ventilation is preferred because it removes contamination from the place of its origin not allowing it to spread. Do not eat, drink or smoke when using the substance. Wash hands thoroughly before breaks and at the end of work. If there is a risk that when working with the product, employee's clothing may catch fire, safety showers and eye wash stations should be installed in the vicinity of workstations .

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Respiratory Protection:

Not required if an effective ventilation is in place. If MAC limits are exceeded, use respirators/masks with suitable organic vapour absorber in emergency situations.

Provide adequate ventilation in work areas. Wear respiratory protection in conditions of exposure to product aerosols and mists.

Hand protection:

Wear protective gloves. Wear protective clothing.

The glove material has to be impermeable and resistant to the product. Material must be selected taking into account the piercing times, rates of diffusion and degradation. Selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. Obtain information on the exact piercing time from the manufacturer and observed it.

Eye and face protection: Wear safety glasses in a sealed enclosure.

Skin protection: Work clothing.

Environment exposure control: Prevent direct release to sewage system / surface water. Do not contaminate surface water and drainage ditches with chemicals or empty packaging. Spilled product or uncontrolled releases into surface water must be reported to the competent authorities in accordance with national and local regulations. Transport as chemical waste, according to national and local regulations.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

appearance	colourless liquid, homogeneous, precipitation free
odour	faint odour of alcohol
odour threshold	not determined
pH	not determined
freezing point	-20°C
initial boiling point	> 60 °C
boiling temperature range	not determined
ignition temperature	> 23°C
ignition point	not determined
auto-ignition temperature	> 200°C
evaporation rate	not determined
flammability (solid, gas)	not applicable - the substance is a liquid
Explosion limits	upper: 44% vol. (methanol) lower: 5.5% vol. (methanol)
vapour pressure	not determined
vapour density to air	> 1 (air=1)
density (minimum)	0.958 – 0.964 g/cm ³ (at 20°C)
solubility	water - complete
partition coefficient: n-octanol/water	Log P o/w + -0.77 at 25°C (methanol)
decomposition temperature	not determined
viscosity	not determined
explosive properties	not explosive, however, mixture vapours may form explosive mixtures with air.
oxidising properties	no data available for the mixture, however, oxidising properties are not expected

9.2. Other information

Data unavailable

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Section 10. Stability and reactivity
10.1. Reactivity

In storage conditions and handling as intended for - no reactivity.

10.2. Chemical stability

The product is stable when used and stored properly.

10.3. Possibility of hazardous reactions

In contact with light alloys hydrogen is released. Product does not undergo polymerisation.

10.4. Conditions to avoid

Avoid direct sunlight, heat, and fire.

10.5. Incompatible materials

Oxidising agents, acids, alkali metals, metal oxides.

10.6. Hazardous decomposition products

Unknown in the recommended usage conditions.

Section 11. Toxicological information
11.1. Information on toxicological effects
Acute Toxicity

ATE mix = 100 (inhalation)

ATE mix = 10,000 (skin)

ATE mix= 3333,33 (ingestion)

Acute Toxicity:

Based on the available data, classification criteria are not met..

<u>Ingredient</u>	<u>CAS No.</u>	<u>Dose</u>	<u>value</u>	<u>unit</u>
Butane-2-on	78-93-3	DL ₅₀ - oral, rat	2737	mg/kg
		CL ₅₀ - inhalation, rat	23,500	mg/m ³ (8h)
		LDL ₀ - oral, baby	2000	mg/kg
		TDL ₀ - oral, man	700	mg/kg
		LDL ₀ - oral, human	1400	mg/kg
Ethanol	64-17-5	LD ₅₀ - oral, rat	7060	mg/kg
		LC ₅₀ - inhalation, rat	20000	mg/l (10h)
		LD ₅₀ - oral, rat	> 1187 - 2769	mg/kg
Methanol	67-56-1	LC ₅₀ - inhalation, rat	128200	mg/m ³ (4h)
		LD ₅₀ - skin, rabbit	17100	mg/kg

Corrosive/irritant to skin:

Based on the available data, classification criteria are not met.

Rabbit: negative result

Serious eye damage/irritation to eyes:

Based on the available data, classification criteria are not met.

