

according to Regulation (EC) No 1907/2006 (REACH) as amended

AG-5 flux

Creation date 06. January 2010

Revision date 14. May 2018 Version 1.04

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

1.1. Product identifier AG-5 flux Substance / mixture mixture

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

mixture's intended use Flux agent.

Disapproved uses of mixture The product should not be used in ways other then those

referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Name or trade name AG TermoPasty Grzegorz Gąsowski Address Kolejowa 33 E, Sokoły, 18-218

Poland

 Identification number (ID)
 200133730

 VAT Reg No
 9661767714

 Phone
 862741342

E-mail biuro@termopasty.pl Web address www.termopasty.pl

Competent person responsible for the safety data sheet

Name AG TermoPasty Grzegorz Gąsowski

E-mail biuro@termopasty.pl

1.4. Emergency telephone number

National Health Service (NHS) 111

National poisoning information centre Scotland, NHS 24: 111

SECTION 2: Hazards identification

2.1. Substance or mixture classification

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336, H335

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

Highly flammable liquid and vapour.

Most serious adverse effects on human health and the environment

Causes serious eye irritation. May cause drowsiness or dizziness. May cause respiratory irritation. Causes skin irritation.

2.2. Label elements

Hazard pictogram





Signal word

Danger

Hazardous substances

isopropanol triethylamine

Hazard statements

H225 Highly flammable liquid and vapour.



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Causes skin irritation. H315 H319 Causes serious eye irritation. H335 May cause respiratory irritation. May cause drowsiness or dizziness. H336

Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No P210

smoking.

P280 Wear eye protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

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.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
Index: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7	isopropanol	80-95	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
Index: 607-144-00-9 CAS: 124-04-9 EC: 204-673-3	adipic acid	2-4	Eye Irrit. 2, H319	
Index: 612-004-00-5 CAS: 121-44-8 EC: 204-469-4	triethylamine	1-2	Flam. Liq. 2, H225 Acute Tox. 4, H302+H312+H332 Skin Corr. 1A, H314 STOT SE 3, H335 Specific concentration limit: STOT SE 3, H335: C ≥ 1 %	1

Notes

Substance for which exposure limits of Community for working environment exist.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water/shower.



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Eye contact

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

Ingestion

DO NOT INDUCE VOMITING! Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

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

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin contact

Causes skin irritation.

Eve contact

Causes serious eye irritation.

Ingestion

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. **Advice for firefighters**

Use a self-contained breathing apparatus and full-body protective clothing. Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Highly flammable liquid and vapour. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

6.2. **Environmental precautions**

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use

6.4. Reference to other sections

See the Section 7, 8 and 13.



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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale aerosols. Prevent contact with skin and eyes. No smoking. Use only non-sparking tools. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep container tightly closed. Keep cool.

The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union

Substance name (component)	Туре	Time of exposure	Value	Note	Source
triethylamine (CAS: 121-44-8)	OEL	8 hours	8,4 mg/m ³		
	OEL	8 hours	2 ppm		EU limits
	OEL	Short-term	12,6 mg/m ³		EU IIIIIIIS
	OEL	Short-term	3 ppm		

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Туре	Time of exposure	Value	Note	Source
	WEL	8 hours	999 mg/m ³		
1 (646, 67, 63, 0)	WEL	15 minutes	1250 mg/m ³		GBR
isopropanol (CAS: 67-63-0)	WEL	8 hours	400 ppm		GBK
	WEL	15 minutes	500 ppm		
	WEL	8 hours	8 mg/m³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	
triethylamine (CAS: 121-44-8)	WEL	15 minutes	17 mg/m³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	GBR
	WEL	8 hours	2 ppm	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	



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United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Туре	Time of exposure	Value	Note	Source
triethylamine (CAS: 121-44-8)	WEL	15 minutes	4 ppm	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	GBR

DNEL

isopropanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	888 mg/kg	Systemic chronic effects	
Workers	Inhalation	500 mg/m ³	Systemic chronic effects	
Consumers	Dermal	319 mg/kg	Systemic chronic effects	
Consumers	Inhalation	89 mg/m ³	Systemic chronic effects	
Consumers	Oral	26 mg/kg	Systemic chronic effects	

PNEC

isopropanol

Route of exposure	Value	Determining method
Drinking water	140.9 mg/l	
Seawater	140.9 mg/l	
Freshwater sediment	552 mg/kg	
Sea sediments	552 mg/kg	
Soil (agricultural)	28 mg/kg	

8.2. **Exposure controls**

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles.

