

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

1.1 Product identifier

Product name pH Adjuster 401
Other means of identification 2-Aminoethanol
Product code 465955-FR01
SDS # 465955
EC number 205-483-3
CAS number 141-43-5
REACH Registration number 01-2119486455-28
Product type Liquid.

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

Use of the substance/mixture Additive
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheet

Supplier Castrol Sweden AB
 c/o WeWork
 Regeringsgatan 29
 111 53 Stockholm
 Sweden

 +46 (0)770456711
E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER Carechem: +44 (0) 1235 239 670 (24/7)

REACH Registration number

Registration number	Legal entity
01-2119486455-28	-

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mono-constituent substance

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

Acute Tox. 4, H302
 Acute Tox. 4, H312
 Acute Tox. 4, H332
 Skin Corr. 1, H314
 Eye Dam. 1, H318
 STOT SE 3, H335
 Aquatic Chronic 3, H412

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

Hazard pictograms



Signal word Danger

Product name pH Adjuster 401	Product code 465955-FR01	Page: 1/13
Version 6.01	Date of issue 8 September 2023	Format Finland
Date of previous issue 15 September 2022.		Language ENGLISH
	(Finland)	

SECTION 2: Hazards identification

Hazard statements	H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled. H314 - Causes severe skin burns and eye damage. H335 - May cause respiratory irritation. H412 - Harmful to aquatic life with long lasting effects.														
<u>Precautionary statements</u>															
Prevention	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection: Recommended: Face shield.. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.														
Response	P304 + P310 - IF INHALED: Immediately call a POISON CENTER or physician. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician. P363 - Wash contaminated clothing before reuse. P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.														
Storage	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.														
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.														
Hazardous ingredients	2-Aminoethanol														
Supplemental label elements	Not applicable.														
<u>EU Regulation (EC) No. 1907/2006 (REACH)</u>															
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.														
<u>Special packaging requirements</u>															
Containers to be fitted with child-resistant fastenings	Not applicable.														
Tactile warning of danger	Not applicable.														
2.3 Other hazards															
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	<table><tr><td>PBT</td><td>P</td><td>B</td><td>T</td><td>vPvB</td><td>vP</td><td>vB</td></tr><tr><td>No</td><td>N/A</td><td>N/A</td><td>No</td><td>N/A</td><td>N/A</td><td>N/A</td></tr></table>	PBT	P	B	T	vPvB	vP	vB	No	N/A	N/A	No	N/A	N/A	N/A
PBT	P	B	T	vPvB	vP	vB									
No	N/A	N/A	No	N/A	N/A	N/A									
Other hazards which do not result in classification	Defatting to the skin.														

SECTION 3: Composition/information on ingredients

3.1 Substances					
Product definition		Mono-constituent substance			
Alkanolamine.					
Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
2-aminoethanol	REACH #: 01-2119486455-28 EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8	99.7 - 99.9	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l STOT SE 3, H335: C ≥ 5%	[1]

Product name pH Adjuster 401	Product code 465955-FR01	Page: 2/13
Version 6.01	Date of issue 8 September 2023	Format Finland
Date of previous issue 15 September 2022.		Language ENGLISH
	(Finland)	

SECTION 3: Composition/information on ingredients

See Section 16 for the full text of the H statements declared above.

Type

[1] Constituent

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician. Get medical attention immediately.
Skin contact	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Chemical burns must be treated promptly by a physician. Wash out mouth with water if person is conscious. Get medical attention immediately.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Potential acute health effects

Inhalation	Harmful if inhaled. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	Harmful if swallowed. Causes burns to mouth, throat and stomach.
Skin contact	Causes severe burns. Harmful in contact with skin.
Eye contact	Causes serious eye damage.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Causes severe burns.
Eye contact	Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Use foam or all-purpose dry chemical to extinguish.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
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Product name pH Adjuster 401

Product code 465955-FR01

Page: 3/13

Version 6.01 **Date of issue** 8 September 2023

Format Finland

Language ENGLISH

Date of previous issue 15 September 2022.

