

Safety Data Sheet



Product name:

Sofnocat 423

Document N°: LB01-00276

Issue: 3

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Compiled in accordance with REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758
Prepared according to GB CLP which is the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain

1		SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1	Product identifier	Substance name: Sofnocat 423
	Unique Formula Identifier (UFI)	Not applicable as this substance is not classified for health or physical hazards
1.2	Relevant identified uses of the substance or mixture and uses advised against	Relevant identified uses: Precious metal catalyst on support Uses advised against: No data Reason why uses advised against: No data
	Details of the supplier of the safety data sheet	Molecular Products Ltd Parkway, Harlow Business Park, Harlow, Essex, CM19 5FR, UK +44 (0) 1279 445111* sds@molprod.com *Only available during office hours 0900 – 1700 GMT
1.4	Emergency telephone number	+44 (0)1865 407333 (24-hour emergency number, English speaking) +86 400 120 6011 (China) +52 555 004 8763 (Mexico) +56 225 829 336 (Chile) +55 11 3197 5891 (Brazil)

2		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)	Not classified
2.1.2	This product is defined as a "special mixture" where the properties of the metals, metal oxides and the inorganic metal substances are modified by inclusion within the matrix of the mixture. As such, it does not present a hazard to human health and according to Annex I of Regulation (EC) No. 1272/2008, labelling is not required	
2.1.3	Additional information - none	
2.2		LABELLING ELEMENTS
2.2.1		Labelling in accordance with EC Regulation No 830/2015 (CLP/GHS):
	Hazard pictogram	None
	Hazard statements	None
	Precautionary Statements	None
	Supplemental Hazard information (EU):	No data
2.3		Other hazards
		Dust may cause irritation of eyes, skin, nose and throat. Contains substances that have been assigned a Workplace Exposure Limit (WEL)

3		SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS						
3.2		Mixtures						
	Chemical characterisation	Mixture of inorganic substances						
	Substance name	CAS No	Index No.	REACH Registration No.	EC No.	Classification	% [weight]	SCL, M-factor, ATE
	Platinum	7440-06-4	No data	01-2120733612-61-XXXX	231-116-1	Not classified	<2%	No data
	Palladium	7440-05-3	No data	01-2120140175-66-XXXX	231-115-6	Not classified	<6%	No data
	Tin (IV) dioxide	18282-10-5	No data	01-2119946062-44-XXXX	242-159-0	Not classified	<50%	No data
	Nickel (II) Dinitrate	13138-45-9	No data	01-2119492333-38-XXXX	236-068-5	Ox.Sol 2 H272 Acute Tox 4 H302 Skin Irrit 2 H315 Eye Dam,1 H318 Skin Sens.1 H317 (conc limit >0.01%) Acute tox 4 H332	<0.6%	No data

						Resp.Sens.1 H334 Muta.2 H341 STOT RE 1 H372 (STOT RE 2:H373 conc limit 0.1-1%) Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Carc.1A H350i Repro.1B H360D		
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4		SECTION 4: FIRST AID MEASURES	
4.1	Description of first aid measures		
	General notes	None	
	Following inhalation	Remove casualty to fresh air and provide warmth and rest. Seek medical advice	
	Following skin contact	Clean areas of skin affected with soap and plenty of water for 15 mins, Seek medical advice	
	Following eye contact	Wash out eye thoroughly with plenty of water for at least 15 mins or until irritation subsides. If necessary, consult an eye specialist/ophthalmologist	
	Following ingestion	If swallowed, do NOT induce vomiting. Drink plenty of water and, if necessary, seek medical advice	
	Self-protection of the first aider	If the atmosphere is dusty ensure that there is sufficient LEV or suitable respiratory protective equipment is used	
4.2	Most important symptoms and effects, both acute and delayed	Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled	
4.3	Indication of any immediate medical attention and special treatment needed	Treatment as described above	