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid Physical state liquid at 20°C color transparent Odour containing alcohol Odour threshold data not available pН data not available Melting point/freezing point data not available Initial boiling point and boiling range data not available data not available

Flash point data not availab Evaporation rate not available

Flammability (solid, gas) Highly flammable liquid and vapour.

Upper/lower flammability or explosive limits

flammability limits data not available explosive limits data not available Vapour pressure data not available Vapour density data not available Relative density data not available

Solubility(ies)

solubility in water brak danych częściowo rozpuszczalny

solubility in fats not available
Partition coefficient: n-octanol/water data not available
Auto-ignition temperature data not available
Decomposition temperature data not available
Viscosity data not available
Explosive properties data not available
Oxidising properties data not available

9.2. Other information

Density 0.86 g/cm³

ignition temperature data not available

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the mixture.



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Acute toxicity

Based on available data the classification criteria are not met.

isopropanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD50	5840 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD ₅₀	13900 mg/kg		Rabbit	
Inhalation	LC50	25000 mg/m ³		Rat (Rattus norvegicus)	

triethylamine

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD50	4600 mg/kg		Rat	
Dermal	LD ₅₀	4100 mg/kg		Rabbit	

Skin corrosion/irritation

Causes skin irritation.

triethylamine

Route of exposure	Result	Time of exposure	Species
	Negative		

Serious eye damage/irritation

Causes serious eye irritation.

triethylamine

Route of exposure	Result	Time of exposure	Species
	Negative		

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause drowsiness or dizziness. May cause respiratory irritation.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. Based on available data the classification criteria are not met.



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SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Data for the mixture are not available.

isopropanol

Parameter	Value	Time of exposure	Species	Environment
EC50	1800 mg/l	7 day	Algae	
LOEC	10000 mg/l	48 hour	Daphnia magna	

triethylamine

Parameter	Value	Time of exposure	Species	Environment
LC50	43.7 mg/l	96 hour	Fishes (Pimephales promelas)	
EC50	200 mg/l	48 hour	Daphnia (Daphnia magna)	
LC50	95 mg/l	17 hour	Bacteria (Pseudomonas putida)	

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

11 05 04 spent flux *

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by dangerous substances

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number

Not subject to ADR.

14.2. UN proper shipping name

not available



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14.3. Transport hazard class(es)

not available

14.4. Packing group

not available

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

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

not available

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H225 Highly flammable liquid and vapour.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.

H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

Guidelines for safe handling used in the safety data sheet

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P280 Wear eye protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road

BCF Bioconcentration Factor
CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and

mixtures

DNEL Derived no-effect level

EC Identification code for each substance listed in EINECS

EC50 Concentration of a substance when it is affected 50% of the population



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EINECS European Inventory of Existing Commercial Chemical Substances

EmS Emergency plan EU European Union

IATA International Air Transport Association

IBC International Code For The Construction And Equipment of Ships Carrying Dangerous

Chemicals

IC50 Concentration causing 50% blockade **ICAO** International Civil Aviation Organization **IMDG** International Maritime Dangerous Goods

INCI International Nomenclature of Cosmetic Ingredients **ISO** International Organization for Standardization **IUPAC** International Union of Pure and Applied Chemistry

Lethal concentration of a substance in which it can be expected death of 50% of the LC₅₀

population

LD₅₀ Lethal dose of a substance in which it can be expected death of 50% of the population

LOAEC Lowest observed adverse effect concentration

LOAEL Lowest observed adverse effect level log Kow Octanol-water partition coefficient

MARPOL International Convention for the Prevention of Pollution From Ships

NOAEC No observed adverse effect concentration

NOAEL No observed adverse effect level **NOEC** No observed effect concentration

NOEL No observed effect level OEL Occupational Exposure Limits

PBT Persistent, Bioaccumulative and Toxic **PNEC** Predicted no-effect concentration

Parts per million ppm

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Agreement on the transport of dangerous goods by rail

UN Four-figure identification number of the substance or article taken from the UN Model

Regulations

UVCB Substances of unknown or variable composition, complex reaction products or biological

materials

VOC Volatile organic compounds

vPvB Very Persistent and very Bioaccumulative

Acute Tox. Acute toxicity Eye Irrit. Eye irritation Flam. Lig. Flammable liquid Skin Corr. Skin corrosion Skin Irrit. Skin irritation

STOT SE Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. First aid principles after the exposure to the chemicals (Zásady pro poskytování první pomoci při expozici chemickým látkám, doc. MUDr. Daniela Pelclová, CSc., MUDr. Alexandr Fuchs, CSc., MUDr. Miroslava Hornychová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.



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Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.