

## MATERIAL SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name: TESTING POWDER No. 30

Product Code: TP30

CAS-No. 1341-49-7

Brand: Solmedia Ltd

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

Identified uses	Testing Reagent
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#### 1.3 Details of the supplier of the safety data sheet

- Name of Supplier:	Solmedia Ltd.
- Address of Supplier:	Unit 2, Vernon Drive Battlefield Enterprise Park Shrewsbury SY1 3TF UK
- Telephone:	0844 80 80 900
- Email:	labsupplies@solmedialtd.com

#### 1.4 Emergency telephone number

Emergency Phone # +44 (0)844 80 80 900

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 3	H301: Toxic if swallowed
Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage
Serious eye damage, Category 1	H318: Causes serious eye damage

#### 2.2 Label elements

Hazard pictograms:



**Signal Word:** Danger

**Hazard Statements:** H301 Toxic if swallowed  
 H314 Causes severe skin burns and eye damage

**Precautionary statements:**

**Prevention:**

P280 Wear eye protection/face protection

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor.

P313 Seek medical advice

Hazardous components which must be listed on the label:

Ammonium hydrogen difluoride

## 2.3 Other hazards

**PBT:** This substance is not identified as a PBT substance.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous ingredients:**

Ammonium Hydrogen Difluoride

Molar mass	CAS	Classification	Percent
57.04g/mol	1341-49-7	Acute Tox. 3; H301 Skin Corr. 1B; H314 Eye Dam. 1; H318	<= 100

Potassium Hydrogen Phthalate	
204.22 g/mol	877-24-7

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**Skin contact:** Rinse with plenty of water for at least 10 minutes. Immediately remove contaminated clothes. Apply calcium gluconate gel (preparation: boil 5g of calcium gluconate in 85ml of hot distilled water, add 10g glycerol. Allow 5g of Carmellose-sodium to

swell in the hot solution. Stable for 6 months, store in a cool place) and massage into the skin until the pain subsides, in between rinse with water and apply fresh gel. Continue gel therapy for another 15 minutes after the pain has subsided. If no calcium gluconate gel is available, apply several dressings thoroughly moistened with 20% calcium gluconate solution. Medical advice absolutely required.

**Eye contact:** Remove contact lenses. Rinse with plenty of water keeping eyelids open, protecting the unaffected eye (at least 10 minutes). Seek medical advice immediately.

**Ingestion:** Immediately give to drink plenty of water, add calcium (in the form of calcium gluconate or calcium lactate). Caution: In the case of vomiting risk of perforation! Administer more calcium gluconate solution. Laxative: Sodium sulfate (1 tablespoon/1/4l water). Seek medical advice immediately. Ensure that injured persons remain calm and protect them against heat loss. Call a doctor immediately.

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

Irritation and corrosion  
Cough  
Shortness of breath  
Risk of blindness  
Respiratory arrest  
Unconsciousness  
Shock

The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders

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

**Immediate / special treatment:** Consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid. If a system effect is suspected, monitoring and treatment in an intensive care unit is urgently required. Caution, ventricular fibrillation due to electrolyte imbalance.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media for the surrounding fire should be used.

#### 5.2 Special hazards arising from the substance or mixture

**Exposure hazards:** Ambient fire may liberate hazardous vapours. May cause evolution of: Hydrogen fluoride, Ammonia, Nitrogen oxides (NO<sub>x</sub>)

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

### 6.2 Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers.

### 6.3 Methods and materials for containment and cleaning up

**Clean-up procedures:** Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Cover drains, collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

**Reference to other sections:** Refer to section 13 of SDS.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Handling requirements:** Observe label precautions. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in original container. Keep dry and in a well ventilated area. Keep container tightly closed. Keep locked up or in an area accessible only to qualified or authorised persons. See label for recommended storage temperature.

Risks from decomposition products: see section 10.3

### 7.3 Specific end use(s)

**Specific end use(s):** No data available.

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Hazardous ingredients:****Ammonium Hydrogen Difluoride****Workplace exposure limits:**

State	8 hour TWA	15 min. STEL	<b>Respirable dust</b>	
			8 hour TWA	15 min. STEL
UK	0.1 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	-	-

**8.1. DNEL/PNEC Values****DNEL / PNEC** No data available.**8.2 Exposure controls****Engineering measures:** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.**Respiratory protection:** Required when dusts are generated. Filter B-(P3)**Hand protection:** Impermeable gloves.**Eye protection:** Tightly fitting safety goggles.**Skin protection:** Impermeable protective clothing.**Environmental:** Do not flush into surface water or sanitary sewer systems.