5		SECTION 5: FIRE FIGHTING MEASURES	
5.1	Extinguishing media	Suitable extinguishing media: Water, Foam, CO2 powder are all suitable Unsuitable extinguishing media: No data	
5.2	Special hazards arising from the substance or mixture	Material is non-combustible. Packaging may be combustible Hazardous combustion products: No data	
5.3	Advice for fire fighters	Self-contained breathing apparatus may be required	

6		SECTION 6: ACCIDENTAL RELEASE MEASURES	
6.1	Personal precautions, protective equipment and emergency procedures	For non-emergency personnel: - Protective equipment: Adhere to personal protective measures - Emergency procedures: Avoid inhaling dust. Avoid skin and eye contact For emergency responders: No data	
6.2	Environmental precautions	Do not allow to get into wastewater or waterways; if this occurs, inform the relevant water authority at once	
6.3	Methods and materials for containment and cleaning up	For containment: No data For cleaning up: In the event of spillage, take up mechanically (e.g. sweep or vacuum up) into tightly closed containers. Adhere to personal protective measures. Label container and dispose of as prescribed Other information: no data	
6.4	Reference to other sections	See section 8 for personal protective equipment	

7		SECTION 7: HANDLING AND STORAGE	
7.1	Precautions for safe handling	Protective measures: Handle in accordance with good hygiene and safety practice, avoid dust formation and wear suitable PPE Measures to prevent fire: No data Measures to prevent aerosol and dust generation: No data Measures to protect the environment: see 6.2 Advice on general occupational hygiene: No data	
7.2	Conditions for safe storage, including any incompatibilities	Technical measures and storage conditions: No data Packaging materials: No data Requirements for storage rooms and vessels: Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool and dry Storage class: - Further information on storage conditions	
7.3	Specific end use(s)	No data	
		No data	

8		SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION			
8.1	Workplace Exposure Limits (WELs) have been assigned by the HSE (EH40/2011)				
	TWA (8 hours)	ppm	5	mg/m ³	Data for Platinum metal
	TWA (8 hours)	ppm	2	mg/m ³	Data for Tin compounds (as Sn)
	STEL (15 mins)	ppm	4	mg/m ³	Data for Tin compounds (as Sn)

	TWA (8 hours)	ppm	0.1	mg/m ³	Data for Nickel and its inorganic compounds water-soluble nickel compounds (as Ni)				
Substance name		Platinum							
EC number		231-116-1		CAS number		7440-06-4			
DNELs									
	Workers					Consumers			
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic	
Oral	Not required				No hazard identified	No hazard identified	No hazard identified	No hazard identified	
Inhalation	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	
Dermal	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	
PNECs									
Environmental protection target					PNEC				
Fresh water					No hazard identified				
Freshwater sediments					No hazard identified				
Marine water					No hazard identified				
Marine sediments					No hazard identified				
Food chain					No potential to cause toxic effects if accumulated (in higher organisms) via the food chain				
Microorganisms in sewage treatment					No hazard identified				
Soil (agriculture)					No hazard identified				
Air					No hazard identified				
Substance name		Palladium							
EC number		231-115-6		CAS number		7440-05-3			
DNELs									
	Workers					Consumers			
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic	
Oral	Not required				No hazard identified	No hazard identified	No hazard identified	No hazard identified	
Inhalation	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	
Dermal	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	
PNECs									
Environmental protection target					PNEC				
Fresh water					0.027 µg/L				
Freshwater sediments					0.274 mg/kg sediment dw				
Marine water					0.003 µg/L				
Marine sediments					0.027 mg/kg sediment dw				
Food chain					No potential to cause toxic effects if accumulated (in higher organisms) via the food chain				
Microorganisms in sewage treatment					1.46 mg/L				
Soil (agriculture)					0.012 mg/kg soil				
Air					No hazard identified				
Substance name		Tin (IV) dioxide							
EC number		242-159-0		CAS number		18282-10-5			
DNELs									
	Workers					Consumers			
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic	
Oral	Not required				No data	2 mg/m ³	No data	2 mg/m ³	

