

# Safety Data Sheet



Product name:

**Oxidising solid, part of an oxygen generator**

Safety Data Ref: 9  
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Section 1 IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF THE COMPANY		
1.1	Product identifier	MPOG Mk II and EO2-30
1.2	Relevant use(s)/misuse(s)	A source of oxygen for life support or industrial applications
1.3	SDS supplier	Molecular Products Ltd, Parkway, Harlow Business Park, Harlow, Essex, CM19 5FR, UK
1.4	Emergency contact (global)	+44 (0) 1279 445111 (office hours) / +44 (0)1865 407333 (24 hour emergency number, English speaking) sds@molprod.com (email)
	Emergency contact (other)	China: 400 120 6011, China (NRCC): +86 532 8388 9090, Mexico: +52 555 004 8763, Chile: +56 225 829 336, Brazil: +55 11 3197 5891

Section 2 HAZARDS IDENTIFICATION	
2.1	Classification of the substance or mixture
2.1.1	Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
	Ox Sol 1 H271 Aquatic Chronic 2 H411 Acute Tox. 4 H302
2.1.2	Additional information – see section 16 for full text of H statements
2.2	LABELLING ELEMENTS
2.2.1	Labelling in accordance with EC Regulation No 1272/2008 (CLP/GHS)
Pictogram(s)	 Signal word DANGER
Hazard statements	
H271	May cause fire or explosion; strong oxidiser
H302	Harmful if swallowed
H411	Toxic to aquatic life with long lasting effects
Precautionary statements	
P220	Keep/store away from organic and combustible materials.
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P391	Collect spillage
P301/312	If swallowed: call a poison centre or doctor/physician if you feel unwell
P371/380/375	In case of fire: evacuate area. Fight fire remotely due to the risk of explosion
2.3	Other hazards
	None known

Section 3 COMPOSITION / INFORMATION ON INGREDIENTS					
Chemical characterisation	Mixture of inorganic substances				
Chemical name	CAS-No	EINECS/ELINCS	Classification	Concentration	
Sodium Chlorate	7775-09-9	231-887-4	CLP: Ox Sol. 1 H271, Acute Tox. 4 H302 Aquatic Chronic 2 H411	>85%	
Barium Peroxide	1403-29-6	215-218-4	CLP: Ox Sol. 2 H272 Acute Tox. 4 H332 Acute Tox. 4 H302	<4%	
Iron Powder	7439-89-6	231-096-4	CLP: Not classified	<8%	

Section 4		FIRST AID MEASURES
4.1	Description of measures	
	Inhalation	Remove casualty to fresh air and provide warmth and rest
	Skin contact	Clean areas of skin affected immediately with soap and plenty of water. If necessary, seek medical advice
	Eye contact	Immediately wash out eye thoroughly with plenty of water until irritation subsides. If necessary, consult an eye specialist/ophthalmologist
	Ingestion	If swallowed, do NOT induce vomiting. Drink plenty of water and, if necessary, seek medical advice
4.2	Most important effects/symptoms	None known
4.3	Immediate/special treatment	Treatment as described above

Section 5		FIRE FIGHTING MEASURES
5.1	Extinguishing media	Flood with water. Do NOT use foam
5.2	Special hazards	Liberates oxygen if heated above 300°C. May cause fire or an explosion if in contact with combustible materials
5.3	Advice for fire fighters	Self-contained breathing apparatus may be required. Use water spray to cool fire-exposed containers.

Section 6		ACCIDENTAL RELEASE MEASURES
6.1	Personal precautions	Adhere to personal protective measures
6.2	Environmental precautions	Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once
6.3	Methods and materials for cleaning up	In the event of spillage, take up large and small fragments mechanically (e.g. sweep or vacuum up, small fragments being first treated with damp sand) into tightly closed containers. Adhere to personal protective measures. Label container and dispose of as prescribed. Do NOT sweep up dry dust (possibility of explosion)
6.4	Reference to other sections	See section 8 for personal protective equipment

Section 7		HANDLING AND STORAGE
7.1	Precautions for safe handling	Handle in accordance with good hygiene and safety practice. Avoid the raising and deposition of dust
7.2	Conditions for safe storage	Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool and dry, avoiding direct sunlight and away from organic, oxidising combustible materials and strong acids
7.3	Specific end use(s)	See section 1.2

Section 8		EXPOSURE CONTROLS / PERSONAL PROTECTION			
8.1	Workplace Exposure Limits (WELs) have been assigned by the HSE (EH40/2005)				
	TWA (8 hours)	ppm	0.5	mg/m <sup>3</sup>	Barium compounds (soluble)
	TWA (8 hours)	ppm	0.1	mg/m <sup>3</sup>	Data for phosphorous
	STEL (15 mins)	ppm	0.3	mg/m <sup>3</sup>	Data for phosphorous
8.2	Exposure controls				
	Engineering controls	Provide adequate ventilation (e.g. local exhaust ventilation)			
	Personal protection	Observe normal standards for handling chemicals Wash hands before breaks and after work Avoid contact with skin and eyes. Avoid inhalation of dust if raised Wear personal protective equipment appropriate to the task (see below)			
	Eye protection	Safety goggles if risk of eye contamination			
	Skin protection	Rubber gloves (consider your own risk assessment, e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken)			
	Respiratory protection	Approved dust mask or respirator (e.g. EN 149:2001 FFP3) for dust if ventilation is insufficient			
	Other protection	Protective overalls			

