

Application to the relevant hazardous substances authority (planning authority)

The Planning (Hazardous Substances) Act 1990 - Section 7(1)

The Planning (Hazardous Substances) Regulations 2015 (Regulation 5)

Application for Hazardous Substances Consent

1

Applicant	Johnson Matthey Davy Technologies Limited
Address	5 th Floor
	2 Gresham Street, London
Post code	EC2V 7AD
Telephone number	01200 421277

Person in control of the land to which the application relates, if different to above	
Address	
Post code	
Telephone number	

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Address or other location details of application site	Johnson Matthey Davy Technologies Limited
	West Bradford Industrial Area
	Pimlico Road
	Clitheroe, Lancashire
Post code	BB7 4QB
OS grid ref	7471 4307

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Hazardous substance(s) covered by the application

- (a) List named substances falling within Part 2 of Schedule 1 to the Regulations first, then list any substances falling within the categories in Part 1 of that Schedule; finally list substances falling within the description in Part 3.
- (b) Substances falling within Parts 1 or 3 of Schedule 1 to the Regulations may be listed under the relevant category or description or named specifically. Where a substance falls within Part 1 and 2 list under Part 2 only; where a substance falls within more than one category in Part 1 list under the category which has the lowest controlled quantity. Where a substance falling within Part 1 or 2 also falls within Part 3 list under the Part which has the lowest controlled quantity. The "controlled quantity" means the quantity specified for that substance in column 2 of Parts 1, 2 or 3 of Schedule 1 to the Regulations.

Note: The Planning (Hazardous Substances) (Amendment) Regulations 2015 are relevant to Q* (addition rule) for LPG, and relevant to notes about ammonium nitrate.

Name, or relevant category or description of substance	Part Entry number @ in Schedule 1 to the 2009 regulations	Part number in Schedule 1 to the Regulations, and entry number if Part 2, category if Part 1, identity if Part 3	Do you have a current PHS consent* in respect of this substance? (Yes/No)	Consent Reference (see note, 2014/2021)	If "yes", state quantity for which consent granted, tonnes (Note 1)	Maximum quantity proposed to be present in tonnes
Part 2 , Named hazardous substances						
Nickel Monoxide	Part A, 11	Part 2, Entry 11	Yes	2014	3	3
Hydrogen	Part A, 15	Part 2, Entry 15	Below qualifying quantity	2014	0.97	0.97
Oxygen	Part A, 25	Part 2, Entry 25	Below qualifying quantity	2014	51	51
H2 Acute Toxic Category 2						
60% Sodium Dichromate Solution		Part 1	Yes	2014	38	38
H2 Acute Toxic Category 3						
60 % Nitric Acid		Part 1	Established Substance	Established substance		175 T
P8 Oxidising Liquids and Solids, Category 1, 2 & 3 Total (184.5T)						
Potassium Nitrate or Sodium Nitrate Solid/ Solution	Part B, 3	Part 1, P8	Yes	2021	132 T	132 T
Cobalt Nitrate hexahydrate (Solid or liquid)	Part B, 3	Part 1, P8	Yes	2014	30 T	30 T
Magnesium Nitrate (solid)	Part B, 3	Part 1, P8	Yes	2014	8 T	8 T
Aluminium Nitrate (solid)	Part B, 3	Part 1, P8	Yes	2014	7.5 T	7.5 T
Cerium Nitrate (Solid)	Part B, 3	Part 1, P8	Yes	2021	5 T	5 T
Platinum nitrate (solution)	Part B, 3	Part 1, P8	Yes	2014	1 T	1 T
Ruthenium Nitrate (Solution)	Part B, 3	Part 1, P8	Yes	2014	1 T	1 T
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (2614T)						
Various (Solids/Liquids) Totals		Part 1, E1	Yes	2021/2024	2842T	2614T
Copper dinitrate solution	Part B, 10i	Part 1, E1	Yes	2014	365T	365T
Zinc Oxide	Part B, 10i	Part 1, E1	Yes		350	350
Copper Oxide	Part B, 10i	Part 1, E1	Yes		300	300
Mixed Metal Nitrate Solution	Part B, 10i	Part 1, E1	Yes		276	276
Zinc Carbonate	Part B, 10i	Part 1, E1	Yes	2014/2021	300	300

