



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

# SAFETY DATA SHEET

## Powerflow Paste Large

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

#### 1.1 Product identifier

**Product name** : Powerflow Paste Large  
**Product code** : 20436  
**Product description** : Not available.  
**Product type** : Solid.

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

Restricted to professional users.

#### 1.3 Details of the supplier of the safety data sheet

: **Alpha, Alent plc**  
**Forsyth Road**  
**Sheerwater**  
**Woking**  
**Surrey**  
**England**  
**GU21 5RZ**  
**Tel: +44(0)1483 758400**  
**Fax: +44(0)1483 728837**

#### Manufacturer

: Alpha, Alent plc  
Koenendelseweg 29  
5222 BG  
's-Hertogenbosch  
The Netherlands  
Tel: +31 73 6280 111  
Fax: +31 73 6219 283

**Contact person** : europeanregulatory@alent.com

**Emergency phone:** +44 1483 758400

**Material uses** : soldering

### 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]

Acute Tox. 4, H302

Eye Dam. 1, H318

**Ingredients of unknown toxicity** : Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 33.8%

**Ingredients of unknown ecotoxicity** : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 63.1%

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

#### Europe

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

**Powerflow Paste Large****SECTION 2: Hazards identification****Classification** : Xi; R41**Human health hazards** : Risk of serious damage to eyes.

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

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

**2.2 Label elements****Hazard pictograms** :**Signal word** : Danger**Hazard statements** : Harmful if swallowed.  
Causes serious eye damage.**Precautionary statements****Prevention** : Wear eye or face protection: Recommended: safety glasses with side-shields. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.**Response** : IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Immediately call a POISON CENTER or physician.**Storage** : Not applicable.**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.**Hazardous ingredients** : Alcohols, C11-14-iso-, C13-rich, ethoxylated**Supplemental label elements** : Not applicable.**2.3 Other hazards****Other hazards which do not result in classification** : None known.**SECTION 3: Composition/information on ingredients****Substance/mixture** : Mixture

Product/ingredient name	Identifiers	%	<u>Classification</u>		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
<b>Europe</b> Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335  <b>See Section 16 for the full text of the H-statements declared above.</b>	[1] [2]
<b>Austria</b>					

**Powerflow Paste Large****SECTION 3: Composition/information on ingredients**

Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Belgium</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Bulgaria</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Croatia</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Czech Republic</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Denmark</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Estonia</b>					

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<b>Finland</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>France</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Germany</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Greece</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Hungary</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Ireland</b>					

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Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Italy</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Latvia</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Lithuania</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Netherlands</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Norway</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Poland</b>					

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<b>Portugal</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Romania</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Slovakia</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Slovenia</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Spain</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Sweden</b>					



**Powerflow Paste Large**
**SECTION 3: Composition/information on ingredients**

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hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Switzerland</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>Turkey</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]
<b>United Kingdom (UK)</b>					
Alcohols, C11-14-iso-, C13-rich, ethoxylated	EC: 616-609-5	≥17 - <25	Xn; R22	Acute Tox. 4, H302	[1]
hydrobromic acid	CAS: 78330-21-9 REACH #: 01-2119479072-39 EC: 233-113-0 CAS: 10035-10-6 Index: 035-002-01-8	≥1 - <3	Xi; R41 C; R34  Xi; R37	Eye Dam. 1, H318 Skin Corr. 1B, H314  Eye Dam. 1, H318 STOT SE 3, H335	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**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

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**
**Eye contact**

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation**

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire,

## SECTION 4: First aid measures

symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- 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

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

- Notes to physician** : 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.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.



## SECTION 5: Firefighting measures

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

- Hazards from the substance or mixture** : No specific fire or explosion hazard.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds

### 5.3 Advice for firefighters

- 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.
- 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. 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).

### 6.3 Methods and material for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
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 (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Powerflow Paste Large****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. Workers should wash hands and face before eating, drinking and smoking. 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 in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. 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. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

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

: Not available.

**Industrial sector specific solutions**

: Not available.

**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
<b>Europe</b> hydrobromic acid	<b>EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values</b> STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Austria</b> hydrobromic acid	<b>GKV_MAK (Austria, 12/2011).</b> TWA: 2 ppm 8 hours. TWA: 6.7 mg/m <sup>3</sup> 8 hours. CEIL: 2 ppm 15 minutes. CEIL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Belgium</b> hydrobromic acid	<b>Lijst Grenswaarden / Valeurs Limites (Belgium, 4/2014).</b> STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Bulgaria</b> hydrobromic acid	<b>България Министерство на труда и социалната политика и Министерството на здравеопазването (Bulgaria, 1/2012).</b> Limit value 15 min: 6.7 mg/m <sup>3</sup> 15 minutes. Limit value 15 min: 2 ppm 15 minutes.
<b>Croatia</b> hydrobromic acid	<b>MinGoRP GVI/KGVI (Croatia, 6/2013).</b> STELV: 6.7 mg/m <sup>3</sup> 15 minutes. STELV: 2 ppm 15 minutes.
<b>Czech Republic</b> hydrobromic acid	<b>MZCR PEL/NPK-P (Czech Republic, 1/2013).</b> STEL: 6 mg/m <sup>3</sup> 15 minutes. STEL: 1.812 ppm 15 minutes. TWA: 0.302 ppm 8 hours. TWA: 1 mg/m <sup>3</sup> 8 hours.
<b>Denmark</b>	