Rabbit: negative result

Sensitising to the respiratory tract or skin:

Based on the available data, classification criteria are not met..

Mutagenicity on reproductive cells:

Based on the available data, classification criteria are not met.

Carcinogenicity:

Based on the available data, classification criteria are not met.

Reproductive toxicity:

Based on the available data, classification criteria are not met.

Target organ toxicity - single exposure:

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Based on the available data, classification criteria are not met.

Target organ toxicity - repeated exposure:

Based on the available data, classification criteria are not met.

Aspiration hazard:

Based on the available data, classification criteria are not met..

Inhalation: in the case of high concentration of vapours the product may cause headaches, dizziness, impaired balance, symptoms similar to if swallowed.

Eye contact: redness, lacrimation, burning sensation.

If swallowed: nausea, vomiting, impaired balance and coordination, blurred vision to a complete loss of vision, blackout, impaired speech, loss of consciousness, death.

Skin contact: in the case of frequent or prolonged exposure: redness, drying and cracking of skin.

Section 12. Ecological information12.1. Toxicity

Ingredient	CAS No.	Dose	value	Unit.
Methanol	67-56-1	CL ₅₀ - fish (<i>Salmo gairdneri</i>)	20,000	mg/l (96h)
		CL ₅₀ - fish (<i>Alburnus alburnus</i>)	28,000	mg/l (96h)
		CE ₅₀ - invertebrates (<i>Daphnia magna</i>)	>10,000	mg/l (24h)
		CE ₅₀ - algae (<i>Chlorella pyrenoidosa</i>)	28440	mg/l
		CL ₅₀ - bacteria (<i>Photobacterium phosphoreum</i>)	157	g/l (5min)
Butane-2-on	78-93-3	CL ₅₀ - fish (<i>Lepomis macrochirus</i>)	5,640	mg/l (48h)
		CL ₅₀ - fish (<i>Leuciscus idus</i>)	4,600	mg/l (48h)
		CE ₅₀ - invertebrates (<i>Daphnia magna</i>)	>520	mg/l (48h)
		CE ₅₀ - algae (<i>Scenedesmus quadricauda</i>)	>100	mg/l (168h)
		CE ₅₀ - bacteria (<i>Photobacterium phosphoreum</i>)	5100	mg/l (5min)
		NOEC - freshwater (<i>Daphnia magna</i>)	< 70	mg/l (< 24h)
Ethanol	64-17-5	LC ₀ - fish (<i>Leuciscus idus melanotus</i>)	7110	mg/l (48h)
		LC ₅₀ - fish (<i>Leuciscus idus melanotus</i>)	8140	mg/l (48h)
		EC ₅₀ - invertebrates (<i>Daphnia magna</i>)	>10,000	mg/l (24h)
		EC ₅₀ - invertebrates (<i>Nitocra spinipes</i>)	7750	mg/l (96h)
		EC ₅₀ - algae (<i>Chlorella pyrenoidosa</i>)	9310	mg/l

12.2. Persistence and degradability

Product is readily biodegradable.

12.3. Bioaccumulative potential

Not expected to bioaccumulate.

12.4. Mobility in soil

The product is mobile in soil and water.

12.5. Results of PBT and vPvB assessment

Not applicable.

12.6. Other harmful effects

The product does not affect global warming and ozone layer depletion.

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Section 13. Waste disposal13.1. Methods of waste disposal

Do not discharge into drains. Do not allow the substance to enter surface or ground water. Product waste to be collected for disposal (recycling) or incinerate in appropriate plants. Used packaging should be submitted to the packaging waste recycling companies.

Classification to be specified according to the place of manufacture as per criteria defined by the applicable regulations. If the product was used in any further operations/processes, the end user should define the produced waste and assign the correct code.

Section 14. Transport information14.1. UN-Number

1993

14.2. UN correct shipping name

FLAMMABLE LIQUID MATERIAL, I.N.O. (ethanol, methanol)

14.3. Transport hazard class(es)

3

14.4. Packing Group

III

14.5. Environmental hazards

The product is not classified as hazardous for the environment during transport.

14.6. Special precautions for users

When handling during the transport, wear PPE in accordance with Section 8. Avoid sources of ignition.

