

HAZARDOUS SUBSTANCE DATA SHEET

Preparation date: 16.06.2007

Updating date:

Manufacturer: **A+B POLSKA Sp. z o.o.**
80-298 Gdańsk, ul. Kadetów 5/13
tel.: +48 58 3420784
REGON: 193013990

fax: +48 58 3420784

1. PRODUCT IDENTIFICATION

Product name: **FLAME STAL** ®

Swelling fire-protection paint

2. COMPOSITION AND INFORMATION ABOUT COMPONENTS

Product type: swelling fire-protection paint, in a modified resins solution, swelling under the influence of high temperatures

Application: for fire-protecting of steel structures

Product components posing hazard

CAS No.	EINECS No.	Name	Concentration %	Hazard classification and specification
1330-20-7	215-535-7	xylene (isomers mixture)	14-19	R 10 Xn; R 20/21 Xi; R 38
115-77-5		pentaethylbenzene	30-40	R 10 Xn; R 20/21 Xi; R 38

3. HAZARDS IDENTIFICATION

Hazardous for humans and environment.

Health hazard: inhaling may cause irritation of respiratory tract, headaches and dizziness, sore throat, nausea, drowsiness. Long-lasting exposure to high concentration of vapours may cause damage to lungs as well as illnesses of blood and cardiovascular system (e.g. anaemia, leukaemia). It may exhibit depressive effect on the central nervous system. In contact with skin it may cause irritation and allergy.

Hazardous properties: inflammable, harmful.

4. FIRST AID

- **general**: seek medical attention in all doubtful cases and when the symptoms persist
- **inhalation**: carry the victim to fresh air, if breathing is irregular or broken then apply artificial respiration and seek medical attention, without stopping the rescue activities
- **contact with skin**: remove contaminated clothing, wash the skin with water and soap, and then flush with water and oil with barrier cream
- **contact with eye**: flush with clean potable water (approx. 10 minutes), ensuring that eyelids are open all the time, remove contact lenses if possible, and then seek medical attention
- **swallowing**: if mouth is contaminated, flush it thoroughly with water, in case of swallowing do not induce vomiting, seek medical attention; gastric lavage or inducing vomiting may only be performed if it is certain that there will be no choking or aspiration of the stomach content to lungs

5. DEALING WITH FIRE

- **extinguishing means**: foam, carbon dioxide, dry extinguishing means, water mist
- **do not apply**: extinguishing with a water jet
- **particular hazards**: products of incomplete combustion may contain carbon monoxide and other hazardous gases
- **firemen protection**: full protective clothing and breathing apparatus
- **other information**: in the case of fire cool down adjacent containers by sprinkling with water, do not permit contact with hot surfaces

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6. DEALING WITH INADVERTENT RELEASE TO ENVIRONMENT

- **Dealing with spill**

Stop the spill. If the spill takes place in a closed room, disconnect the sources of ignition and ensure ventilation. Avoid inhaling of vapours. Collect the spilled material using an absorptive material and place it in closed containers. Removal of large spills is performed by a specialist team.

Large spills in open spaces should be covered with foam in order to reduce the risk of ignition. Protect sewage drains from the spill. Do not flush the product to the sewage system.

In the case of spill on a water surface, prevent the product from spreading, using adequate water barriers. Protect the areas covered by environmental protection and sources of water intake.

- **Individual protective measures**

In the case of large spills, wear chemical-resistant gloves and shoes, use respiratory protection.

- **Other hazards**

The vapours are heavier than air and may relocate to distant sources of ignition (e.g. along drainage channels, in cellars).

7. PRODUCT HANDLING AND STORAGE

The product is designated for professional application in industry. Use in accordance with the designation and the application instructions. Avoid contact with eyes and skin, wash the hands thoroughly after every contact with the product.

Store properly marked packages in closed state in a well-ventilated place, away from sources of ignition, do not permit contact with hot surfaces. Avoid direct sunlight. Vapours of solvents may create an explosive mixture with air.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION MEANS

Limit value of exposure

Pay attention to the limit values NDS and NDSCH (Decree of the Minister of Work and Social Policy of 29 November 2002, Journal of Laws No. 217, item 1833).

CAS No.	Name	NDS (mg/m ³)	NDSCH (mg/m ³)
1130-20-7	xylene (isomers mixture)	100	350
115-77-5	pentaethylbenzene	10	

Technical protection means – apply only in well-ventilated places.

General personal protection:

- respiratory protection: using masks with organic compounds vapours absorbers
- apply in the case of insufficient ventilation
- eye protection: use chemical-resistant goggles
- hands protection: wear chemical-resistant gloves of PVC
- skin protection: wear protective working clothing

Occupational hygiene: smoking, eating and drinking is forbidden in the place of application of the product. Wash hands thoroughly after work.