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**SECTION 8: Exposure controls/personal protection**

hydrobromic acid	<b>Arbejdstilsynet (Denmark, 10/2012).</b> CEIL: 2 ppm CEIL: 6.7 mg/m <sup>3</sup>
<b>Estonia</b> hydrobromic acid	<b>Töökeskonna keemiliste ohutegurite piirnormid määrus nr 293 (Estonia, 1/2008).</b> STEL: 6.7 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes.
<b>Finland</b> hydrobromic acid	<b>Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 3/2014).</b> STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>France</b> hydrobromic acid	<b>Ministère du travail (France, 7/2012). Notes: Labour Act, Art. 4412-150 (Regulatory indicative exposure limits)</b> STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Germany</b> hydrobromic acid	<b>TRGS900 AGW (Germany, 4/2014).</b> TWA: 6.7 mg/m <sup>3</sup> 8 hours. PEAK: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Greece</b> hydrobromic acid	<b>Υπουργείο Εργασίας και Κοινωνικών Υποθέσεων (Greece, 2/2012).</b> TWA: 3 ppm 8 hours. TWA: 10 mg/m <sup>3</sup> 8 hours. STEL: 3 ppm 15 minutes. STEL: 10 mg/m <sup>3</sup> 15 minutes.
<b>Hungary</b> hydrobromic acid	<b>25/2000. (IX. 30.) EüM-SzCsM együttes rendelet (Hungary, 12/2011).</b> PEAK: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Ireland</b> hydrobromic acid	<b>NAOSH (Ireland, 12/2011).</b> OELV-15min: 2 ppm 15 minutes. OELV-15min: 6.6 mg/m <sup>3</sup> 15 minutes.
<b>Italy</b> hydrobromic acid	<b>Ministry of Labour and Social Policy (Italy, 10/2013).</b> Short Term: 2 ppm 15 minutes. Short Term: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Latvia</b> hydrobromic acid	<b>Ministru kabineta - AER (Latvia, 2/2011).</b> STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Lithuania</b> hydrobromic acid	<b>Lietuvos Higienos Normos HN 23 (Lithuania, 10/2007). Absorbed through skin.</b> STEL: 6.7 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes.
<b>Netherlands</b> hydrobromic acid	<b>MinSZW Wettelijke Grenswaarden (Netherlands, 6/2014).</b> STEL, 15-min: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Norway</b>	

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hydrobromic acid	<b>FOR-2011-12-06-1358 (Norway, 1/2013).</b> CEIL: 10 mg/m <sup>3</sup> CEIL: 3 ppm
<b>Poland</b>	
hydrobromic acid	<b>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014).</b> CEIL: 6.5 mg/m <sup>3</sup>
<b>Portugal</b>	
hydrobromic acid	<b>Instituto Português da Qualidade (Portugal, 3/2007).</b> CEIL: 2 ppm
<b>Romania</b>	
hydrobromic acid	<b>HG 1218/2006 cu modificările și completările ulterioare (Romania, 1/2012).</b> Short term: 6.7 mg/m <sup>3</sup> 15 minutes. Short term: 2 ppm 15 minutes.
<b>Slovakia</b>	
hydrobromic acid	<b>Nariadenie vlády SR c. 355/2006 (Slovakia, 12/2011).</b> STEL: 6.7 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes.
<b>Slovenia</b>	
hydrobromic acid	<b>Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Slovenia, 12/2010).</b> TWA: 6.7 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours. KTV: 6.7 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 2 ppm, 4 times per shift, 15 minutes.
<b>Spain</b>	
hydrobromic acid	<b>INSHT (Spain, 1/2014).</b> STEL: 2 ppm 15 minutes. STEL: 7 mg/m <sup>3</sup> 15 minutes.
<b>Sweden</b>	
hydrobromic acid	<b>AFS 2011:18 (Sweden, 12/2011).</b> TWA: 1 ppm 8 hours. TWA: 3.5 mg/m <sup>3</sup> 8 hours. CEIL: 2 ppm 15 minutes. CEIL: 7 mg/m <sup>3</sup> 15 minutes.
<b>Switzerland</b>	
hydrobromic acid	<b>SUVA (Switzerland, 1/2014).</b> TWA: 2 ppm 8 hours. TWA: 6.7 mg/m <sup>3</sup> 8 hours. STEL: 2 ppm 15 minutes. STEL: 6.7 mg/m <sup>3</sup> 15 minutes.
<b>Turkey</b>	
hydrobromic acid	<b>TR ISGGM OEL (Turkey, 12/2013).</b> STEL: 6.7 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes.
<b>United Kingdom (UK)</b>	
hydrobromic acid	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 10 mg/m <sup>3</sup> 15 minutes. STEL: 3 ppm 15 minutes.

