

Safety data sheet

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

1.1. Product identifier

Product name **Flux**
Code: **S720**

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

Intended use **Product for welding of metals and precious metals. For professional use only**
Uses advised against **Uses other than those stated.**

1.3. Details of the supplier of the safety data sheet

Name **GALLORINI ALLOYS SRL**
Full address **Via la Casella n. 2/c**
District and Country **52010 Capolona (AR)**
ITALY
Tel. +39 0575 421147
Fax +39 0575 422987

e-mail address of the competent person
responsible for the Safety Data Sheet **Carlo Gallorini info@gallorini.it**

1.4. Emergency telephone number

For urgent inquiries refer to

For health care identify, if applicable, the relevant phone number based on the State where you plan to deploy the product. The numbers and conditions can be found at: <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>

GALLORINI SNC di Carlo e Luca Gallorini & c.

Tel. +39 0575 421147 (Technical support - Monday to Friday: 8:30 to 13:00, 14:00 to 17:00)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:
Reproductive toxicity, category 1B

H360Df May damage the unborn child. Suspected of damaging fertility.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: **Danger**

Hazard statements:

H360Df May damage the unborn child. Suspected of damaging fertility.
Restricted to professional users.

Precautionary statements:

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves / clothing and eye / face protection.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P391 Collect spillage.

Contains: DISODIUM OCTABORATE TETRAHYDRATE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Identification

Classification 1272/2008 (CLP)

BORIC ACID

CAS 10043-35-3

$60 \leq x < 75$

Repr. 1B H360FD

EC 233-139-2

INDEX 005-007-00-2

Reg. no. 01-2119486683-25-0027

ROSIN

CAS 8050-09-7

$25 \leq x < 40$

EC 232-475-7

INDEX 650-015-00-7

Reg. no. 01-2119480418-32-0043

INDEX -

Reg. no. 01-2119489913-23-0001

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

BORIC ACID and DISODIUM OCTABORATE TETRAHYDRATE

Swallowing small quantities (one teaspoon) will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

Note to physicians: Observation only is required for adult ingestion of less than 5 grams of boric acid. For ingestion in excess of 5 grams, maintain adequate kidney function and force fluids.

PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS: for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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

Specific information on symptoms and effects caused by the product are unknown.

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

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Use dry chemical, CO₂ or sand.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use water, gaseous extinguishing media or foam.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product and place it in containers for recovery or disposal. If the product is flammable, use explosion-proof equipment. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Avoid the formation and deposition of dust. Avoid impact, friction and electro-static loading; risk of ignition! Render equipment and apparatus inert (inert gases) and earth before putting into operation. Use antistatic tools.

Keep away from strong oxidizing agents

Avoid direct exposure to the sun. Make sure there is adequate ventilation. Keep preferably at temperatures between 20 ° C and 35 ° C and to avoid temperatures below -5 ° C and above 40 ° C.

7.3. Specific end use(s)

No use other than specified in Section 1.2 of this safety data sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
POL	Polska	ROZPORZADZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

BORIC ACID

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
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	mg/m3	ppm	mg/m3	ppm				
TLV-ACGIH	2		6		INHAL			
Predicted no-effect concentration - PNEC								
Normal value in fresh water			2,9		mg/l			
Normal value in marine water			2,9		mg/l			
Normal value of STP microorganisms			10		mg/l			
Normal value for the terrestrial compartment			5,7		mg/kg/d			
Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,98 mg/kg bw/d				
Inhalation				4,15 mg/m3				8,3 mg/m3
Skin				196 mg/kg bw/d				392 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

Recommended material: rubber, nitrile and butyls.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166). Do not use contact lenses.

RESPIRATORY PROTECTION

Use a type FFP3 filtering facemask (see standard EN 149).

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

For more information refer to the exposure scenarios available on request:

- BORIC ACID
- ROSIN

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	powder
Colour	WHITE
Odour	Resin-like
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not applicable
Boiling range	Not available
Flash point	Not applicable
Evaporation Rate	Not available
Flammability of solids and gases	Solid no-flammable (Reg. CE 440/2008, Metodo A.10 – Report n°02552-17, 13/04/2017)
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	3,14 g/cm ³
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

BORIC ACID: Decomposes at 100 ° C forming metaboric acid (HBO₂) that, if further heated, is converted to boron oxide (B₂O₃)

10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

BORIC ACID: risk of explosion on contact with acetic anhydride.

10.4. Conditions to avoid

Avoid environmental dust build-up.

BORIC ACID: Avoid exposure to moisture, high temperatures and direct contact with fire and heat sources.

10.5. Incompatible materials

BORIC ACID: strong reducing agents, such as metal or alkali metal hydrides. The boric acid reacts as a weak acid which can cause corrosion of metal of a basic nature.

