

SAFETY DATA SHEET

Commercial product name:

DSPA

Date of issue:

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1. Identification of the substance / preparation and the company.

Product name and code:

DSPA.

Synonym:

Extinguishing agent.

Material uses:

DSPA can be used for fire and explosion suppression as replacement for Halon extinguishing agents. DSPA is intended to use in industrial units and can be used by fire departments as first action to suppress fires (A, B, C and F Class fires) in close rooms and as fixed installations in all kind of buildings, transport sector (trains, trucks, cars, ships).

Identification company:

DSPA.nl B.V.
Hulzenseweg 10-20
NL - 6534 AN Nijmegen
THE NETHERLANDS
P.O. Box 6572
6503 GB Nijmegen
Telephone: 31 (0) 24 35 22 573
Telefax: 31 (0) 24 37 87 583
E – mail: info@dspa.nl
URL: www.dspa.nl

Emergency telephone number:

(24 hour), (31)30 – 2748888, only for the doctor.
Vergiftiging informatie centrum (poison information centre)
Utrecht, The Netherlands.

2. Hazard identification.

The preparation is classified according to Directive 1999/45/EC or Directive 67/548/EEC and its amendments.

O; R8

Oxidizing.
Contact with combustible material may cause fire.

Special hazards:

The material can cause sensitisation and irritation to the skin, prolonged or repeated exposure can reinforce this impact. The smoke released during intended use is harmful upon inhalation.

Other:

Prevent dust formation of the material in case of not intended use.

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3. Composition / information on ingredients.

Ingredient	% weight	danger	CAS#	EC#	REACH registration date
GHS classification elements					
Potassium nitrate GHS:	>50	O; R8 -	7757-79-1	231-818-8	30-11-2010
Cyanoguanidine GHS:	<30	- -	461-58-5	207-312-8	30-11-2010
Formaldehyde, oligomeric reaction products with phenol GHS:	<10	Xn; R20/22 -	9003-35-4	500-005-2	30-11-2010

Full text of each relevant R - and H - phrase can be found in heading 16.
REACH date for registration according to EC Regulation 1907/2006 stated by [ECHA](#) (list 03-2009).
GHS classification elements in so far as officially assigned according to EC Regulation 1272/2008.

4. First – aid measures.

General:	In the event of an accident or when feeling unwell consult a physician without delay.
Eye contact:	Exposure causes irritation to the eyes. Remove contact lenses, and rinse with water while keeping the eyelids open for at least 15 minutes. Regularly lift the eyelids. Avoid rubbing the eyes. Assist the victim with rinsing. Consult an optometrist.
Skin contact:	Exposure can cause serious skin irritation, constant pain or reddening of the skin. Rinse with plenty of water (at least 15 minutes) and then wash with water and soap, if available. Take a shower if necessary. Consult a dermatologist.
Swallowing:	Have the victim rinse his mouth with water and spit it out (never give an unconscious person something to drink due to risk of suffocation). Do not induce vomiting (unless under direct supervision by a doctor) and immediately consult a doctor showing the packaging or label, or take the victim to hospital. The person should be placed and kept in the recovery position if unconscious. Loosen tight clothing, such as a shirt, tie, belt or waistband. Rest.
If aerosol, dust or vapour is inhaled in high concentrations:	Take the person into the fresh air and keep him warm, let him rest; if there is difficulty in breathing, give oxygen. Give artificial respiration if breathing has stopped. Consult a doctor after prolonged exposure or if the symptoms do not disappear after a short while.
Further medical treatment:	Symptomatic treatment and supportive therapy as prescribed. See point 11.

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5. Fire – fighting measures.

Extinguishing media suitable:	NONE – THIS IS AN EXTINGUISHING AGENT.
Extinguishing media which must not be used for safety reasons:	None.
Special exposure hazards arriving from substance or preparation itself, combustion products, resulting gases:	Keep enough distance to protect your own safety due to the character of the material. If involved in a fire, it may emit noxious and toxic fumes. Combustion products may include: potassium carbonate, ammonium hydrogen carbonate, potassium hydrogen carbonate, potassium nitrite and gases like carbon monoxide, carbon dioxide, nitrogen oxide and traces of hydrogen cyanide.
Protection of fire-fighters:	Fire - men have to wear self - contained breathing apparatus (with mouth – and nose protection) and complete protective clothing.
Additional information:	Alert and evacuate the surrounding area.

