

DALIAN F.T.Z. GREAT INDUSTRY&TRADE CO., LTD.

ADD: 1207A HUINENG BUILDING DALIAN F.T.Z.CHINA

TEL: 0086-411-3955-2835

FAX: 0086-411-3926-6880

◆ Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Name of product: Ammonium Persulfate

Use of the substance/preparation

Chemical basic material
For industrial purposes only

Company/undertaking identification

Company name: DALIAN F.T.Z.GREAT INDUSTRY & TRADE CO.,LTD.

Address: 1207A Huineng Building Dalian F.T.Z.China

Telephone: 0086-411-39552835

Fax: 0086-411-39266880

◆ Hazards identification

Classification according to directive 67/548/EEC:



O

oxidizing



Xn

harmful

R 8

R 22

R 36/37/38

R 42/43

Contact with combustible material may cause fire.

Harmful if swallowed.

Irritating to eyes, respiratory system and skin.

May cause sensitization by inhalation and skin contact.

Classification according EC regulation 1272/2008 (CLP):



Danger

Ox. Sol. 3; H272

Acute Tox. 4; H302

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Resp. Sens. 1; H334

Skin Sens. 1; H317

STOT SE 3; H335

May intensify fire; oxidizer.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause respiratory irritation.

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◆ Composition/information on ingredients

Chemical characterization (substance)

H8 N2 O8 S2 = (NH4)2S2O8

Ammonium persulfate

CAS-Number: 7727-54-0

EINECS-Number: 231-786-5

RTECS-Number: E0350000

EU-number: 016-060-00-6

◆ First-aid measures

- After inhalation: Move victim to fresh air. Make sure he/she is warm and comfortable.
If the casualty has difficulty breathing, call a doctor immediately. Where appropriate artificial Ventilation.
If victim is at risk of losing consciousness, position and transport on their side.
- In case of skin contact: Take off immediately all contaminated clothing.
After contact with skin, wash immediately with plenty of water.
In case of skin reactions, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
Subsequently consult an ophthalmologist.
- After swallowing: Rinse mouth immediately and drink plenty of water.
Avoid vomiting. Immediately get medical attention.
- Information to physician: Treat symptomatically.
Subsequent observance for pneumonia and lung oedema.
Monitor electrolytes and renal function.

◆ Firefighting measures

- Suitable extinguishing media: Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.
- Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases: Oxidizing. Contact with combustible material may cause fire.
In case of strong heating: Formation of sulphur dioxide.
- Special protective equipment for fire fighters: Wear a self-contained breathing apparatus and chemical protective clothing.
- Additional information: Hazchem-Code: 1Z
Cool endangered containers with water spray and, if possible, remove from danger zone.
Heating causes rise in pressure with risk of bursting.
Contaminated fire-fighting water must be collected separately. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

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◆ Accidental release measures

Personal precautions:	Wear suitable protective clothing. Avoid contact with the substance. Do not breathe dust. Provide adequate ventilation. Keep away from combustible material.
Measures to protect the environment:	Do not allow to penetrate into soil, waterbodies or drains. If necessary notify appropriate authorities.
Methods for cleaning up:	Avoid generation of dust. Take up carefully when dry. Small quantities: Neutralization with Sodium thiosulphate-solution. Place in appropriate containers for disposal. Final cleaning.
Additional information:	May react violently with combustible materials.

◆ Handling and storage

Handling

Advices on safe handling	Provide adequate ventilation, and local exhaust as needed. Vent dust from the work area. Open and handle container with care. Do not allow containers to stand open. Avoid contact with skin, eyes, and clothing. Do not breathe dust.
Precautions against fire and explosion:	Keep away from sources of ignition - No smoking. Do not weld.

