

AG-FLUX



**SAFETY DATA SHEET**

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

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

**1.1. Product identifier**

Product name : AG-FLUX  
UFI : 71K1-GW5S-F40N-2RMA

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

Hard solder

**1.3. Details of the supplier of the safety data sheet**

Registered company name : GEB.  
Address : CS 62062.95972.ROISSY CDG CEDEX . France.  
Telephone : +33 1 48 17 99 99. Fax : +33 1 48 17 98 00.  
geb@geb.fr  
www.geb.fr

**1.4. Emergency telephone number : +33 1 45 42 59 59.**

Association/Organisation : INRS.

**>SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**> In compliance with EC regulation No. 1272/2008 and its amendments.**

Substance that is corrosive to metals, Category 1 (Met. Corr. 1, H290).  
Acute oral toxicity, Category 4 (Acute Tox. 4, H302).  
Skin corrosion, Category 1A (Skin Corr. 1A, H314).  
Serious eye damage, Category 1 (Eye Dam. 1, H318).  
Hazardous to the aquatic environment - Chronic hazard, Category 4 (Aquatic Chronic 4, H413).

**2.2. Label elements**

**> In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS05



GHS07

Signal Word :

DANGER

Product identifiers :

EC 215-181-3 POTASSIUM HYDROXIDE

Hazard statements :

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statements - General :

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary statements - Prevention :

P234	Keep only in original packaging.
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P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection
Precautionary statements - Response :	
P301 + P312	IF SWALLOWED: Call a POISON CENTER or a doctor if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or a doctor.
P390	Absorb spillage to prevent material damage.
Precautionary statements - Storage :	
P406	Store in a corrosion resistant/... container with a resistant inner liner.
Precautionary statements - Disposal :	
P501	Discard content/container according to applicable regulations.

**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances  $\geq 0.1\%$  with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

**>SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

**> Composition :**

N/A

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 14075_53_7A CAS: 14075-53-7 EC: 237-928-2 REACH: 01-2119960644-32-xxxx  FLUOROBORATE DE POTASSIUM / KBF4	Aquatic Chronic 4, H413		50 $\leq$ x % < 100
INDEX: 019_002_008A CAS: 1310-58-3 EC: 215-181-3 REACH: 01-2119487136-33-XXXX  POTASSIUM HYDROXIDE	GHS07, GHS05 Dgr Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314	[1]	25 $\leq$ x % < 50

**Specific concentration limits:**

Identification	Specific concentration limits	ATE
INDEX: 019_002_008A CAS: 1310-58-3 EC: 215-181-3 REACH: 01-2119487136-33-XXXX  POTASSIUM HYDROXIDE	Skin Corr. 1A: H314 C $\geq$ 5% Skin Corr. 1B: H314 2% $\leq$ C < 5% Skin Irrit. 2: H315 0.5% $\leq$ C < 2% Eye Dam. 1: H318 C $\geq$ 2% Eye Irrit. 2: H319 0.5% $\leq$ C < 2%	

**Information on ingredients :**

(Full text of H-phrases: see section 16)

[1] Substance for which maximum workplace exposure limits are available.

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**|>SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. description of first aid measures**

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

**In the event of splashes or contact with skin :**

Remove any soiled or splashed clothing immediately.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

**|> In the event of swallowing :**

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water, administer activated medical charcoal and consult a doctor.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

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**SECTION 5 : FIREFIGHTING MEASURES**

Non-flammable.

**5.1. Extinguishing media**

**Suitable methods of extinction**

In the event of a fire, use :

- sprayed water or water mist
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO<sub>2</sub>)

**Unsuitable methods of extinction**

In the event of a fire, do not use :

- water jet
- water

**5.2. Special hazards arising from the substance or mixture**

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)
- fluorine (F<sub>2</sub>)

**5.3. Advice for firefighters**

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

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>SECTION 6 : ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed under headings 7 and 8.

**For non first aid worker**

Avoid any contact with the skin and eyes.

**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

> **6.2. Environmental precautions**

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

**6.3. Methods and material for containment and cleaning up**

Clean preferably with a detergent, do not use solvents.

**6.4. Reference to other sections**

No data available.

>SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

> **7.1. Precautions for safe handling**

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Remove contaminated clothing and protective equipment before entering eating areas.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

**Fire prevention :**

Prevent access by unauthorised personnel.

**Recommended equipment and procedures :**

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

> **Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

Never open the packages under pressure.

**7.2. Conditions for safe storage, including any incompatibilities**

No data available.

> **Storage**

Keep out of reach of children.

Keep the container tightly closed in a dry place.

Keep away from food and drink, including those for animals.

> **Packaging**

Always keep in packaging made of an identical material to the original.

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

No data available.

>SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

**Occupational exposure limits :**

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
1310-58-3			2 mg/m3		

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- France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021) :

CAS	VME-ppm :	VME-mg/m3 :	VLE-ppm :	VLE-mg/m3 :	Notes :	TMP No :
1310-58-3	-	-	-	2	-	-

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
1310-58-3		2 mg/m3			

**8.2. Exposure controls**

**Personal protection measures, such as personal protective equipment**

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

**> - Hand protection**

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

**> - Body protection**

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Wear suitable protective clothing, in particular overalls and boots. These items must be kept in good condition and cleaned after use.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

**> - Respiratory protection**

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

**>SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

**Physical state**

Physical state : Paste.

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**Colour**

Unspecified

**Odour**

Odour threshold : Not stated.

> **Melting point**

Melting point/melting range : 850 °C.

> **Freezing point**

Freezing point / Freezing range : Not stated.

> **Boiling point or initial boiling point and boiling range**

Boiling point/boiling range : Not relevant.

**Flammability**

Flammability (solid, gas) : Not stated.

**Lower and upper explosion limit**

Explosive properties, lower explosivity limit (%) Not stated.

:

Explosive properties, upper explosivity limit (%) Not stated.

:

> **Flash point**

Flash point interval : Not relevant.

**Auto-ignition temperature**

Self-ignition temperature : Not relevant.

**Decomposition temperature**

Decomposition point/decomposition range : Not relevant.

**pH**

pH (aqueous solution) : Not stated.

pH : Not relevant.

> **Kinematic viscosity**

Viscosity : Not stated.

> **Solubility**

Water solubility : Partially soluble.

Fat solubility : Not stated.

> **Partition coefficient n-octanol/water (log value)**

Partition coefficient: n-octanol/water : Not stated.

> **Vapour pressure**

Vapour pressure (50°C) : Below 110 kPa (1.10 bar).

> **Density and/or relative density**

Density : 0.8 à 1.6 (20°C)

**Relative vapour density**

Vapour density : Not stated.

**Particle characteristics**

The mixture does not contain nanoforms.

**9.2. Other information**

VOC (g/l) : 0

**9.2.1. Information with regard to physical hazard classes**

No data available.

**9.2.2. Other safety characteristics**

No data available.

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**>SECTION 10 : STABILITY AND REACTIVITY**

**> 10.1. Reactivity**

Mixture which by chemical action can corrode and even destroy metals.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Avoid :

- frost
- humidity

**> 10.5. Incompatible materials**

N/A

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)
- fluorine (F<sub>2</sub>)

**>SECTION 11 : TOXICOLOGICAL INFORMATION**

**> 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Harmful if swallowed.

May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure for up to three minutes.

Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.

**11.1.1. Substances**

No toxicological data available for the substances.

**11.1.2. Mixture**

No toxicological data available for the mixture.

**11.2. Information on other hazards**

**SECTION 12 : ECOLOGICAL INFORMATION**

May cause long lasting harmful effects to aquatic life.

The product must not be allowed to run into drains or waterways.

**12.1. Toxicity**

**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data available.

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

No data available.

**12.6. Endocrine disrupting properties**

No data available.

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**12.7. Other adverse effects**

No data available.

**SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

**SECTION 14 : TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2023 - IMDG 2022 [41-22] - ICAO/IATA 2023 [64]).

**14.1. UN number or ID number**

1814

**14.2. UN proper shipping name**

UN1814=POTASSIUM HYDROXIDE SOLUTION

**14.3. Transport hazard class(es)**

- Classification :



8

**14.4. Packing group**

III

**14.5. Environmental hazards**

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**14.6. Special precautions for user**

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	8	C5	III	8	80	5 L	-	E1	3	E

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	8	-	III	5 L	F-A. S-B	223	E1	Category A	SGG18 SG35

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	8	-	III	852	5 L	856	60 L	A3 A803	E1
	8	-	III	Y841	1 L	-	-	A3 A803	E1

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

**14.7. Maritime transport in bulk according to IMO instruments**

No data available.

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**SECTION 15: Regulatory information**

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

**Classification and labelling information included in section 2:**

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

**Container information:**

Packaging to be fitted with child-resistant fastenings (see EC Regulation No. 1272/2008, Annex II, Part 3).

Containers to be fitted with a tactile warning of danger (see EC Regulation No. 1272/2008, Annex II, Part 3).

**Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):**

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):  
<https://echa.europa.eu/substances-restricted-under-reach>.

**Explosives precursors :**

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

**Particular provisions :**

No data available.

**15.2. Chemical safety assessment**

No data available.

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**>SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Wording of the phrases mentioned in section 3 :**

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H413	May cause long lasting harmful effects to aquatic life.

**> Abbreviations and acronyms :**

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

UFI : Unique formulation identifier.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

TMP : French Occupational Illness table

TLV : Threshold Limit Value (exposure)

AEV : Average Exposure Value.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS05 : Corrosion

GHS07 : Exclamation mark

PBT: Persistent, bioaccumulable and toxic.

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vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.

|> Modification compared to the previous version