6. Accidental release measures.

Personal precautions:	Eliminate all sources of heat and ignition. People dealing with major spillages should wear personal protective clothing (suitable gloves and filter mask FFP-2 if dust is formed). Evacuate the danger zone. Avoid dust engendering and inhalation of the dust.
Environmental precautions:	Do not discharge into drains or sewers. If significant quantities are being released in the environment, inform the authorities according to the local rules.
Clean up methods:	Collect spilled material by hand, e.g. with a dustpan and duster; do not use a vacuum cleaner, which poses a risk of explosion. Do not use compressed air for clean up. Collect the waste product in suitable drums for disposal. Wash the spillage area clean with plenty of water.

7. Handling and storage.

Handling:	When handling observe the usual precautionary measures for chemicals. Avoid contact with heat, sparks, flames and other ignition sources. No smoking. No heating, welding, soldering, drilling, cutting. Do not use equipment producing an open flame or electrical equipment which may cause sparks. Handle in case of not intended use in well-ventilated areas. Prevent dust formation and inhalation of dust. If intense aerosol is released from a dry sprinkler powder system, respiratory protection is required.
Storage:	Keep container tightly closed when not in use. Prevent product temperatures above 35 °C and below -50 °C. Store the product dry. Suitable storage material: Original DSPA packaging. Storage material to avoid: Aluminium is less suitable. Storage temperature: Recommended storage temperature 20 ± 15 °C.
Specific use(s):	Extinguishing material in case of a fire. Only use in combination with the pyrotechnical starter of DSPA.

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8. Exposure controls / personal protection.

Limits of exposure: No occupational exposure limits are determined for the preparation and/or for the components. As used as extinguishing material, as dense aerosol or dust is formed. For respirable dust the recommended MAC value for a 8 hours exposure (TWA) is 10 mg/m³.

Personal protective equipment:

Do not eat or drink whilst working with the product.

Respiratory protection:

Required at inadequately ventilated workplaces. As respirable dust in case of application of the material as extinguishing material, use respiratory protection (FFP-2 mask EN149: 2001).



Skin and body:

Wear suitable protective clothing (preferable heavy cotton or disposable coverall), gloves and eye / face protection. Take off immediately all contaminated clothing. Keep working clothes separate (on site, e.g. in a closed plastic bag) and change them every day. Rinse the skin with a lot of water or take a shower.



Hands:

Wash hands before breaks and at the end of work. Protective gloves of neoprene or butyl rubber should be worn when handling with the product. Use heat-resistant gloves for handling as extinguishing material in case of a fire.



Eyes:

Use safety eyewear (tight fitting goggles) or a full-face shield. Eye - wash.



9. Physical and chemical properties.

General information.

Appearance:

Solid, compressed powder.

Colour:

Beige / light red.

Odour:

None.

Important health, safety and environmental information.

pH:

Can not be determinate (slightly soluble in water).

Boiling point:

-

Flash point:

> 93 °C.

Explosive properties:

-

Vapour pressure:

Not available.

Relative density:

1,9 (water = 1).

Solubility in water:

Slightly soluble in water.

10. Stability and reactivity.

Stability:

Stable at normal use.

Conditions to avoid:

Avoid high temperatures, heating, open fire and ignition sources, and prevent the effects of a grinding motion and impact forces that may result in ignition.

Materials to avoid:

Oxidising agents, strong acids, strong bases.

Hazardous decomposition products:

During use possible release of potassium carbonate, ammonium hydrogen carbonate, potassium hydrogen carbonate, potassium nitrite and gases like carbon monoxide, carbon dioxide, nitrogen oxide and traces of hydrogen cyanide.

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11. Toxicological information.

Acute toxicity from the components:

Product information: Potassium nitrate, CAS# 7757-79-1.
LD₅₀ (oral, rat): 3.015 mg/kg.

Product information: Cyanoguanidine, CAS# 461-58-5.
LD₅₀ (oral, mouse): > 2.000 mg/kg.
LD₅₀ (dermal, rabbit): > 2.000 mg/kg.
LC_{LO} (inhalation, rat): > 0,259 ppm (4 hrs.).

This health hazard assessment is based on information of the components.

Effects on the eyes: Particle matter may cause physical injury to the eye. Redness. Pain.

Effects on the skin: Redness. Contact with the preparation may result in contact eczema, sensitisation, skin cracking and swelling. Prolonged or repeated exposure may damage the skin and may cause irritation eczema.