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

<b>State:</b>	Solid
<b>Colour:</b>	White
<b>Odour:</b>	Stinging
<b>pH:</b>	2 at 5.7g/l 20°C
<b>Melting point:</b>	126°C
<b>Boiling point/boiling range:</b>	238°C at 1,013 hPa (decomposition)
<b>Vapour pressure:</b>	1 hPa at 20°C
<b>Density:</b>	1.5 g/cm <sup>3</sup> at 20°C
<b>Water solubility:</b>	630 g/l at 20°C
<b>Decomposition temperature:</b>	> 230°C

## 9.2 Other safety information

**Other information:** Bulk density ca. 750 kg/m<sup>3</sup>

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

Hygroscopic

### 10.3 Possibility of hazardous reactions

Risk of explosion with halogen-halogen compounds. Generates dangerous gases or fumes in contact with acids, release of hydrogen fluoride.

### 10.4 Conditions to avoid

Strong heating (decomposition)

### 10.5 Incompatible materials

**Materials to avoid:** Quartzes/silicate ceramics, glass, aluminium, iron, zinc, metals

### 10.6 Hazardous decomposition products

In the event of fire: See section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Toxicity values:

Route	Species	Test	Value	Units
INHALATION	RAT	LC50	37	mg/m <sup>3</sup>
DERMAL	RBT	LD50	20	mg/kg

#### Hazardous ingredients:

##### SODIUM AZIDE

ORL	MUS	LD50	27	mg/kg
ORL	RAT	LD50	27	mg/kg
SKN	RAT	LD50	50	mg/kg

#### Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (toxic)	ING	Hazardous: calculated

### Symptoms/ routes of exposure

**Skin contact:** Product causes burns, poorly healing wounds and tissue damage.

**Eye contact:** Irreversible effects on the eye. Risk of blindness.

### 11.2 Other information

**Systemic effects:** Convulsions, unconsciousness, cardiac irregularities, respiratory arrest, shock, disturbed electrolyte balance. Chronic uptake results in damage of: liver, kidney, bone marrow.

**The following applies to soluble inorganic fluorides in general:** may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.

**The following applies to ammonium salts in general: after swallowing:** local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

Other dangerous properties cannot be excluded.

This substance should be handled with particular care.

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## SECTION 12: Ecological information

### 12.1 Toxicity

**Ecotoxicity values:** Toxicity to fish

LC100 (Danio rerio (zebra fish)): 562 mg/l

Exposure time: 96h

Remarks: (IUCLID)

LC0 (Danio rerio (zebra fish)): 237 mg/l

Exposure time: 96h

Remarks: (IUCLID)

**Toxicity to microorganisms:**

EC50 (activated sludge): 2,394 mg/l

Method: OECD Test Guideline 209

### 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**

This product is not identified as a PBT/vPvB substance

**12.6 Other adverse effects**

Toxic to aquatic organisms. Toxic to soil organisms.

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

**Disposal operations:** Leave chemicals in original container and arrange for collection by specialised disposal company. No mixing with other waste. Handle uncleaned containers like the product itself.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

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**SECTION 14: Transport information**

<b>14.1 UN/ID No.:</b>	UN1727
<b>14.2 Proper shipping name:</b>	Ammonium hydrogendifluoride, solid
<b>14.3 Class:</b>	8
<b>14.4 Packing group:</b>	II
<b>14.5 Environmentally hazardous:</b>	--
<b>14.6 Special precautions for use:</b>	No
<b><u>Sea transport (IMDG)</u></b>	
<b>14.1 UN/ID No.:</b>	UN 1727
<b>14.2 Proper shipping name:</b>	AMMONIUM HYDROGENDIFLUORIDE, SOLID
<b>14.3 Class:</b>	8
<b>14.4 Packing group:</b>	II
<b>14.5 Environmentally hazardous:</b>	--
<b>14.6 Special precautions for use:</b>	Yes
EmS Code:	F-A, S-B
Segregation group:	Acids, Ammonium compounds



**Land transport (ADR/RID)**

<b>14.1 UN/ID No.:</b>	UN 1727
<b>14.2 Proper shipping name:</b>	AMMONIUM HYDROGENDIFLUORIDE, SOLID
<b>14.3 Class:</b>	8
<b>14.4 Packing group:</b>	II
<b>14.5 Environmentally hazardous:</b>	--

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Not applicable.

Seveso III: Directive 2012/18/EU of the European Parliament and of the council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
H2	Acute Toxic	50 t	200 t
Storage class:	6.1 D		
Other regulations:	Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.		

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**SECTION 16: Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and 3:**

H301: Toxic if not swallowed  
H314: Causes severe skin burns and eye damage  
H318: Causes serious eye damage

**Legal disclaimer:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.