Copper Carbonate	Part B, 10i	Part 1, E1	Yes		250	250
Products containing Zinc Oxide	Part B, 10i	Part 1, E1	Yes	2014	222	195.5
Zinc Nitrate Solution	Part B, 10i	Part 1, E1	Yes	2014	210	210
Products containing Copper Carbonate	Part B, 10i	Part 1, E1	Yes	2014	140	135
Nickel Nitrate Solution	Part B, 10i	Part 1, E1	Yes	2014	112	98.5
Hydrozincite	Part B, 10i	Part 1, E1	Yes	2014	100	90
Products containing Nickel Hydroxyl Carbonate	Part B, 10i	Part 1, E1	Yes	2014	20	20
Tricobalt Tetroxides	Part B, 10i	Part 1, E1	Yes	2014	2	2
Palladium Nitrate	Part B, 10i	Part 1, E1	Yes	2014	1	1
Silver Nitrate	Part B, 10i	Part 1, E1	Yes	2014	1	1
Cobalt Nitrate Solution / Mixed Metal Nitrate solution		Part 1, E1	Yes		16.25	16.25
E2 Hazardous to the aquatic environment in Category Chronic 2 (82T)						
Chromium(III) Hydroxy Nitrate Solution		Part 1, E2	Established substance		n/a	72 T
Products /Intermediates containing Chromium (ex 2 plant)		Part 1, E2	Established Substance		n/a	10 T

Established substances present on site prior to the establishment of the regulations but reclassified under CLP afterwards.

4 Manner in which substance(s) are to be kept and used

For each substance, category or description of substance, covered by the application, provide the following information, referring to the substance location plan where appropriate.

“vessel” means any container designed or adapted to contain hazardous substances which is affixed to the land, and includes a container which forms part of plant or machinery which is affixed to the land but does not include a pipeline.

“Buried” or “Mounded” vessel includes a vessel which is only partially buried or partially mounded.

“moveable container” means any container designed or adapted to contain hazardous substances other than a vessel.

- (a) Tick one box below to show whether the substance(s) will be present for storage only or will be stored and involved in a manufacturing, treatment or other industrial process:

<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Storage Only</i>	<i>Stored and involved in an industrial process</i>
Nickel Monoxide, Part 2, Entry 11		✓ (Note 2)
Hydrogen, Part 2, Entry 15		✓
H2 Acute Toxic Category 2 (60% Sodium Dichromate Solution)		✓
H2 Acute Toxic Category 3 (60% Nitric Acid)		✓
P8 Oxidising Liquids and Solids, Category 2 & 3		✓
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1		✓
E2 hazardous to the aquatic environment in category chronic 2.		✓

Note 2: Named substance is generated during the manufacture of products. It is not specifically stored or involved in an industrial process but may be present in inhalable form.

(b) For each vessel to be used for storing the substance(s) give the following information:

Vessel No *	Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Location	Installed above ground† (Yes/No)	Secondary Containment Provided	Buried (Yes/No)	Mounded (Yes/No)	Maximum capacity (cubic metres)	Highest vessel design temperature °C	Highest vessel design pressure (bar absolute)
F60	Oxygen, Part 2, Entry 25	Oi(S)	Yes	Yes	No	No	51 m³ (51 Tonnes)	Operates at -183 °C	Operates at 10 barg with 17 bar pressure relief and 24 bar bursting discs.
4F1	H2 Acute Toxic Category 2 (60% Sodium Dichromate Solution)	Ta(S)	Yes	Yes	No	No	38 m³ (22.8 Tonnes)	50	1.02 bar
3F15	H2 Acute Toxic Category 3 60% Nitric Acid	TNa(S)1	Yes	Yes	No	No	130 m³ (175 Tonnes)	50	+10 mbarg / - 5 mbarg
1F3	P8 Oxidising Liquids and Solids, Category 2 & 3, (Magnesium Nitrate)	Oe(M)	Yes	Yes	No	No	9 m³	100	Atmospheric
3F10	E1 Hazardous to the aquatic environment in category acute 1 or chronic 1, (Mixed metal Nitrate solution tank)	Dec	Yes	Yes	No	No	0.6 m³	80	0.02/-0.006 barg
3F56	E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, (Copper dinitrate solution)	Deb(S)1	Yes	Yes	No	No	130 m³ (192 Tonnes)	80	+10 mbarg / - 5 mbarg
F62	E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, (Zinc Nitrate Solution)		Yes	Yes	No	No	8 m³	80	+7.5 mbarg / - 2.5 mbarg
3F16	E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Zinc Nitrate Solution)		Yes	Yes	No	No	130 m³	80	+7.5 mbarg / - 2.5 mbarg
8F7	E1 hazardous to the aquatic environment in category	DEf(S)	Yes	Yes	No	No	17.7 m³	80	0.075 mbarg

