

## REACH Communication of Uses to Downstream Users Industrial and Specialty Gases - Ammonia

The following table outlines REACH uses defined by Air Products for Ammonia.

For a complete reference of the Use Descriptor System, please refer to the

[Guidance on Information Requirements and Chemical Safety Assessment, Chapter R.12: Use Descriptor System \(Draft, 09/18/2009\)](#)

published by the European Chemicals Agency (ECHA)

Use Description short form	Sector of Use	Process Category	Product Category	Environmental Release Category
Using gas for water treatment	<b>0-2</b> Other activities related to manufacture and services	<b>3</b> Use in closed batch process (synthesis or formulation)	37	6B
Formulation of mixtures with gas in pressure receptacles	<b>10</b> Formulation	<b>3</b> Use in closed batch process (synthesis or formulation)	N/A	2
Using gas for metal treatment	<b>15</b> Manufacture of fabricated metal products, except machinery and equipment	<b>22</b> Potentially closed processing operations with minerals/metals at elevated temperature Industrial setting	14	TBD*
Use of gas to manufacture pharmaceutical products	<b>3</b> Industrial uses	<b>2</b> Use in closed, continuous process with occasional controlled exposure (e.g. sampling) <b>3</b> Use in closed batch process (synthesis or formulation)	19	6A
Using gas alone or in mixtures for the calibration of analysis equipment	<b>0-2</b> Other activities related to manufacture and services	<b>3</b> Use in closed batch process (synthesis or formulation)	21	8D
Transfilling gas or liquid	<b>10</b> Formulation	<b>9</b> Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	N/A	2
Using gas as feedstock in chemical processes	<b>3</b> Industrial uses	<b>1</b> Use in closed process, no likelihood of exposure	19	6A
Use gas to refill refrigeration equipment, Refrigerant gas	<b>3</b> Industrial uses <b>22</b> Professional uses	<b>8b</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	16	7
Use ammonia in photocopying machines	<b>22</b> Professional uses	<b>8b</b> Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	20	TBD*
Precursor for fertiliser/explosive manufacture	<b>3</b> Industrial uses	<b>2</b> Use in closed, continuous process with occasional controlled exposure (e.g. sampling) <b>3</b> Use in closed batch process (synthesis or formulation)	19	1
Use of gas for exhaust gas DeNox applications	<b>3</b> Industrial uses	<b>2</b> Use in closed, continuous process with occasional controlled exposure (e.g. sampling) <b>3</b> Use in closed batch process (synthesis or formulation)	20	6A
Using gas for treatment of plastics	<b>12</b> Manufacture of plastics products, including compounding and conversion	<b>3</b> Use in closed batch process (synthesis or formulation)	15	4

Use Description short form	Sector of Use	Process Category	Product Category	Environmental Release Category
Using gas for metal treatment	<b>15</b> Manufacture of fabricated metal products, except machinery and equipment	<b>22</b> Potentially closed processing operations with minerals/metals at elevated temperature Industrial setting	14	TBD*
Use in aluminium casting	<b>14</b> Manufacture of basic metals	<b>4</b> Use in batch and other process (synthesis) where opportunity for exposure arises	7	4
Use in treatment of textiles	<b>5</b> Manufacture of textiles, leather, fur	<b>4</b> Use in batch and other process (synthesis) where opportunity for exposure arises	35	4
Use as a reaction gas in mass spectrometry	<b>16</b> Manufacture of computer, electronic and optical products, electrical equipment	<b>4</b> Use in batch and other process (synthesis) where opportunity for exposure arises	21	TBD*
Use in microfiche developing	<b>7</b> Printing and reproduction of recorded media	<b>4</b> Use in batch and other process (synthesis) where opportunity for exposure arises	30	4
Use in microfilm duplication	<b>7</b> Printing and reproduction of recorded media	<b>4</b> Use in batch and other process (synthesis) where opportunity for exposure arises	30	4

\* To Be Determined