Storage

Requirements for storerooms and containers:	Store container tightly closed in a dry and cool place. Store at room temperature. Protect from light and heat. Qualified materials: Glass, ceramic, PVC, PE, PP
Hints on joint storage	Keep away from combustible material. Do not store together with food.
Storage class:	5.1B= Oxidising substances

◆ Exposure controls / Personal protection equipment

Exposure limit values

Type	Value
Great Britain:	WEL-TWA 1 mg/m ³

Additional information:

Exposure controls	Provide good ventilation and/or an exhaust system in the work area. Material must only be Handled in closed installations or systems. See also information in chapter 7, section storage.
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Occupational exposure controls

Respiratory protection:	In case of dust: Particulates filter P2 according to EN 143.
Hand protection:	Protective gloves according to EN 374. Glove material: Nitrile rubber - Layer thickness: 0,11 mm. Breakthrough time: >480 min. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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Eye protection: Tightly sealed safety glasses according to EN 166.
Skin protection: Flame retardant protective clothing
General protection and hygiene measures:
Take off immediately all contaminated clothing.
Bei der Arbeit nicht essen, trinken, rauchen.
Wash hands before breaks and after work.
Safety shower and eye wash station should be easily accessible to the work area.

◆ Physical and chemical properties

Appearance

Physical state: solid, crystalline or crystalline powder
Colour: white
Odour: odourless

Important health, safety and environmental information

Melting point / melting range: 120 °C (Decomposition)
Flash point / flash point range: not combustible
Flammability : oxidizing
Density : 1,98 g/cm
pH value: at 1%: 4-6
at 20 °C, 100 g/L: 3,2
at 21 °C, 250 g/L: 2,0-2,5
Solubility in water: at 20 °C: approx. 600 g/L
Thermal decomposition: > 120 °C

Additional information

Molecular weight: 228,19 g/mol

◆ Stability and reactivity

Conditions to avoid: Protect from moisture contamination. Keep away from heat.
Materials to avoid: Violent reaction with metal powders and reducing agents.
Reacts with acids and alkalis.
combustible substances, iron, copper, zinc, peroxide compounds, Silver compounds
Hazardous decomposition products:
In case of strong heating: decomposition under formation of sulphur dioxide and sulphur trioxide, ammonia, nitrogen oxides (NO_x), ozone.
Thermal decomposition: > 120 °C
Additional information: Not combustible. Oxidizing effect due to oxygen generation.

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◆ Toxicological information

Toxicological Tests:

Acute toxicity :	LD50 Rat, oral: LD 0 Rat, dermal: 495 mg/kg (OECD 401) 2000 mg/kg (OECD 402)
Following inhalation:	LC 0 Rat, inhalative: 2,95 mg/L/4h (OECD 403) Dusts: strong irritant. Coughing, shortage of breath. Pulmonary edema is possible. Symptoms may occur with delay.
After swallowing:	harmful
After skin contact:	irritant
After eye contact:	Strong irritant. Risk of serious damage to eyes.

General remarks

After resorption: Headache, nausea, vomiting, diarrhoea.
Sensitization (guinea-pig): positive (OECD 406).
May cause sensitization by inhalation and skin contact.
Bacteriological mutagenicity: Salmonella typhimurium negative

◆ Ecological information

Ecotoxicity

Aqua toxicity :	Harmful effects on water organisms by modification of pH-value. Algae toxicity: EC50 Myriophyllum spicatum: 13,2 - 16,2 mg/L. (Inhibition of growth rate.) Bacterial toxicity: EC10 Pseudomonas putida: 36 mg/L/18h. Daphnia toxicity: EC50 Daphnia magna: ca. 120 mg/L/48h. NOEC Daphnia magna: 41 mg/L/48h. Fish toxicity: LC50 Lepomis macrochirus (bluegill): 103 mg/L/96h. NOEC Lepomis macrochirus (bluegill): 62,7 mg/L/96h. LC50 Oncorhynchus mykiss: 76,3 mg/L/96 h. Source: IUCLID.
Water Hazard Class:	1 = mild water pollutant (WGK catalog number 836)

Details of elimination

Further details:	Decomposition/hydrolysis: When mixed with water, forms byproducts that are hazardous to health. Methods for the determination of biodegradability are not applicable to inorganic substances.
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Additional ecological information

Oxygen demand: COD: 26 mg/g
General information: Do not allow to enter ground water, sewage or drains.

◆ Disposal considerations

Product

Waste key number: 160904* =Oxidising substances
* = Evidence for disposal must be provided.
Recommendation: Special waste. Waste disposal according to official state regulations.