(c) For each substance, category, or description of substance, state the largest size (capacity in cubic metres) of any moveable container(s) to be used for that substance, category, or description of substances:

<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Storage area on site* (Map reference)</i>	<i>Maximum capacity (cubic metres) of individual moveable containers</i>	<i>Deliveries/Collections per month if applicable</i>
Nickel Monoxide, Part 2, Entry 11	See SYNCL-08-13-21037	0.22m ³ Drum (0.22 Tonnes)	Not applicable
Hydrogen, Part 2, Entry 15	Ha(M)		Existing consent not currently in use
H2 Acute Toxic Category 2 (60% Sodium Dichromate Solution)	Ta(S)	Road Tanker, 6 m ³ (10 Tonnes)	Deliveries 4 per month (1 per week)
H2 Acute Toxic Category 3 (60% Nitric Acid)	TNa(S)1	Road Tanker, 21.2m ³ (29 Tonnes)	Deliveries 124 per month (4 per day approx.)
P8 Oxidising Liquids and Solids, Category 2 & 3	Ob(S), Oc(S), Od(s), Oe(S), Of(S), Og(S), Oh(s)	0.025 T Bags, 1 Tonne FIBC's or 1T (1m ³) IBC's	Delivery 1 per month (if required, campaign-based production)
	Oe(M)		
	Oa(S)Truck	1 Tonne FIBC	1 collection per day (22T)
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1	DEa(S)2	0.025 T bags, 1 Tonne FIBC's/Octoboxes or 1T (1m ³) IBC's 0.22 T (0.22 m ³) barrels	Collection 4 x 22T Road Trucks per day
		25 m ³ (32T) Road Tanker	Facilities to deliver Copper dinitrate Solution, Zinc Nitrate Solution and Mixed Metal Nitrate Solution by road Tanker are present for emergency supply/planned maintenance. If used would require 10 deliveries per week but do not increase overall site stocks which is governed by the receipting storage tank capacity
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Cobalt Nitrate Solution)		1000 litre IBC (delivered in 2000 litre lots)	Delivery x2 per week week
E2 Hazardous to the aquatic environment in category Chronic 2	DEa(S)1	Road Tanker 19.5 m ³ (27 Tonnes)	Delivery 2 per month
	DEc(S)2	1m ³ IBC	Delivery 1 per month
		0.22 T (0.22m ³) barrel & 1T Octobox/FIBC	Included with E1 Substances as above.

* identify by reference to substance location plan

- Transport of goods around site is conducted on private roads.

(d) For each substance, category, or description of substance, state major storage locations of relevant substances.