	Inhalation	No hazard identified	No data	No hazard identified	No data	No hazard identified	6 mg/m ³	No hazard identified	6 mg/m ³
	Dermal	No hazard identified	5.7 mg/m ³	No hazard identified	5.7 mg/m ³	No hazard identified	2 mg/m ³	No hazard identified	2 mg/m ³
PNECs									
Environmental protection target						PNEC			
Fresh water						0.1 mg/L			
Freshwater sediments						No data available; testing technically not feasible			
Marine water						0.01 mg/L			
Marine sediments						No data available; testing technically not feasible			
Food chain						No potential for bioaccumulation			
Microorganisms in sewage treatment						100 mg/L			
Soil (agriculture)						No data available; testing technically not feasible			
Air						No hazard identified			
Substance name		Nickel (II) Dinitrate							
EC number		236-068-5			CAS number		13138-45-9		
DNELs									
Workers					Consumers				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic	
Oral	Not required					0.37 mg/kg bw/day		0.011 mg/kg bw/day	
Inhalation	1.6 mg/m ³	104 mg/m ³	50 µg/m ³	50 µg/m ³	0.1 mg/m ³	8.8 mg/m ³	60 ng/m ³	60 ng/m ³	
Dermal	No hazard identified	No hazard identified	0.44 µg/m ³	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified
PNECs									
Environmental protection target						PNEC			
Fresh water						7.1 µg/L			
Freshwater sediments						109 mg/kg sediment dw			
Marine water						8.6 µg/L			
Marine sediments						109 mg/kg sediment dw			
Food chain						0.12 mg/kg food			
Microorganisms in sewage treatment						0.33 mg/L			
Soil (agriculture)						29.9 mg/kg soil dw			
Air						No hazard identified			
8.2	Exposure controls								
	Appropriate engineering controls	Substance/mixture related measures to prevent exposure during identified uses: No data Structural measures to prevent exposure: Provide adequate ventilation (e.g., local exhaust ventilation) Organisational measures to prevent exposure: No data Technical measures to prevent exposure: No data							
	Personal protection equipment	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 and face protection	Safety goggles if risk of eye contamination EN166							
	Skin protection	Hand protection: Rubber gloves (consider your own risk assessment, e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken) EN 374 Other skin protection: Protective overalls							
	Respiratory protection	Approved dust mask or respirator (e.g. EN 149:2001 FFP3) for dust if ventilation is insufficient							
	Thermal hazards	No data							
	Environmental exposure controls	Substance/mixture related measures to prevent exposure: No data Instruction measures to prevent exposure: No data Organisational measures to prevent exposure: No data Technical measures to prevent exposure: No data							

9	SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES								
9.1	Information on basic physical and chemical properties								
	Physical state	Granules, pellets, beads, monoliths			Colour			Grey or black	
	Odour	Odourless			pH			Not determined	

	Boiling pt/range	Not determined	Melting point/freezing point	Not determined
	Flash point	Not applicable	Relative density	Not determined
	Solubility	Insoluble	Decomposition temperature	Not determined
	Evaporation rate	Not determined	Flammability	Not determined
	Lower and upper explosion limit	Not determined	Vapour pressure	Not determined
	Relative vapour density	Not determined	Partition coeff. LogPoct/water	Not determined
	Auto-ignition temperature	Not determined	Kinematic viscosity	Not determined
	Explosive properties	Not determined	Oxidising properties	Not determined
	Particle characteristics	Not determined		
9.2	Other information	None		

10	SECTION 10: STABILITY AND REACTIVITY			
10.1	Reactivity	Heat is generated when exposed to materials which oxidise easily in air		
10.2	Chemical stability	Stable under normal conditions of handling		
10.3	Hazardous reactions	None known		
10.4	Conditions to avoid	Materials which oxidise easily in air		
10.5	Incompatible material	None known		
10.6	Hazardous decomposition products	None known		