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9. PHYSICAL AND CHEMICAL PROPERTIES

State of matter:	dense liquid of white colour
Odour:	characteristic
Density (at 20°C), g/cm ³ :	approx. 1.25-1.35
Boiling temperature, °C:	140°C
Ignition temperature (not lower than), °C:	38°C
Spontaneous ignition temperature, °C:	approx. 250°C
Explosiveness limits, vol. %:	0.6-0.7
Solubility in water:	not soluble
Vapour pressure at 20°C:	0.8 kPa
Viscosity acc. to Brookfield, mPa*s:	26000-30000
Portion of volatile substances, mass %:	19-21
Portion of non-volatile substances, mass %:	84-85

10. STABILITY AND REACTIVITY

The substance is stable in standard conditions.

Product vapours mix well with air, easily creating explosive mixtures.

Hazardous products of thermal decomposition – depending on the decomposition conditions, toxic gases containing carbon monoxide and dioxide will be created.

11. TOXICOLOGICAL INFORMATION

- **sight** – irritating, may cause stinging or redness of eyes after incidental contact
- **skin** – in contact with skin it may cause irritation and allergy
- **inhalation** – irritation of respiratory tract, nausea, headache and dizziness may occur at high quantities of product vapours or mist
- **swallowing** – unlikely to cause damage after incidental swallowing, higher quantities may cause nausea and vomiting, multi-organ damage and even death
- **long-term effects** – long-lasting exposure to high quantities of vapours may cause illnesses of blood and cardiovascular system (e.g. anaemia and leukaemia)

12. ECOLOGICAL INFORMATION

Not subject to biodegradation, do not pour to water-courses. Acrylic resin has harmful effect on water organisms and it may cause long-lasting changes in water environment.

13. DEALING WITH WASTE

Special waste dumps in accordance with legal regulations.

The act on waste of 27 April 2001 (Journal of Laws No. 62 item 628), the Decree of the Minister of Environment of 27.09.2001 on waste catalogue (Journal of Laws No. 112 item 1206) and the Decree of the Minister of Economy of 5.03.2001 on detailed rules for removal, utilisation and neutralisation of hazardous waste (Journal of Laws No. 22 item 251).

Group 08 – waste from production, preparation, commerce and application of protective coats (paints and lacquers, vitreous enamels), putty, glues, sealants and printer's inks.

Waste of the product is classified as hazardous waste – code 08 01 11.

Package not cleaned – recommendation in accordance with the Act on packages and package waste of 11.05.2001 (Journal of Laws No. 63 item 638).

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14. TRANSPORT INFORMATION

The product should be stored and transported in accordance with PN-89/C-81400 and the ADR transport regulations currently in force:

Class 3, Code F1, Identification No. 30, UN No. 1263, Packing group: III

Road/railway transport ADR/RID

Class ADR/RID-GGVSE/

Digit/letter:/

ONU number: 1263

Sea transport: IMDG

IMDG class: 3.3

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ONU number: 1263

Packing group: III

Number: EMS: 3-05

MFAG: 310

Air transport ICAO/TI and IATA/DGR

ICAO/IATA class: 3

ONU/ID number: 1263

Packing group: III

15. INFORMATION ABOUT LEGAL REGULATIONS

Act of 11 January 2001 on chemical substances and preparations (Journal of Laws No. 11 item 84).

Decree of the Minister of Health of 3 July 2002 on data sheets of hazardous substances and hazardous preparations (Journal of Laws No. 140 of 3.09.2002 item 1171).

Decree of the Minister of Health of 2 September 2003 on criteria and method of classification of chemical substances and preparations (Journal of Laws No. 171 of 2.10.2003 item 1666).

Decree of the Minister of Health of 2 September 2003 on marking of packages of hazardous substances and preparations (Journal of Laws No. 173 of 6.10.2003 item 1679).

Product classification: Xn; N; R 10, R: 20/21 – 36/38 – 43, R 51/53

Correct handling of the product: S 2 – 25 – 28 – 37/39 – 51 – 61

Symbols and their definitions

Xn harmful product

N product hazardous to environment

R 10 inflammable product

R 20/21 acts harmfully through respiratory tract and in contact with skin

R 36/38 irritant to eyes and skin

R 43 may cause allergy in contact with skin

R 51/53 acts toxically on water organisms, may cause long-lasting adverse changes in water environment

S 2 keep away from children

S 25 avoid eye contamination

S 28 immediately wash contaminated skin with a large quantity of water with soap

S 37/39 wear adequate protective gloves and goggles or face protection

S 51 apply only in well-ventilated rooms

S 61 avoid dumping to environment. Proceed in accordance with the instructions or the data sheet

Keep in mind that there may be some local regulations.

16. OTHER INFORMATION

The above specified data on safety, health protection and environment protection are based on the present state of our knowledge resulting from literature research and experience. The information presented in this document constitutes only a description of the requirements concerning the safety during application of our product. The precautions concerning health and safety, as well as advice on environment protection issues, presented in the document, need not be suitable to all individual persons or situations. The user is responsible for evaluating and using the described product in a safe manner and in accordance with the regulations in force.