<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3, 2009 Regulations</i>	<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3, 2015 Regulations</i>	<i>Storage area on site*</i>	<i>Map Reference</i>	<i>Maximum capacity (cubic metres)/ Tonnes</i>
Part A, 11,	Nickel Monoxide, Part 2, Entry 11	8H1	Nb(SM)	1.40 T
		8S2A & 8S2B	Nc(SM)	0.48 T
		8H4	Nd(SM)	0.48 T
Part A, 15	Hydrogen, Part 2, Entry 15	14 plant	Ha(M)/ Ha(S)	0.97 T
Part A, 25	Oxygen, Part 2, Entry 25		Oi(S)	51 T
H2 Acute Toxic Category 2				
Part B, 1	60% Sodium Dichromate Solution	4F1	Ta(S)	38 m ³ / 22T
H2 Acute Toxic Category 3				
	60% Nitric Acid	3F15 40 Plant 41 Plant 28 plant	TNa(S)1 TNa(S)2 TNa(S)3 TNa(S)4	130 m ³ / 175 T 2m ³ / 2.7 T 0.74m ³ / 1 T 0.1m ³ /0.135 T
P8 Oxidising Liquids and Solids, Category 3				
<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3, 2009 Regulations</i>	<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3, 2015 Regulations</i>	<i>Storage area on Site*</i>	<i>Map Reference</i>	<i>Maximum capacity (cubic metres)/ Tonnes</i>
Part B, 3	Cobalt Nitrate hexahydrate (Solid/liquid) (Liquids/Solids in process)	RMS	Ob(S)	25 T
		29 building	Ob(M)	5 T
Part B, 3	Aluminium Nitrate (solid)	RMS	Od(S)	6.5 T
		8 plant (8F28)	Od(M)	1 T
Part B, 3	Potassium Nitrate or Sodium Nitrate (Liquid and Solid)	41 plant (Solution) in process	Oa(M)3	40 T
		41 Plant (Solid) Hoppers	Oa(M)1 & Oa(M2)	40 T (2 x 20T hoppers) Combined
		41 Plant (Solid) Bags Truck (Solid)	Oa(S) Oa(S)Truck	30 T in 1T bags 22 T in 1T bags
Part B, 3	Magnesium Nitrate (solid) (Solution in process)	RMS	Oe(S)	0.5T
		1 plant (1F3)	Oe(M)	0.5T
Part B, 3	Cerium Nitrate (Solid)	RMS	Of(S)	4.5T
		8 Plant (8F35)	Of(M)	0.5T
Part B, 3	Platinum Nitrate (Solution)	RMS	Og(S)	0.5T
		12 plant (12F4)	Og(M)	0.5T

Part B, 3	Ruthenium Nitrate (Solution)	RMS Oven bay	Oh(S) Oh(M)	0.5T 0.5T
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Solids / Liquids)				
	Substance	Storage area on site*	Map Reference	Maximum capacity (cubic metres)/ Tonnes
Part B, 10i	Copper Carbonate	RMS	DEj(S)	250T
Part B, 10i	Zinc Oxide	RMS	DEa(S)1	200T
Part B, 10i	Zinc Carbonate	RMS	DEi(S)1	200T
Part B, 10i	Nickel Hydroxy carbonate	RMS	DEk(S)	10 T
Part B, 10i	Copper Oxide	RMS	DEm(S)	100T
Part B, 10i	Copper Dinitrate Solution	North Site	DEb(S)1 DEb(S)2	365 T
Part B, 10i	Mixed Metal Nitrate Solution	North Site 21 Plant	DEc(S)1 DEc(S)2	181 T 95 T
Part B, 10i	Zinc Nitrate solution	North Site	DEc(SM)1	210 T
Part B, 10i	Nickel Nitrate Solution	South Site	DEf(S), DEf(M)3	98.5 T
Part B, 10i	Palladium Nitrate Solution	RMS	DEn(S)	0.5T
Part B, 10i	Silver Nitrate Solution	RMS	DEp(s)	0.5T
	Cobalt Nitrate Solution	29 Building	DEn(S)1	2 m ³ (2 x 1m ³ IBC's) (3.5T)
	Cobalt Nitrate Solution/Mixed Metal Nitrate Solution		Ob(M), DEn(M)2 DEn(M)3	8.5 m ³ (12.75T)
Part B, 10i	E1 Hazardous to the aquatic environment in acute 1 or chronic 1 (previously product containing zinc oxide – despatch area)	Marshalling area	DEa(S)2	300T
Part B, 10i	E1 Hazardous to the aquatic environment in acute 1 or chronic 1 (previously product containing zinc oxide – despatch area)	40 Plant	E(R)2	22T
Part B, 10i	E1 Hazardous to the aquatic environment in acute 1 or chronic 1 (previously product containing zinc oxide – despatch area)	RMS	E(R)1	50T
Part B, 10i	E1 Hazardous to the aquatic environment in acute 1 or chronic 1 (previously product containing zinc oxide – despatch area)	21 Plant	DEm(M)3 DEa(S)3	40T 32T
	E1 Hazardous to the aquatic environment in acute 1 or chronic 1 (Existing Site products based on Ni, Cu, Zn) oxide and/or carbonates	South Site	E1(S)6 E1(S)7 E1(S)8	10T 10T 20T
E2 Hazardous to the aquatic environment in category chronic 2.				