Effect on the respiratory organs: The substance may cause effects on the blood, resulting in formation of methaemoglobin when ingested. The effects may be delayed. Smoke and gases released during intended use is harmful upon inhalation.

Ingestion: Abdominal pain. Blue lips or fingernails. Blue skin. Dizziness. Laboured breathing. Confusion. Convulsions. Diarrhoea. Headache. Nausea. Unconsciousness.

12. Ecological information.

Ecotoxicity from the components.

Product information: Potassium nitrate, CAS# 7757-79-1.
LC₅₀ (fish, gambusia affinis): 22,5 mg/l (96 hrs.).
EC₅₀ (daphnia magna, crustacea): 226 mg/l (72 hrs.).

Product information: Cyanoguanidine, CAS# 461-58-5.
LC₅₀ (fish, onchorhynchus mykiss): 7,7 mg/l (96 hrs., rainbow trout).
EC₅₀ (daphnia magna): 3,18 mg/l (48 hrs.).

Mobility: The product is only slightly soluble in water.
Persistence / degradability: From the components poor biologically degradable.
Bioaccumulation: -
Other harmful effects: -

WGK: 1 (Wassergefährdungsklasse or water pollution class, German Water Resources Act., limited water pollutant).

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13. Disposal considerations.

Product waste:	Incinerate in a hazardous waste incinerator suitable for the disposal of noxious chemical waste in accordance with the relevant regulation. The generation of waste should be avoided or minimised wherever possible. Waste, even small quantities, should never be poured down watercourses.
Eural code for waste:	06 03 99. WASTES FROM INORGANIC CHEMICAL PROCESSES. Waste salts and their solutions; Wastes not otherwise specified.
Empty containers:	Remove any residue adhering to the walls.

14. Transport information.

Classification as ADR material for road transport.	
UN number:	1479.
Proper shipping name:	UN 1479 OXIDIZING SOLID, N.O.S. (mixture contains potassium nitrate), 5.1, III.
ADR class:	5.1.
Tunnel restriction category:	3
Tunnel restriction code:	E.
	
ADR label:	
Remark:	Supplier makes in circumstances use of the complete exemption in accordance with LQ12 rand number 3.4 of the ADR (maximum gross content for inner packaging 1 kg).
Classification as ICAO/IATA material for air transport.	
UN number:	1479.
Proper shipping name:	UN 1479 Oxidizing solid, n.o.s. (mixture contains potassium nitrate), 5.1, III.
Packaging instruction (25 kg):	516 (passenger aeroplane).
Packaging instruction (10 kg):	Y516 (passenger aeroplane).
Packaging instruction (100 kg):	518 (cargo aircraft).
Class:	5.1.
Classification as IMDG material for sea transport.	
UN number:	1479.
Proper shipping name:	UN 1479 Oxidizing solid, n.o.s. (mixture contains potassium nitrate), 5.1, III.
Class:	5.1.
Maximum quantity:	5 kg.
EmS:	F-A, S-Q.
Packing and stowage:	Category B.

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15. Regulatory information.

EG regulations.



Hazard symbol:

EU labelling classification:

O

Oxidizing.

R – (risk) phrases:

R8

Contact with combustible material may cause fire.

S – (safety) phrases:

-

WGK (German legislation)

1 (Wassergefährdungsklasse or water pollution class).

Additional warning:

Contains potassium nitrate and formaldehyde, oligomeric reaction products with phenol.



Waste symbol:

16. Other information.

List of relevant R- and H- phrases referred to under headings 2 and 3:

R8 - Contact with combustible material may cause fire.

R20/22 - Harmful by inhalation and if swallowed.

History:

Date of PDF printing:

29 May 2009.

Date of previous issue:

15 January 2008.

Version:

2.

Changes:

Recipe update.

Information source:

- IUCALID dataset substance ID: 7757-79-1, date 19.02.2000.

DSPA is a trademark of DSPA.nl.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties. In all cases, it is the responsibility of the user to determine the applicability of such information and recommendations and the suitability of any products for its own particular purpose.

Safety data sheet according regulation (EC) No 1907/2006 of the European parliament and of the council from 18 December 2006 concerning the registration, evaluation, authorisation and restriction of chemicals (REACH).

Annex.

From the raw materials in this recipe, at the moment of drafting this safety data sheet, no chemical safety reports according to regulation (EC) no. 1907/2006 has been registered.