Section 9		PHYSICAL AND CHEMICAL PROPERTIES			
9.1	Basic physical and chemical properties				
	Physical form	Solid	Colour	Grey	
	Odour	Odourless	pH	Not determined	
	Boiling pt/range	Not determined. Decomposes at approx. 300°C	Melting pt/range	Approx. 200°C	
	Flash point	Not applicable	Relative density	2.0g/cm <sup>3</sup>	
	Water solubility	Partial	Odour threshold	Not applicable	
	Evaporation rate	Not applicable	Flammability	Not applicable	



	Explosion limits	Not applicable	Vapour pressure	Not applicable
	Vapour density	Not applicable	Partition coeff. LogPoct/water	Not applicable
	Auto-ignition temperature	Not applicable	Viscosity	Not applicable
	Explosive properties	Not determined	Oxidising properties	Not determined
	Decomposition temperature	Not determined		
9.2	Other information	Strong oxidiser		

<b>Section 10</b>	<b>STABILITY AND REACTIVITY</b>			
10.1	Reactivity	Can burn with exploding violence if in contact with fuels or organic material		
10.2	Chemical stability	Stable under normal conditions of handling		
10.3	Hazardous reactions	Decomposes to form oxygen on heating or ignition (friction or impact can cause ignition)		
10.4	Conditions to avoid	Contact with water and organic materials		
10.5	Incompatible material	Organic material		
10.6	Hazardous decomposition products	Chlorine and chlorine dioxide can be evolved following contact with strong acids		

<b>Section 11</b>	<b>TOXICOLOGICAL INFORMATION</b>			
11.1	Information on toxicological effects			
	Acute toxicity	LD <sub>50</sub> rabbit (oral)	1200 mg/kg	Data for sodium chlorate
	Dermal compatibility	No data available		
	Mucous membrane compatibility	No data available		

<b>Section 12</b>	<b>ECOLOGICAL INFORMATION</b>				
12.1	Toxicity	LC <sub>50</sub>	Aquatic organisms	mg/l	No data available
12.2	Degradability	Not determined	12.3	Bio-accumulative potential	Not determined
12.4	Mobility in soil	Not determined	12.5	PBT/vPvB assessment	Not applicable
12.6	Other adverse effects	Risk of damage to plant life. Do not allow to get into waste water or waterways. If this occurs, inform the relevant water authority at once			

<b>Section 13</b>	<b>DISPOSAL CONSIDERATIONS</b>	
	Advice on disposal	If possible, recycle to supplier or approved recycling company. If not (e.g. designated as waste), dispose of in accordance with national and local authority regulations, e.g. The Hazardous Waste (England & Wales) Regulations 2005
	Contaminated packaging	Treat empty containers in the same way as the product: if possible wash out thoroughly and recycle

<b>Section 14</b>	<b>TRANSPORT INFORMATION</b>					
14.1	United Nations number (ADR, IMDG, IATA)	UN 1479	14.2	Proper shipping name (ADR, IMDG, IATA)	UN1479 Oxidising Solid n.o.s. (sodium chlorate, barium peroxide)	
14.3	Transport class(s) (ADR, IMDG, IATA)	5.1		14.4	Packing group (ADR, IMDG, IATA)	11
14.5	Environmental hazards (ADR, IMDG, IATA)	The product should be marked as a marine pollutant		14.6	Special procedures (ADR, IMDG, IATA)	Not applicable
14.7	Transport in bulk	Not applicable				

<b>Section 15</b>	<b>REGULATORY INFORMATION</b>	
15.1	Safety, health and environmental regulations	The SDS has been updated in accordance with EC Regulation No 1272/2008 (CLP/GHS)
15.2	Chemical safety assessment	Not applicable

Section 16	OTHER INFORMATION	
	Further information	The SDS has been revised in accordance with EC Regulation 1272/2008 (CLP)
		Comply with COSHH Regulations
		Hazard statements referred to in sections 2/3: H271: May cause fire or explosion; strong oxidiser H302: Harmful if swallowed H411: Toxic to aquatic life with long lasting effects,
	Sources of data	Other suppliers' safety data sheets, Annex VI of the CPL Regulation (EC) No 1272/2008, EH40 (2005)
	Prepared by	Dr Patricia Wormald, Molecular Products, PW@molprod.com
	Date of issue	27 January 2020
	This information is based on our present state of knowledge and is intended to describe our products from the point of view of the safety requirements. It should not be construed as guaranteeing specific problems	