	Chromium Hydroxy Nitrate Solution	2 plant 8 plant	DE(S)1 DE(S)2	56 T 6 T
	Solids/Liquids	2 Plant	E(M)12	10 T

- (e) Where a substance, category or description of substance is to be used in a manufacturing, treatment or other industrial process(es), give a general description of the process(es), describe the major items of plant which will contain the substance(s); and state the maximum quantity (in tonnes) which is liable to be present in the major items of the plant, and the maximum temperature (°C) and pressure (bar absolute) at which the substance, category or description of substance is liable to be present:

Process: Metal Dissolution processes

Use of H2 Cat 3 (60% Nitric Acid) to Manufacture E1 Cat 1 (Nickel Nitrate Solution).

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Location</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Nickel Nitrate Solution	Metal dissolution	DEF(M)1 - 57.5T DEK(M)3 – 16T	8F6, 8F7 8F45 F80/F81	13 m³ 18 m³ (27 T) 16 m³ (24 T)	90 80 85 90	+ 50 mbarg 0.9936 bar +/-0.05 barg atmospheric

Use of H2 Cat 3 (60 % Nitric Acid) and Oxygen to manufacture E1 Cat 1 (Copper dinitrate Solution).

<i>E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper dinitrate Solution</i>	<i>Location</i>	<i>3F1</i>	<i>109 m³</i>	<i>90</i>	<i>+ 30 mbarg</i>

Use of H2 Cat 3 (60% Nitric Acid) to manufacture E1 Cat 1 (Zinc Nitrate Solution).

<i>E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Zinc Nitrate Solution</i>	<i>Location</i>	<i>F61 Dissolver F62 3F16</i>	<i>14 m³ 8 m³ 136 m³</i>	<i>100 90 90</i>	<i>+50 mbarg +7.5 / -2.5 mbarg +7.5 / -2.5 mbarg</i>

Use of H2 Cat 2 (60% Sodium Dichromate Solution) and H2 Cat 3 (60 % Nitric Acid) & Oxygen to manufacture a non classified substance.

H2 Acute Toxic Category 2 (60% Sodium Dichromate) & H2 Acute Toxic Category 3, 60% Nitric acid	Metal dissolution	Location TAa(M) Oi(M)	4F3	82 m ³	80	- 6 mbarg
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3 Plant: Process formation of Intermediates and Calcination.

Use of Raw materials, formation of intermediates, heat treatment, formation of products and packing.

DEi(M)1 – Formation of intermediates Zinc Carbonate, 3T
 DEj(M)1 – Formation of intermediates Copper (II) Carbonate – Copper (II) hydroxide, 34T
 DEl(M)1 – Formation of intermediates Hydrozincite, 35T
 DEEm(M)1 – Powder Mixing and pellet formation Copper Oxide, 40T
 DEa(M)7 – Intermediates containing Zinc Oxide, 71T
 DEb(M) – Product containing Copper dinitrate, 12T
 DEc(M)1 Mixed Metal Nitrate solution, 4T

Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Description of process(es)	Location	Major items of plant*	Max. quantity (tonnes/m ³)	Max. temp. (°C)	Max. pressure (bar absolute)
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper/Zinc carbonate, Copper/zinc oxide	Formation and processing of intermediates	DEEm(M)1 DEl(M)1 DEa(M)7	3F13 A/B/C (ageing tanks), 3F21/22, 3F34 (holding tanks)	14 m ³ , 3 m ³ , 11 m ³	80	+7.5 mbarg
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper Carbonate and/or Oxide	Drying and Calcination	DEl(M)1	3B1 3B2	Up to 2.8 T per hour feed	400 550	Atmospheric

E1 Hazardous to the aquatic environment in category acute 1 or chronic 1 (Copper/Zinc oxide/carbonate)	Formation of product	DEm(M)1	3H5 3H7 3H8	40 m ³ 2.4 m ³ 11 m ³	60	Atmospheric
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7 Plant: Calcination.

Use of raw materials, Coating, heat Treatment to form products with subsequent packing.