(Finland)

SECTION 5: Firefighting measures

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)

5.3 Advice for firefighters

Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Do not breathe vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid contact of spilt material and runoff with soil and surface waterways. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Do not reuse container. Empty containers retain product residue and can be hazardous. Avoid prolonged or repeated contact with skin. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid and as a result may induce allergic skin reactions. Evaporation of water from soluble cutting fluids during use may lead to an increase in concentration which may result in the development of skin conditions due to irritation and defatting. It is important to monitor fluid strength on a regular basis with a refractometer and maintain it at the recommended concentration. Lubricants from other sources and other contaminants should be minimised. Swarf and other debris should be removed.

Product name pH Adjuster 401

Product code 465955-FR01

Page: 4/13

Version 6.01 **Date of issue** 8 September 2023

Format Finland

Language ENGLISH

Date of previous issue 15 September 2022.

(Finland)

SECTION 7: Handling and storage**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature: <40°C (<104°F). Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Protect from freezing. Store locked up. Keep away from heat and direct sunlight. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)**Recommendations**

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
2-aminoethanol	Institute of Occupational Health, Ministry of Social Affairs (Finland). Absorbed through skin. TWA: 1 ppm 8 hours. Issued/Revised: 9/2007 TWA: 2.5 mg/m ³ 8 hours. Issued/Revised: 9/2007 STEL: 3 ppm 15 minutes. Issued/Revised: 9/2007 STEL: 7.6 mg/m ³ 15 minutes. Issued/Revised: 9/2007

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
Derived No Effect Level	
No DNELs/DMELs available.	
Predicted No Effect Concentration	
No PNECs available	

8.2 Exposure controls**Appropriate engineering controls**

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Product name pH Adjuster 401	Product code 465955-FR01	Page: 5/13
Version 6.01	Date of issue 8 September 2023	Format Finland
Date of previous issue 15 September 2022.		Language ENGLISH
	(Finland)	

SECTION 8: Exposure controls/personal protection

Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory protection	<p>Use with adequate ventilation.</p> <p>In case of insufficient ventilation, wear suitable respiratory equipment.</p> <p>For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.</p> <p>The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.</p> <p>Recommended:</p> <p>Recommended: half-face mask - organic vapour filter (Type A) - particulate filter.</p>
Eye/face protection	Chemical splash goggles. Face shield.
Skin protection	
Hand protection	<p>General Information:</p> <p>Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).</p> <p>Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.</p> <p>Wear suitable gloves.</p> <p>Recommended: Nitrile gloves.</p> <p>Breakthrough time:</p> <p>Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.</p> <p>Our recommendations on the selection of gloves are as follows:</p> <p>Continuous contact:</p> <p>Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.</p> <p>If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.</p> <p>Short-term / splash protection:</p> <p>Recommended breakthrough times as above.</p> <p>It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.</p> <p>Glove Thickness:</p> <p>For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers’ technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required</p>

SECTION 8: Exposure controls/personal protection

for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Refer to standards:

Respiratory protection: EN 529

Gloves: EN 420, EN 374

Eye protection: EN 166

Filtering half-mask: EN 149

Filtering half-mask with valve: EN 405

Half-mask: EN 140 plus filter

Full-face mask: EN 136 plus filter

Particulate filters: EN 143

Gas/combined filters: EN 14387

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Odour	Amine-like.
Odour threshold	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	166°C (330.8°F)
Flammability	Not available.
Lower and upper explosion limit	Lower: 3.4%
Flash point	Closed cup: 91°C (195.8°F) [Pensky-Martens]
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	12
Kinematic viscosity	Not available.
Solubility	

Media	Result
water	Miscible in water.

Partition coefficient n-octanol/water (log value) -2.3

Vapour pressure Not available.

Product name pH Adjuster 401

Product code 465955-FR01

Page: 7/13

Version 6.01 **Date of issue** 8 September 2023

Format Finland

Language ENGLISH

Date of previous issue 15 September 2022.

(Finland)

SECTION 9: Physical and chemical properties

	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Density and/or Relative density	>1000 kg/m³ (>1 g/cm³) at 20°C						
Relative vapour density	Not available.						
Particle characteristics							
Median particle size	Not applicable.						
9.2 Other information							
Evaporation rate	Not available.						
Explosive properties	Not available.						
Oxidising properties	Not available.						

SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
10.4 Conditions to avoid	High temperatures
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidising materials. Slightly reactive or incompatible with the following materials: acids.
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 estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
2-Aminoethanol	502.5	1105.5	N/A	11.1	N/A
2-aminoethanol	500	1100	N/A	11	N/A

Conclusion/Summary

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

Information on likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects**Inhalation**

Harmful if inhaled. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion

Harmful if swallowed. Causes burns to mouth, throat and stomach.

Skin contact

Causes severe burns. Harmful in contact with skin.

Eye contact

Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics**Inhalation**

Adverse symptoms may include the following:

- respiratory tract irritation
- coughing
- nausea or vomiting
- headache
- drowsiness/fatigue
- dizziness/vertigo
- unconsciousness

Ingestion

Adverse symptoms may include the following:

- stomach pains

Product name pH Adjuster 401**Product code** 465955-FR01**Page:** 8/13**Version** 6.01 **Date of issue** 8 September 2023**Format** Finland**Language** ENGLISH**Date of previous issue** 15 September 2022.**(Finland)**

SECTION 11: Toxicological information

Skin contact Adverse symptoms may include the following:
 pain or irritation
 redness
 dryness
 cracking
 blistering may occur

Eye contact Adverse symptoms may include the following:
 pain
 watering
 redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion Ingestion of large quantities may cause nausea and diarrhoea.

Skin contact Causes severe burns.

Eye contact Causes severe burns.

Potential chronic health effects

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

Not available.

Remarks - Endocrine disruptor - Health Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information**12.1 Toxicity**

Environmental hazards Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Inherently biodegradable

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Liquid. Soluble in water.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
2-Aminoethanol	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Endocrine disrupting properties Not available.

Remarks - Endocrine disruptor - Environment Not available.

12.7 Other adverse effects No known significant effects or critical hazards.

Product name pH Adjuster 401

Product code 465955-FR01

Page: 9/13

Version 6.01 **Date of issue** 8 September 2023

Format Finland

Language ENGLISH

Date of previous issue 15 September 2022.

(Finland)

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product****Methods of disposal**

Undiluted fluid Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Diluted Fluid The spent diluted fluid comprises a relatively stable emulsion. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques (e.g. emulsion splitting, coagulation and filtration) approved by the local authority. Spent fluid should never be disposed of down the drain. The aqueous phase should not be discharged into sewage systems unless provided for by local regulations; the non-aqueous phase should be disposed of as undiluted fluid. Note that separated aqueous solutions or effluents may contain metal salts as well as traces of oil and must be checked for conformity in these respects against consents given by the authorities before disposal. Further treatment may be required.

Hazardous waste

Yes.

European waste catalogue (EWC)

Waste code	Waste designation
12 01 10*	synthetic machining oils

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging**Methods of disposal**

Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by hazardous substances





Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

References

Commission 2014/955/EU
Directive 2008/98/EC

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN2491	UN2491	UN2491	UN2491
14.2 UN proper shipping name	Ethanolamine	Ethanolamine	Ethanolamine	Ethanolamine
14.3 Transport hazard class(es)	8 	8 	8 	8 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.
Additional information	Hazard identification number 80 Tunnel code (E)	The product is only regulated as an environmentally hazardous substance when transported in tank vessels.	Emergency schedules F-A, S-B	-

14.6 Special precautions for user

Not available.

Product name pH Adjuster 401**Product code** 465955-FR01**Page:** 10/13**Version** 6.01 **Date of issue** 8 September 2023**Format** Finland**Language** ENGLISH**Date of previous issue** 15 September 2022.**(Finland)**

SECTION 14: Transport information

ADR/RID Classification code: C7

ADN Classification code: C7

14.7 Maritime transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Other regulations

REACH Status The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

United States inventory (TSCA 8b) All components are active or exempted.

Australia inventory (AIIIC) All components are listed or exempted.

Canada inventory All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

Japan inventory (CSCL) All components are listed or exempted.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) All components are listed or exempted.

