

**DSS-03141A****SAFETY DATA SHEET****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

**Product name** Alusol A  
**Product code** 453700-DE02  
**SDS no.** 453700  
**Product type** Liquid.

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

Handling and dilution of metal working fluid concentrates-Industrial

**Use of the substance/  
mixture**

Metalworking fluid - soluble.  
 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 (U.K.) Limited  
 Wakefield House  
 Pipers Way  
 Swindon  
 Wiltshire, SN3 1RE  
 United Kingdom  
 Tel.: +44 (0)1793 512712  
 Fax.: +44 (0)1793 486083

**E-mail address** MSDSadvice@bp.com

**1.4 Emergency telephone number**

**EMERGENCY  
TELEPHONE NUMBER** Carechem: +44 (0) 1235 239 670 (24 hours)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Product definition** Mixture**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Eye Irrit. 2, H319  
 Aquatic Chronic 3, H412

**Classification according to Directive 1999/45/EC [DPD]**

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** Xi; R36**Human health hazards** Irritating to eyes.**Additional information**  LP: Not classified as hazardous when diluted below 20%.

See Section 16 for the full text of the R phrases or 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**  Warning

**Hazard statements**  H319 - Causes serious eye irritation.  
 H412 - Harmful to aquatic life with long lasting effects.

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(United Kingdom)

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## SECTION 2: Hazards identification

### Precautionary statements

<b>Prevention</b>	<p>P280 - Wear eye or face protection.                      P273 - Avoid release to the environment.                      P264 - Wash hands thoroughly after handling.</p>
<b>Response</b>	<p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>
<b>Storage</b>	<p>Not applicable.</p>
<b>Disposal</b>	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>

### Hazardous ingredients

Alcohols, C12-15, ethoxylated

### Supplemental label elements

Contains 3-iodo-2-propynyl butylcarbamate. May produce an allergic reaction.

### Special packaging requirements

<b>Containers to be fitted with child-resistant fastenings</b>	Not applicable.
<b>Tactile warning of danger</b>	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	Defatting to the skin.
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## SECTION 3: Composition/information on ingredients

**Substance/mixture** Mixture  
 Highly refined mineral oil, emulsifiers and additives.

Product/ingredient name	Identifiers	%	67/548/EEC	Classification	
				Regulation (EC) No. 1272/2008 [CLP]	Type
Distillates (petroleum), solvent-dewaxed heavy paraffinic	REACH #: 01-2119471299-27 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6	≥10 - <25	Not classified.	Asp. Tox. 1, H304	[1] [2]
Distillates (petroleum), hydrotreated, heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≥10 - <25	Not classified.	Asp. Tox. 1, H304	[1] [2]
Amine neutralised phosphoric acid esters	Not available.	≥5 - <10	Xi; R36/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
N,N'-Methylenebismorpholine	EC: 227-062-3 CAS: 5625-90-1	≥1 - <3	Xn; R22 C; R34	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318	[1]
Alcohols, C12-15, ethoxylated	EC: 500-195-7 CAS: 68131-39-5	≥1 - <3	Xi; R41 N; R50	Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	[1]
Boric acid	REACH #: 01-2119486683-25 EC: 233-139-2 CAS: 10043-35-3 Index: 005-007-00-2	≥1 - <3	Repr. Cat. 2; R60, R61	Repr. 1B, H360FD (Fertility and Unborn child)	[1] [2]
2,2'-(methylimino) diethanol	REACH #: 01-2119488970-24 EC: 203-312-7 CAS: 105-59-9 Index: 603-079-00-5	≥1 - <3	Xi; R36	Eye Irrit. 2, H319	[1]

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## SECTION 3: Composition/information on ingredients

3-Iodo-2-propynyl butylcarbamate	EC: 259-627-5 CAS: 55406-53-6 Index: 616-212-00-7	≥0.3 - <1	Xn; R20/22 Xi; R41, R37/38 R43 N; R50	Acute Tox. 4, H302 [1] Acute Tox. 3, H331 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 1, H372 (trachea) Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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See Section 16 for the full text of the R-phrases declared above.

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

### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	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. Get medical attention.
<b>Skin contact</b>	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms appear. 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.
<b>Ingestion</b>	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. Wash out mouth with water if person is conscious. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

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

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

<b>Notes to physician</b>	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

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

### 5.2 Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO <sub>2</sub> etc.) phosphorus oxides

### 5.3 Advice for firefighters

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## SECTION 5: Firefighting measures

### Special precautions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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

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. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Contact emergency personnel.