10.6. Hazardous decomposition products**SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effectsACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture:LC50 (Inhalation - vapours) of the mixture:

Not classified (no significant component)

LC50 (Inhalation - mists / powders) of the mixture:LC50 (Inhalation - mists / powders) of the mixture:

Not classified (no significant component)

LD50 (Oral) of the mixture:LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:LD50 (Dermal) of the mixture:

Not classified (no significant component)

BORIC ACID

LD50 (Oral)> 2660 mg/kg Rat (OECD TG 401)

LD50 (Dermal)> 2000 mg/kg Rabbit (FIFRA (40 CFR 163))

LC50 (Inhalation)> 2,03 mg/l/4h Rat/aerosol (OECD TG 403)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

May damage the unborn child - Suspected of damaging fertilityMay damage the unborn child - Suspected of damaging fertility

BORIC ACID

Adverse effects on sexual function and fertility

Method: three-generation study (similar to OECD 416)

Species: rat

Doses: 0, 34 (5.9), 100 (17.5) and 336 (58.5) mg boric acid (mg B)/kg bw/day

Route of administration: oral feed

Results: NOAEL (male) : 100 mg/kg bw boric acid equivalent to 17.5 mg B/kg bw

Adverse effects on development of the offspring

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: rat

Doses:19 (3.3), 36 (6.3), 55(9.6), 76 (13.3) and 143 (25) mg boric acid (mg B)/kg bw

Route of administration: oral feed

Results: NOAEL : 55 mg/kg bw/day or 9.6 mg/kg bw/day (a reduction in the mean foetal bodyweight per litter and skeletal changes)

DISODIUM OCTABORATE TETRAHYDRATE (Source: SDS supplier)

Studies on the administration at high doses in rats, mice and dogs have shown adverse hematologic effects and the primary target organ of toxicity of boron are the testicles. At high doses in rats, mice and rabbits have shown effects on the developing fetus, including fetal weight loss and minor skeletal variations studies. The doses administered were much higher than those which are normally exposed humans.

The tests of exposure to 50 and 155 mg Borax decahydrate / kg body weight (equivalent to 5.9 and 17.5 mg B / kg body weight) made on 3 generations of Sprague-Dawley rats showed no adverse effects on fertility, lactation, litter size, weight of the unborn or other abnormalities. NOAEL (No Observed Adverse Effect Level) for fertility (male rat): 17.5 mg B / kg / day.

The rats exposed to doses of 518 mg Borax decahydrate / kg body weight (equivalent to 58.5 mg B / kg body weight) were sterile.

The examination of the ovaries in female rats exposed to 58.5 mg B / kg body weight has detected ovulation decreased in most of the examined ovaries. None of the females exposed to high doses has generated puppies after mating with males in the control group.

LOAEL (Lowest Observed Adverse Effect Level) for fertility (female / male rat): 58.5 mg B / kg body weight / day.

The group of male rats and high-dose females (58.5 mg B / kg body weight) showed clinical signs of toxicity such as sleeping rough, scaly tail, respiratory distress and inflamed eyelids.

Based on the data obtained from this study it concluded that exposure of rats at levels up to 17.5 mg B / kg body weight does not cause adverse reproductive effects.

Population studies of humans with a high exposure to boron, did not show any adverse effect on the developing fetus.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

BORIC ACID

LC50 - for Fish	79,7 mg/l/96h Pimephales promelas (ASTM E729-95)
EC50 - for Crustacea	109 mg/l/48h Ceriodaphnia dubia (ASTM E729-95)
EC50 - for Algae / Aquatic Plants	40,2 mg/l/72h Pseudokirchneriella subcapitata (OECD Guideline 201)
Chronic NOEC for Fish	< 44,5 mg/l/ 32 d Pimephales promelas (ASTM E1241-05)
Chronic NOEC for Crustacea	10,8 mg/l/21 d Daphnia magna (OECD Guideline 211)
Chronic NOEC for Algae / Aquatic Plants	17,5 mg/l/72h Pseudokirchneriella subcapitata (OECD Guideline 201)

12.2. Persistence and degradability

BORIC ACID

Solubility in water	a 20°C (EU Method A.6) mg/l
Partition coefficient: n-octanol/water	-1,09 Log Kow a 22°C (EU Method A.8)

12.3. Bioaccumulative potential

BORIC ACID

Boron accumulates in terrestrial and aquatic plants. The BSAF values (A Biota / Sediment Accumulation Factor) derived from tests on the soil are generally <100.

12.4. Mobility in soil

BORIC ACID

Boric acid is soluble in water and is dispersed through the ground.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The Product is not classified as a flammable solid on the basis of tests conducted according to the method A. 10 of the EC Reg. 440/2008, conducted on 2017.04.13.