**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

## SECTION 8: Exposure controls/personal protection

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 effect levels

No DELs available.

### Predicted effect concentrations

No PECs available.

## 8.2 Exposure controls

### **Appropriate engineering controls**

- : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye/face protection**

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: safety glasses with side-shields

### Skin protection

#### **Hand protection**

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): disposable vinyl

#### **Body protection**

- : 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. Recommended: None assigned.

#### **Other skin protection**

- : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory protection**

- : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: None assigned.

#### **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.

**Powerflow Paste Large****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**Appearance

<b>Physical state</b>	: Solid. [Paste.]
<b>Colour</b>	: White to yellowish.
<b>Odour</b>	: Characteristic.
<b>pH</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Initial boiling point and boiling range</b>	: Not available.
<b>Flash point</b>	: Not available.
<b>Upper/lower flammability or explosive limits</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility(ies)</b>	: Not available.
<b>Partition coefficient: n-octanol/ water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>VOC content</b>	: 0 % (w/w)

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<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.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<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

Product/ingredient name	Result	Species	Dose	Exposure
hydrobromic acid	LC50 Inhalation Gas.	Rat	2858 ppm	1 hours

**Conclusion/Summary** : Not available.Acute toxicity estimates

Route	ATE value
Oral	1407.6 mg/kg

Irritation/Corrosion



## SECTION 11: Toxicological information

**Conclusion/Summary** : Not available.

### Sensitiser

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
hydrobromic acid	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : Harmful if swallowed.

**Skin contact** : No known significant effects or critical hazards.

**Eye contact** : Causes serious eye damage.

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

**Inhalation** : No specific data.

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

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

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

## SECTION 11: Toxicological information

<b>Conclusion/Summary</b>	: Not available.
<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>Teratogenicity</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.
<b>Other information</b>	: Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Conclusion/Summary</b>	: Not available.
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### 12.2 Persistence and degradability

<b>Conclusion/Summary</b>	: Not available.
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### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

<b>Soil/water partition coefficient (<math>K_{oc}</math>)</b>	: Not available.
<b>Mobility</b>	: Not available.

### 12.5 Results of PBT and vPvB assessment

<b>PBT</b>	: Not applicable.
<b>vPvB</b>	: 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

<b>Methods of disposal</b>	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
<b>Hazardous waste</b>	: Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

#### Packaging

<b>Methods of disposal</b>	: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
<b>Special precautions</b>	: 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. 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	IMDG
14.1 UN number	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-
14.3 Transport hazard class(es)	-	-
14.4 Packing group	-	-

## 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

None of the components are listed.

**Annex XVII - Restrictions** : Not applicable.

on the manufacture,  
placing on the market  
and use of certain  
dangerous substances,  
mixtures and articles

#### Other EU regulations

Europe inventory : Not determined.

#### National regulations

Austria

Belgium

Bulgaria

Croatia

Czech Republic

Denmark

Estonia

Finland

France

Germany

Hazard class for water : 3 Appendix No. 4

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Netherlands

Norway

Poland

Portugal

Romania

Slovakia

**SECTION 15: Regulatory information**[Slovenia](#)[Spain](#)[Sweden](#)[Switzerland](#)[Turkey](#)[United Kingdom \(UK\)](#)

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

**Date of printing** 25.05.2015.

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**Date of previous issue** : 09.04.2015.

**Version** : 2.01

**Notice to reader**

▮ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

	Classification	Justification
	Acute Tox. 4, H302	Calculation method
	Eye Dam. 1, H318	Calculation method
<b>Europe</b>		
<b>Full text of abbreviated H statements</b>	: H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation.	
<b>Full text of classifications [CLP/GHS]</b>	: Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	
<b>Full text of abbreviated R phrases</b>	: R22- Harmful if swallowed. R34- Causes burns. R41- Risk of serious damage to eyes. R37- Irritating to respiratory system.	
<b>Full text of classifications [DSD/DPD]</b>	: C - Corrosive Xn - Harmful Xi - Irritant	

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