#### 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid contact of spilt material and runoff with soil and surface waterways. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

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## 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

Store between the following temperatures: 5 to 40°C (41 to 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. Keep away from heat and direct sunlight. 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Distillates (petroleum), hydrotreated, heavy paraffinic	<b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Boric acid	<b>ACGIH TLV (United States).</b> STEL: 6 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 1/2005 Form: Inhalable fraction TWA: 2 mg/m <sup>3</sup> 8 hours. Issued/Revised: 1/2005 Form: Inhalable fraction

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.

This product contains a preservative that may release trace amounts of formaldehyde during use.

#### 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.

#### 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

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## SECTION 8: Exposure controls/personal protection

ensure that all items of personal protective equipment are compatible.

### Individual protection measures

#### 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

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.  
In case of insufficient ventilation, wear suitable respiratory equipment.  
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.

#### Eye/face protection

Safety glasses with side shields.

#### Skin protection

##### Hand protection

#### General Information:

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).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile gloves.

#### Breakthrough time:

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.  
Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

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.

Short-term / splash protection:

Recommended breakthrough times as above.

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.

#### Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

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.

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.

Note: Depending on the activity being conducted, gloves of varying thickness may be required 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

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## SECTION 8: Exposure controls/personal protection

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.

### 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

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Liquid.
Colour	Amber.
Odour	Not available.
Odour threshold	Not available.
pH	9 [Conc. (% w/w): 4%]
Melting point/freezing point	Not available.
Initial boiling point and boiling range	>100°C (>212°F)
Pour point	<0 °C
Flash point	Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	1000 kg/m <sup>3</sup> (<1 g/cm <sup>3</sup> ) at 20°C
Solubility(ies)	Emulsifies in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 88 mm <sup>2</sup> /s (88 cSt) at 40°C
Explosive properties	Not available.
Oxidising properties	Not available.

### 9.2 Other information

No additional information.

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## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>10.4 Conditions to avoid</b>	Avoid excessive heat.
<b>10.5 Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials. Slightly reactive or incompatible with the following materials: acids.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity estimates

Route	ATE value
<input checked="" type="checkbox"/> Oral Inhalation (vapours)	17514.2 mg/kg 750.4 mg/l

**Information on the likely routes of exposure** Routes of entry anticipated: Dermal, Inhalation.

#### Potential acute health effects

<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	<input checked="" type="checkbox"/> No known significant effects or critical hazards.
<b>Skin contact</b>	<input checked="" type="checkbox"/> Defatting to the skin. May cause skin dryness and irritation.
<b>Eye contact</b>	<input checked="" type="checkbox"/> Causes serious eye irritation.

#### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	<input checked="" type="checkbox"/> No specific data.
<b>Skin contact</b>	<input checked="" type="checkbox"/> Adverse symptoms may include the following: irritation dryness cracking
<b>Eye contact</b>	Adverse symptoms may include the following: pain or irritation watering redness

#### Delayed and immediate effects and also chronic effects from short and long term exposure

<b>Inhalation</b>	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.

#### Potential chronic health effects

<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

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## SECTION 12: Ecological information

### 12.1 Toxicity

**Environmental hazards** Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Expected to be biodegradable.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Liquid. Emulsifies in water.

### 12.5 Results of PBT and vPvB assessment

**PBT** Not applicable.

**vPvB** Not applicable.

### 12.6 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 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 07*	mineral-based machining oils free of halogens (except emulsions and solutions)
12 01 09*	machining emulsions and solutions free of halogens

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 dangerous 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. 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.

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## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user 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](#)

[Substances of very high concern](#)

[Toxic to reproduction](#)

Ingredient name	Status	Reference number
<input checked="" type="checkbox"/> Boric acid	Candidate	ED/30/2010

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)**

At least one component is not listed.

**Australia inventory (AICS)**

All components are listed or exempted.

**Canada inventory**

At least one component is not listed.

**China inventory (IECSC)**

At least one component is not listed.

**Japan inventory (ENCS)**

At least one component is not listed.

**Korea inventory (KECI)**

All components are listed or exempted.

**Philippines inventory (PICCS)**

At least one component is not listed.

**Taiwan inventory (CSNN)**

Not determined.