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Location</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category acute 1 or chronic 1 (Copper/Zinc Oxide)	Hopper	DEa(M)2 DEm(M)2	7H2	12T	80	Atmospheric
E1 Hazardous to the aquatic environment in category acute 1 or chronic 1 (Copper/Zinc Oxide)	Coating		7F1	1 T	100	Atmospheric
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Copper/Zinc oxide)	Drying & Calcination		7B1	7 T	400	Atmospheric

8 Plant: Use and formation of raw materials, Formation of Intermediates, Mixing, Drying and Calcining

DEF(M)3 – Nickel Nitrate 16T

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Part Number in schedule 1 to the Regulations 2015 and entry number if Part 2m Category if Part 1, Identity if part 3</i>	<i>Description of process(es)</i>	<i>Location</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
	E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (nickel Nitrate/Nickel hydroxy Carbonate)	Formation and processing of intermediates	DEk(M)1	8D1 (precipitation reactor), 8F4 (Hold tank) 8D3A/B (holding tanks) 8D4A/B	38 m³ 40 m³ 12 m³ each 4.3 m³ each	75 80 80 75 – 105	Atmospheric Atmospheric -2.5/+7.5mbarg Atmospheric
	P8	Formation and processing of intermediates	Of(M) Od(M) Oh(M)	8F28 8F35	0.5 T 1T 0.5T	70	Atmospheric
Part A, 11	E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (nickel Nitrate/Nickel hydroxy Carbonate)	Drying		8B1	Up to 1.085 T per hour	130	-6 to 56mbarg
Nickel Oxide	Part A. 11	Calcination	Na(SM)	8B2	0.64 T	600	+/-10mbarg

Nickel Oxide E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1	Part A, 11	Part 2, Entry 11	Product formation Heat Treatment	Nb(M) Nc((M) Nd(M)	8H1 8S2A & 8S2B 8H4 8B6 8B7 8B8	1.40 T 0.48 T 0.48 T 4T 4T 2T	100 1200 1200 900	1 bar +/- 10mbarg
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9 Plant: Use of raw materials, Formation of intermediates, heat treatment, formation of Products and packing.

DEa(M)3 – Powder mixing and pellet formation Zinc oxide, 1.5T
 DEi(M)2 – Powder mixing and pellet formation zinc carbonate, 1.5T
 DEj(M)2 – Powder mixing and pellet formation copper (II) carbonate – Copper Hydroxide wet pill bunker, 27T
 DEl(M)2 – Formation of intermediates hydrozincite, 20T
 DEa(M)8 – Products containing zinc oxide, 5T

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Location / Consent Tonnes</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category acute 1 or chronic 1, (Zinc/Copper Carbonate/oxide)	Raw material loading and mixing	DEa(M)3 -1.5 T DEa(M)2 DEj(M)2 / 27T DEi(S)2 DEi(M)8	9H13,9H12 9H14, 9H15, 9H16, 9H17 9H18, 9H19	1m³ each 0.5 m³ each 0.56 m³ each	Ambient	Atmospheric
E1 Hazardous to the aquatic environment in category acute 1 or chronic 1, (Zinc/Copper Carbonate/oxide)	Mixing and aging	DEa(M)8 / 5 T DEl(M)2 / 27T DEa(M)1 / 12T Deb(M)	9S2 & 9S3 9H4 9H20	1.75 m³ each 6.86 m³ 1500 ltr	Ambient	Atmospheric
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, (Zinc/Copper Carbonate and Oxide)	Drying / Calcining		9B1	Up to 1 T per hour feed	700	Atmospheric

E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, (Zinc/Copper Carbonate or Oxide)	Packing		9H24, 9H25	0.3 m³ each	Ambient	Atmospheric
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12 Plant:

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Location</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1	Impregnation	DEp(M)1 DEn(M)1	12F3 12B2	0.5 T each		

13 Plant: Thermal Firing of intermediates

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 Nickel Monoxide, Part 2, Entry 11	Decomposition kilns	13B4 & 13B5	4 T each	900	+/- 10mbarg

14 Plant

Hydrogen, the process is no longer in operation and plant mothballed, but the site wishes to maintain its existing consent if the process is ever reestablished.