14.7. Bulk transport in accordance with Annex II of MARPOL 73/78 Convention and the IBC Code

Not applicable

Section 15. Regulatory information15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture*Legislation:*

The Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws of 2011 No. 63, item 322, Journal of Laws of 2012 No. 0, item 908, Journal of Laws of 2015 No. 0 item 675)

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), and 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 (rectification Official Journal L 136 of 29 May 2007 as amended)

Commission Regulation (EU) No. 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Official Journal L 133/1 of 31 May 2010)

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. (Official Journal UE L No 353 of 31 December 2008 as amended)

Ordinance of the Minister of Health of 10 August 2012 on the criteria and methods of classification of chemical substances and their mixtures (Journal of Laws of 2012 No 0, item 1018, Journal of Laws of 2014 No 0, item 6)

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Ordinance of the Minister of Health of 20 April 2012 on labelling the packaging containing hazardous substances and hazardous mixtures and certain mixtures (Journal of Laws of 2012 No 0, item 445, Journal of Laws of 2014 No 0, item 145).

Ordinance of the Minister of Labour and Social Policy of 6 June 2014 on the maximum permissible concentrations and intensities of harmful factors in workplace (Journal of Laws of 2014 No 817)

Ordinance of the Minister of the Economy dated 21 December 2005 on basic requirements for personal protective equipment. (Journal of Laws of 2005 No 259, item 2173).

Ordinance of the Minister of Labour and Social Policy of 26 September 1997 on general occupational health and safety regulations (consolidated text Journal of Laws of 2003 No. 169, item 1650; of 2007 No. 49, item 330; of 2008 No. 108, item 690; of 2011 No. 173, item. 1034)

Ordinance of the Minister of Health of 30 December 2004 on occupational health and safety in the workplace where chemicals are handled (Journal of Laws of 2005 No 11, item 86, Journal of Laws of 2008 No 203, item 1275).

The Act of 14 December 2012 on waste (Journal of Laws of 2013r. No. 0, item 21 as amended).

The Act of 13 June 2013 on the packaging and packaging waste management (Journal of Laws of 2013 No 0, item 888).

The Act of 24 August 1991 on fire protection (consolidated text Journal of Laws of 2009 No. 178, item 1380; of 2010 No. 57, item 353; Journal of Laws of 2012 No. 0, item 908; Journal of Laws of 2013. No. 0, item 1635)

The Act of 19 August 2011 on road transport of hazardous materials (Journal of Laws of 2011 No. 227, item 1367, No. 244, item 1454)

European Agreement on the International Carriage of Dangerous Goods by Road ADR (Annex to the Journal of Laws of 2013 No. 0, item 815)

Government Statement of 28 May 2013 on the entry into force of amendments to Supplement A i B of the European Agreement relating to the international road transport of hazardous goods (ADR), signed in Geneva on 30 September 1957 (Journal of Laws of 2013 No.0 item 815)

Ordinance of the Minister of Environment of 18 November 2014 on the conditions to be fulfilled when releasing wastewaters into water or ground, and on substances particularly harmful to the aquatic environment (Journal of Laws of 2014 No. 0, item 1800)

15.2. Chemical Safety Assessment

No data available on conducting the chemical safety assessment for the substance.

Section 16. Other information

Explanation of abbreviations and acronyms:

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs. Routes of exposure: oral, inhalation, through the skin.
H319	Irritant to eyes.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.
Flam. Liq. 2	Flammable liquid, category 2.
Acute Tox. 3	Acute toxicity, category 3 (inhalation, skin, ingestion).
Eye Irrit. 2	Irritant to eyes, category 2

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STOT SE 3 Target organ toxicity - single exposure, hazard category 3, narcotic effect, irritation of the respiratory tract.

STOT SE 1 Toxic to target organs following single exposure, category 1 (inhalation, skin, ingestion).

The mixture has been classified using the calculation method.

Information presented above are based on the currently available data describing the product, as well as the manufacturer's experience and knowledge in this area. They shall be treated as a supporting information in safe handling during transport, storage and product usage. However, this does not indemnify the user from the responsibility for the incorrect usage of the above information and adherence to all relevant regulations.