Contaminated packaging

Recommendation: Waste disposal according to official state regulations.
Cleaned containers may be recycled.

◆ Transport information

Overland transport (ADR/RID)

Warning board:	ADR/RID: Kemmler-number 50, UN number 1444
Product designation:	UN 1444, AMMONIUM PERSULPHATE
ADR/RID	Class 5.1, Code: O2
Packaging group	III
Label	5.1
Limited quantities	LQ12
EQ:	E1
Contaminated packaging: Instructions	P002 IBC08 LP02 R001
Contaminated packaging: Special provisions	B3
Special provisions for packing together	MP10
Portable Tanks: Instructions	T1
Portable Tanks: Special provisions	TP33
Tank coding	SGAV
Tunnel restriction code:	E



Transport by sea (IMDG)

UN number:	1444
Proper shipping name:	AMMONIUM PERSULPHATE
IMDG:	Class 5.1, Code -
Packing Group:	III
EmS:	F-A, S-Q
Special provisions	-
Limited quantities	5 kg
EQ	E1
Contaminated packaging: Instructions	P002, LP02
Contaminated packaging: Provisions	-
IBC: Instructions	IBC08
IBC: Provisions	B3
Tank instructions: IMO	
Tank instructions: UN	T1
Tank instructions Provisions	TP33

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Stowage and segregation Properties and observations	Category A. White crystals or powder. Soluble in water. Mixtures with combustible material are sensitive to friction and are liable to ignite.
Marine Pollutant	No
Air transport (IATA)	
UN/ID number:	1444
Proper shipping name:	AMMONIUM PERSULPHATE
ICAO/IATA:	Class 5.1
Hazard	Oxidizer
PG	III
EQ	E1
Passenger Ltd.Qty .:	Y516 - Maximum quantity: 10 kg
Passenger:	516 - Maximum quantity: 25 kg
Cargo:	518 - Maximum quantity: 100 kg
ERG	5L

◆ Regulatory information

Labelling (67/548/EEC or 1999/45/EC)

Code letter and hazard symbol:

	O	Oxidizing
	Xn	Harmful
R phrase(s):	R 8	Contact with combustible material may cause fire.
	R 22	Harmful if swallowed.
	R 36/37/38	Irritating to eyes, respiratory system and skin.
	R 42/43	May cause sensitization by inhalation and skin contact.
S phrase(s):	S (2)	Keep out of the reach of children.
	S 22	Do not breathe dust.
	S 24	void contact with skin.
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S 37	Wear suitable gloves.

Labelling (EU-GHS)

Hazard symbols:



Signal word

Danger

Hazard Statements	H272	May intensify fire; oxidizer.
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	

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Precautionary Statements	H335	May cause respiratory irritation.
	P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	P220	Keep/Store away from combustible materials.
	P221	Take any precaution to avoid mixing with combustibles.
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P264	Wash hands and face thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P285	In case of inadequate ventilation wear respiratory protection.
	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P330	Rinse mouth.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before reuse.
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P312	Call a POISON CENTER or doctor/physician if you feel unwell.	
P321	Specific treatment (see ' First aid ' on this label).	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	
P405	Store locked up.	
P501	Dispose of contents/container to hazardous or special waste collection point.	

National regulations

National regulations - Great Britain

Hazchem-Code: 1Z

National regulations - Germany

Storage class: 5.1B= Oxidising substances

Water Hazard Class: 1 = mild water pollutant (WGK catalog number 836)

Incident regulation: Nr. 3

Informations on working limitations:

Observe employment restrictions concerning young persons.

Observe employment restrictions for expectant or nursing mothers.

National regulations - EC member states

Volatile organic compounds (VOC):

0 % by weight

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National regulations - USA

TSCA Inventory: listed

TSCA HPVC: not listed

Hazard rating systems

NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 0 (Minimal)

Reactivity: 2 (Moderate)

HMIS Version III Rating:

Health: 2 (Moderate)

Flammability: 0 (Minimal)

Physical Hazard: 2 (Moderate)

Personal Protection: X = Consult your supervisor



HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	2
	X

◆ Other information

Group that issues data sheet

Contact person: see chapter 1, department responsible for information.

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

End of MSDS