21 Plant: Use of raw materials, Formation of Intermediates. Heat treatment, formation of products and packing.

<i>Substance including Part no. in Schedule 1 to the Regs. and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Location</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper/Zinc carbonate	Formation and processing of intermediates	DEI(M)3 – 6T DEJ(M)3 – 74T Dec(M)2- 4T	21D306A/B (Reactors), 21G331-4, 21F519 holding tank	1.5 m³ each x2 1.22 m³ each x 4 15.7 m³	100 70 70	0.5 Barg +10 mbarg Atmospheric
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper/Zinc carbonate	Drying	DEI(M)3 – 35T	21B510	35 T	220	-2.5 mbar
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper/Zinc Carbonate/Oxide	Product formation including raw material feed and product	DEm(M)3 -40T DEa(M)4 DEa(S)3 DEa(M)9 – 6T	21H591 21H703A/B	0.65 T 0.25 T each	Ambient	Atmospheric
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1, Copper/Zinc carbonate	Recovery system		21F340 21G318 21F338 21F318 21F308	17.6 m³ 1.22 m³ 1 m³ 8.7 m³ 43.7 m³	Ambient 100	Atmospheric

28 Plant: Use of Raw Materials, Solution Preparation, Impregnation, formation of intermediates, heat treatment, formation of products and packing.

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>		<i>Major items of plant*</i>	<i>Max. quantity (tonnes/m³)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
P8 Oxidising liquid, Category 2 (Cobalt Nitrate Hexahydrate solid) Or E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Cobalt Nitrate solution/Mixed metal Nitrate Solution	Solution make up	Ob(M)	28F51 28F51	5T (2.13 m³) (3.195T) 2.13 m³	150 150	-5/+10 mbarg -5/+10 mbarg
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (cobalt nitrate Solution/ Mixed Metal Nitrate Solution	Solution make up	DEn(M)2 (previously Oc(M)	28F086, 28F56, 28F57 28C115	(3.225T) 2.125 m³ (3.195T) 2.13 m³ each 2.5 Kg/hr	115	-0.8 +/- 1.0 bar(g)
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (Cobalt Nitrate Solution)	Mixing	DEn(M)3	28S89 & 28S90	0.1 m³	80	Atmospheric
E1 Hazardous to the aquatic environment in category Acute 1 or Chronic 1 (TriCobalt nitrate Solution) going to Tetra Cobalt oxide species	Heat Treatment formation of Tricobalt tertraoxide species	DEn(M)4 E1(M)4 Previously DEo(M)	28B90 28B5 28H113	0.2 T 0.4 T 1.05 T	95 350	Atmsopheric 0.02 +/- 130 mbarg
E1 Hazardous to the aquatic environment in	Packing	E1(M)5	28H111 28H114	1T 0.67T	140 300	Atmospheric -0.027 +/- 0.13

category Acute 1 or Chronic 1 (TriCobalt tetraoxide Species)		28H1	0.35T	250	0.0 0.02
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40 Plant: pH correction

Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Description of process(es)	Major items of plant*	Max. quantity (tonnes/m ³)	Max. temp. (°C)	Max. pressure (bar absolute)
H2 Cat 3 (60 % Nitric Acid)	pH correction	n/a	n/a	n/a	n/a

41 Plant: Drying and Packing and pH control

Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Description of process(es)	Location	Major items of plant*	Max. quantity (tonnes/m ³)	Max. temp. (°C)	Max. pressure (bar absolute)
P8 Oxidising Solids, Category 3 (Potassium Nitrate or Sodium Nitrate solution)	Crystallisation, Dewatering & Drying	Oa(M)3	41B01	Up to 0.8 T per hour feed	110	Atmospheric
P8 Oxidising Solids, Category 3 (Potassium Nitrate or Sodium Nitrate Crystals)	Product Storage and packing	Oa(M)1 Oa(M)2	41H01 & 41H02	2 x 20 T hoppers	Ambient	Atmospheric
H2 Cat 3 (60 % Nitric Acid)	pH correction		n/a	n/a	n/a	n/a

5 Additional Information

- (a) If you have an existing PHS consent(s) as referred to in Table A, **attach a copy of each consent** to this application.
- (b) **List the maps or plans** or any explanatory scale drawings of plant/buildings submitted with this application (**as a minimum submit a site map and a substance location plan** – see **Notes** below).