Section 11	TOXICOLOGICAL INFORMATION:						
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008						
	Hazard class	Method	Species	Route of exposure	Effective dose	Exposure time	Results
	Skin corrosion/irritation	No data	No data	No data	No data	No data	NICKEL NITRATE: Classified as Causes skin irritation
	Serious eye damage/irritation	No data	No data	No data	No data	No data	NICKEL NITRATE: Classified as Causes serious eye irritation
	Respiratory or skin sensitisation	No data	No data	No data	No data	No data	NICKEL NITRATE: Classified as may cause an allergic skin reaction
	Germ cell mutagenicity	No data	No data	No data	No data	No data	NICKEL NITRATE: Classified as suspected of causing genetic defects
	Carcinogenicity	N/A					
	Reproductive toxicity	N/A					
	Summary of evaluation of the CMR properties	No data					
	STOT-single exposure	N/A					
	STOT-repeated exposure	No data	No data	No data	No data	No data	NICKEL NITRATE: Causes damage to organs through repeated exposure
	Aspiration hazard	No data					
11.2	Information on other hazards	Material has low order of toxicity by ingestion					

12	SECTION 12: ECOLOGICAL INFORMATION			
12.1	Toxicity			
	Information on ecotoxicity effects on finished product not available None of the components classified for the environment			
	Acute (short-term) toxicity:	Fish: No data Crustacea: No data Algae/aquatic plants: No data Other organisms: No data		
	Chronic (long-term) toxicity	Fish: No data Crustacea: No data Algae/aquatic plants: No data Other organisms: No data		
12.2	Persistence and degradability	No data		
12.3	Bioaccumulative potential	Not determined		
12.4	Mobility in soil	Not determined		
12.5	Results of PBT and vPvB assessment	Not applicable		

12.6	Endocrine disrupting properties	No data
12.7	Other adverse effects	Do not allow to get into wastewater or waterways. If this occurs, inform the relevant water authority at once

13	SECTION 13: DISPOSAL CONSIDERATIONS	
13.1	Waste treatment methods	
	Product/ Packaging 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. Treat empty containers in the same way as the product: if possible, wash out thoroughly and recycle Waste codes/ waste designations according to LoW: No data
	Waste treatment-relevant information	No data
	Sewage disposal-relevant information	No data
	Other disposal recommendations	No data

14	SECTION 14: TRANSPORT INFORMATION				
14.1	UN number or ID number	Not classified	14.2	UN proper shipping name	Not classified
14.3	Transport hazard class(es)	Not classified	14.4	Packing group	Not classified
14.5	Environmental hazards	The product should not be marked as a marine pollutant	14.6	Special procedures for user	Not applicable
14.7	Maritime transport in bulk according to IMO instruments	Not applicable			

15	SECTION 15: REGULATORY INFORMATION	
15.1	Safety, health and environmental regulations	
	The product is classified in accordance with EC Regulation 830/2015 (CLP). Other regulatory information and provisions are not applicable for this product	
15.2	Chemical safety assessment	
	Not applicable	

Section 16	OTHER INFORMATION	
	Indication of changes	This SDS has been revised in accordance with EC Regulation 1272/2008 (CLP) and in response to a change in Annex II REACH regulations, June 2020.
	Abbreviations and acronyms	None
	Key literature references and sources for data	Other suppliers' safety data sheets, EH40 (2020) ECHA Registration Dossier and Annex VI of CLP (EC 1272/2008)
	Prepared by	Dr Patricia Wormald, Molecular Products, pw@molprod.com Neil Stearn, Cambridge Environmental Assessments, neil.stearn@cea-res.co.uk
	Date of issue	30 August 2021
	Classification according to Regulation (EC) No 1272/2008	Classification procedure
	Not classified	
	Relevant H-statements (number and full text)	H317 May cause an allergic skin reaction H373 Causes damage to organs through prolonged or repeated exposure H272 May intensify fire; oxidiser H302 Harmful if swallowed H315 Causes skin irritation H318 Causes serious eye damage H332 Harmful if inhaled H334 May causes allergy or asthma symptoms or breathing difficulties if inhaled H341 Suspected of causing genetic defects H372 Causes damage to organs through prolonged or repeated exposure H373 May cause damage to organs through prolonged or repeated exposure H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects H350i May cause cancer by inhalation H360D May damage the unborn child
	Training advice	None

	Further information	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
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