14.1. UN number

ADR / RID, IMDG, IATA:	The Product is not classified as HAZARDOUS SUBSTANCE
ADR / RID:	The Product is not classified as HAZARDOUS SUBSTANCE
IMDG:	The Product is not classified as HAZARDOUS SUBSTANCE.
IATA:	The Product is not classified as HAZARDOUS SUBSTANCE

14.2. UN proper shipping name

ADR / RID:	Not Applicable
IMDG:	Not Applicable
IATA:	Not Applicable

14.3. Transport hazard class(es)

ADR / RID:	Not Applicable	Not Applicable
IMDG:	Not Applicable	Not Applicable
IATA:	Not Applicable	Not Applicable

14.4. Packing group

ADR / RID, IMDG, IATA:	Not Applicable
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14.5. Environmental hazards

ADR / RID:	Not Applicable
IMDG:	Not Applicable
IATA:	Not Applicable

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: Not Applicable	Limited Quantities: Not Applicable	Tunnel restriction code: Not Applicable
	Special Provision: -		

IMDG:	EMS Not Applicable	Limited Quantities: Not Applicable	
IATA:	Cargo:	Maximum quantity: Not Applicable	Packaging instructions -
	Pass.:	Maximum quantity: Not Applicable	Packaging instructions: -
	Special Instructions:	Not Applicable	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Not Applicable

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Contained substance

Point 30

BORIC ACID Reg. no.: 01-2119486683-25-0027

30. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as toxic to reproduction category 1A or 1B (Table 3.1) or toxic to reproduction category 1 or 2 (Table 3.2) and listed as follows: — Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 — Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6

Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30:

1. Shall not be placed on the market, or used,
 - as substances,
 - as constituents of other substances, or,
 - in mixtures,
 for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:
 - either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or,
 - the relevant generic concentration limit specified in Part 3 of Annex I of Regulation (EC) No 1272/2008.

Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: '*Restricted to professional users*'.

2. By way of derogation, paragraph 1 shall not apply to:
 - (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;
 - (b) cosmetic products as defined by Directive 76/768/ EEC;
 - (c) the following fuels and oil products:
 - motor fuels which are covered by Directive 98/ 70/EC,
 - mineral oil products intended for use as fuel in mobile or fixed combustion plants,
 - fuels sold in closed systems (e.g. liquid gas bottles);
 - (d) artists' paints covered by Regulation (EC) No 1272/2008;
 - (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.

Substances in Candidate List (Art. 59 REACH)

BORIC ACID (Reg. no.: 01-2119486683-25-0027)

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances:

- *BORIC ACID*

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Repr. 1B Reproductive toxicity, category 1B

H360Df May damage the unborn child. Suspected of damaging fertility.

H360FD May damage fertility. May damage the unborn child.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration

- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

Classification according to Regulation (EC) Nr. 1272/2008

Reproductive toxicity, category 1B, H360Df - May damage the unborn child.
Suspected of damaging fertility.
Hazardous to the aquatic environment, acute toxicity, category 1, H400 - Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1, H410 - Very toxic to aquatic life with long lasting effects.

Classification procedure

Calculation method.
Calculation method.
Calculation method.

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for the recipient of the Safety Data Sheet (SDS):

This SDS was authored by Flashpoint S.r.l. on the basis of:

- a) the provisions contained in EC Regulation no.1907/2006 (REACH), and in particular Article 31 and Annex II of the Regulation, and its subsequent amendments, and
- b) information provided by the "Supplier" identified in Section 1 of this SDS and in particular the data necessary to:
 - i) identify the substance (mono-constituent, multi-constituent or UVCB) or the mixture;
 - ii) describe the physical and chemical properties (Section 9),
 - iii) describe the toxicological properties (Section 11)
 - iv) describe the eco-toxicological properties (Section 12), and
 - v) appropriately characterize the other sections of the SDS.

Considering that the "data search" in scientific literature and testing for the evaluation of the properties for the substance or the mixture are under the responsibility of the Supplier, Flashpoint S.r.l. assumes no responsibility concerning reliability and completeness of the information referred to the above mentioned point b) in authoring this SDS.

The recipient of this SDS shall make sure of reading and understanding the information included by all people who handle, store, use, or otherwise come into contact in any way with the substance or mixture to which this SDS is referred to. In particular, the recipient shall provide adequate training to the personnel for the use of hazardous substances and/or mixtures. The recipient shall verify the suitability and completeness of the provided information according to the specific use of the substance or mixture.

However, the substance or mixture referred to by this SDS shall not be used for uses other than those specified in Section 1. The Supplier don't assume responsibility for improper uses. Since the use of the product does not fall under the direct control of the Supplier, the user shall, under his own responsibility, fulfill national and EU regulations concerning health and safety.

The information included in this SDS are provided in good faith and are based on the current state of scientific and technical knowledge, at the revision date indicated, available to the Supplier indicated in Section 1 of this SDS. It shall not be meant that the SDS is a guarantee of any specific property of the substance or mixture. The information concern only to the substance or mixture specifically designated in Section 1 and it could not be valid for the substance or mixture used in combination with other materials or in any process not specified in the text.

This version of the SDS substitutes all the previous versions.