SYNCL-41-13-21036 41 Plant Layout.
 SYNCL-08-13-21037 8 plant Layout.
 Site Map
 SYNVL-00-13-06299 Substance Location plan

- (c) Provide a brief overview description of the **main activities** carried out or proposed to be carried out on the land to which the application relates.

The main activities conducted are the receipt and storage of raw materials used in the production of catalysts. This involves processes such as mixing, creation of intermediates, calcining and drying. The site also manufactures raw materials by conducting reactions.

- (d) Provide details of how each relevant substance is proposed to be transported to and from the land to which the application relates, for example the size and frequency of vehicle deliveries, the size or maximum flow rate of pipeline imports/exports.

Substance including Part number in Schedule 1 to the Regulations, and entry number if Part 2, category if Part 1, identity if Part 3	How, and other details such as frequency and quantity, transported to and from the land to which the application relates	
	Transported to site	Transported from site
Others Road truck (see section 4c above)	X	X

- (e) Provide details of the vicinity of the land to which the application relates, where such details are relevant to the risks or consequences of a major accident (relevant details include numbers of people in neighbouring developments that could be affected by a major accident and details about environmentally sensitive receptors).

Our COMAH safety report last issued in 2024 to the COMAH competent authority identifies no off-site major accident hazards with regards to health. The site has boundaries which include housing and a school.

Our COMAH safety report has identified major accident hazards which could affect water courses and sewers including the River Ribble, contributory streams & becks which enter this watercourse (Cemetery beck and Knuck Knowles) and also via discharge to the United Utilities WwTW at Clitheroe. Details are provided in the COMAH safety report issued to the COMAH competent authority in 2024.

- (f) Provide a brief overview of the measures taken or proposed to be taken to limit the consequences of a major accident.

Risk reduction, containment, emergency plans. Details are provided in our COMAH safety report, emergency procedures and offsite environmental plan with Lancashire County Council.

Risk reduction, containment, emergency plans. Details are provided in our COMAH safety report, emergency procedures and offsite environmental plan with Lancashire County Council.

(g) Give any further information which you consider to be relevant to the determination of this application. (For example, details about any exempted established substances on site or a copy of any notification about 'other establishments'/exempted established substances if already submitted).

- 60% Nitric acid established substance previous contact with Ribble Valley council has been made.

- Chromium (III) hydroxy Nitrate solution established substance

- Cobalt Nitrate can be purchased in Solid or Solution format and has two different coding's (P8 or E1), applicant wishes currently to have potential to use both on 28 plant.

- This application is to consolidate consents 3/2014/0759 & 3/2021/0449 and to also revise where needed these consents or add new/changed locations and inventory.

- 3/2014/0759 consented items are shown in blue text on the substance location plan.

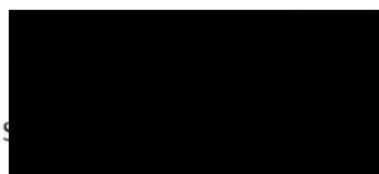
- 3/2021/0449 consented items are shown in green text on the substance location plan.

- Changes requested in this application are shown in red text on the substance location plan.

- Part 2 substances shown in black text are present on site but at quantities below the qualifying threshold.

An addendum to the 2024 COMAH safety report is being issued to detail the changes in process around our 28 plant development. This will also detail the removal and decommissioning of 31 and 35 plants.

We hereby apply for hazardous substances consent in accordance with the proposals described in the application



on behalf of Johnson Matthey Davy Technologies Limited
(insert name of person in control of the land if different to applicant)

06/07/2026

Date

To be accompanied by the notices and certificates required by regulations 6 and 7 of the Regulations.

Notes

"Site map" is a map, reproduced from, or based on, an Ordnance Survey map with a scale of not less than 1:10,000, which identifies the land to which the application relates and shows National Grid lines and reference numbers.

"Substance location plan" is a plan of the land to which the application relates, drawn to a scale of not less than 1:2,500, which identifies-

- (a) any area of land intended to be used for the storage of the substance;
- (b) where the substance is to be used in a manufacturing, treatment or other industrial process, the location of the major items of plant involved in that process in which the substance will be present; and
- (c) access points to and from the land.