15.2 Chemical Safety Assessment

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

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## SECTION 16: Other information

<b>Abbreviations and acronyms</b>	ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS = Chemical Abstracts Service CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] CSA = Chemical Safety Assessment CSR = Chemical Safety Report DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level DPD = Dangerous Preparations Directive [1999/45/EC] DSD = Dangerous Substances Directive [67/548/EEC] EINECS = European Inventory of Existing Commercial chemical Substances ES = Exposure Scenario EUH statement = CLP-specific Hazard statement EWC = European Waste Catalogue GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OECD = Organisation for Economic Co-operation and Development PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail RRN = REACH Registration Number SADT = Self-Accelerating Decomposition Temperature SVHC = Substances of Very High Concern STOT-RE = Specific Target Organ Toxicity - Repeated Exposure STOT-SE = Specific Target Organ Toxicity - Single Exposure TWA = Time weighted average UN = United Nations UVCB = Complex hydrocarbon substance VOC = Volatile Organic Compound vPvB = Very Persistent and Very Bioaccumulative
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### Full text of abbreviated H statements

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H360FD (Fertility and Unborn child)	May damage fertility. May damage the unborn child.
H372 (trachea)	Causes damage to organs through prolonged or repeated exposure. (trachea)
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

Acute Tox. 3, H331	ACUTE TOXICITY (inhalation) - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Repr. 1B, H360FD (Fertility and Unborn child)	TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 1B
Skin Corr. 1C, H314	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT RE 1, H372 (trachea)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (trachea) - Category 1

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**SECTION 16: Other information**

**Full text of abbreviated R phrases**

R60- May impair fertility.  
 R61- May cause harm to the unborn child.  
 R22- Also harmful if swallowed.  
 R20/22- Also harmful by inhalation and if swallowed.  
 R34- Causes burns.  
 R41- Risk of serious damage to eyes.  
 R36- Irritating to eyes.  
 R36/38- Irritating to eyes and skin.  
 R37/38- Irritating to respiratory system and skin.  
 R43- May cause sensitisation by skin contact.  
 R50- Very toxic to aquatic organisms.

**Full text of classifications [DSD/DPD]**

Repr. Cat. 2 - Toxic to reproduction category 2  
 C - Corrosive  
 Xn - Harmful  
 Xi - Irritant  
 N - Dangerous for the environment

**History**

**Date of issue/ Date of revision** 02/02/2015.

**Date of previous issue** 20/06/2014.

**Prepared by** Product Stewardship

**Indicates information that has changed from previously issued version.**

**Notice to reader**

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## Annex to the extended Safety Data Sheet (eSDS)

Industrial

### Identification of the substance or mixture

Product definition	Mixture
Code	453700-DE02
Product name	Alusol A

### Section 1: Title

**Short title of the exposure scenario** Handling and dilution of metal working fluid concentrates - Industrial - E-NE (i)

**List of use descriptors**

**Identified use name:** Handling and dilution of metal working fluid concentrates-Industrial  
**Process Category:** PROC01, PROC02, PROC08b, PROC05  
**Sector of end use:** SU03  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC02  
**Specific Environmental Release Category:** ATIEL-ATC SPERC 2.Ei.v1

**Processes and activities covered by the exposure scenario** Handling and dilution of metal working fluid concentrates. Includes associated product storage, material transfers, sampling and maintenance activities.

### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

**Physical state:** Liquid, vapour pressure < 0.5 kPa

**Concentration of substance in product:** Covers use of substance/product up to 100 % (unless stated differently)

**Frequency and duration of use:** Covers daily exposures up to 8 hours (unless stated differently)

**Other given operational conditions affecting workers exposure:** Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures applicable to all activities:  
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Filling/preparation of equipment from drums or containers:  
Avoid carrying out activities involving exposure for more than 4 hours.

Process sampling:  
Avoid carrying out activities involving exposure for more than 4 hours.

Equipment cleaning and maintenance:  
Drain down system prior to equipment break-in or maintenance. Avoid carrying out activities involving exposure for more than 4 hours. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:  
Store substance within a closed system.

## Section 2.2: Control of environmental exposure

No exposure scenario is presented because the product is not classified for the Environment

## Section 3: Exposure estimation

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** No exposure scenario is presented because the product is not classified for the Environment

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: Guidance to check compliance with the exposure scenario

### Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see [www.ATIEL.org/REACH\\_GES](http://www.ATIEL.org/REACH_GES)

### Health

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.