Taiwan Chemical Substances Inventory (TCSI) All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

EU - Water framework directive - Priority substances

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

Product name pH Adjuster 401

Product code 465955-FR01

Page: 11/13

Version 6.01 Date of issue 8 September 2023

Format Finland

Language ENGLISH

Date of previous issue 15 September 2022.

(Finland)

SECTION 16: Other information

Abbreviations and acronyms	<p>ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway</p> <p>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>ATE = Acute Toxicity Estimate</p> <p>BCF = Bioconcentration Factor</p> <p>CAS = Chemical Abstracts Service</p> <p>CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]</p> <p>CSA = Chemical Safety Assessment</p> <p>CSR = Chemical Safety Report</p> <p>DMEL = Derived Minimal Effect Level</p> <p>DNEL = Derived No Effect Level</p> <p>EINECS = European Inventory of Existing Commercial chemical Substances</p> <p>ES = Exposure Scenario</p> <p>EUH statement = CLP-specific Hazard statement</p> <p>EWC = European Waste Catalogue</p> <p>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>IATA = International Air Transport Association</p> <p>IBC = Intermediate Bulk Container</p> <p>IMDG = International Maritime Dangerous Goods</p> <p>LogPow = logarithm of the octanol/water partition coefficient</p> <p>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)</p> <p>OECD = Organisation for Economic Co-operation and Development</p> <p>PBT = Persistent, Bioaccumulative and Toxic</p> <p>PNEC = Predicted No Effect Concentration</p> <p>REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]</p> <p>RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail</p> <p>RRN = REACH Registration Number</p> <p>SADT = Self-Accelerating Decomposition Temperature</p> <p>SVHC = Substances of Very High Concern</p> <p>STOT-RE = Specific Target Organ Toxicity - Repeated Exposure</p> <p>STOT-SE = Specific Target Organ Toxicity - Single Exposure</p> <p>TWA = Time weighted average</p> <p>UN = United Nations</p> <p>UVCB = Complex hydrocarbon substance</p> <p>VOC = Volatile Organic Compound</p> <p>vPvB = Very Persistent and Very Bioaccumulative</p> <p>Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4 / RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13</p>														
Full text of abbreviated H statements	<table> <tr><td>H302</td><td>Harmful if swallowed.</td></tr> <tr><td>H312</td><td>Harmful in contact with skin.</td></tr> <tr><td>H314</td><td>Causes severe skin burns and eye damage.</td></tr> <tr><td>H318</td><td>Causes serious eye damage.</td></tr> <tr><td>H332</td><td>Harmful if inhaled.</td></tr> <tr><td>H335</td><td>May cause respiratory irritation.</td></tr> <tr><td>H412</td><td>Harmful to aquatic life with long lasting effects.</td></tr> </table>	H302	Harmful if swallowed.	H312	Harmful in contact with skin.	H314	Causes severe skin burns and eye damage.	H318	Causes serious eye damage.	H332	Harmful if inhaled.	H335	May cause respiratory irritation.	H412	Harmful to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]	<table> <tr><td>Acute Tox. 4</td><td>ACUTE TOXICITY - Category 4</td></tr> <tr><td>Aquatic Chronic 3</td><td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3</td></tr> <tr><td>Eye Dam. 1</td><td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1</td></tr> <tr><td>Skin Corr. 1B</td><td>SKIN CORROSION/IRRITATION - Category 1B</td></tr> <tr><td>STOT SE 3</td><td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3</td></tr> </table>	Acute Tox. 4	ACUTE TOXICITY - Category 4	Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B	STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3				
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History

Date of issue/ Date of revision	08/09/2023.
Date of previous issue	15/09/2022.
Prepared by	Product Stewardship

 Indicates information that has changed from previously issued version.

Notice to reader

Product name pH Adjuster 401	Product code 465955-FR01	Page: 12/13
Version 6.01	Date of issue 8 September 2023	Format Finland Language ENGLISH
Date of previous issue 15 September 2022.	(Finland)	

SECTION 16: Other information

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

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Product name pH Adjuster 401

Product code 465955-FR01

Page: 13/13

Version 6.01 **Date of issue** 8 September 2023

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