Safety Data Sheet

DIVOSHEEN 209 VA4

Revision: 2016-07-28 **Version:** 01.0

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier
Product name DIVOSHEEN 209 VA4

1.2 Recommended use and restrictions on use
Identified uses:
CIP detergent descaler
Restrictions of use:
Uses other than those identified are not recommended

1.3 Details of the supplier
Diversey Australia Pty. Limited
29 Chifley St, Smithfield, NSW, 2164, Australia
Telephone: 1800 647 779 (toll free)
Fax: (02) 9725 5767
Email: aucustserv@sealedair.com
Website: http://www.sealedair.com/

1.4 Emergency telephone number
Call 1800 033 111 (24hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Skin corrosion, Category 1A
Corrosive to the respiratory tract, AUH071
Corrosive to metals, Category 1

2.2 Label elements

Signal word: Danger

Hazard statements:
H314 - Causes severe skin burns and eye damage.
AUH071 - Corrosive to the respiratory tract.
H290 - May be corrosive to metals.

Prevention statement(s):
P233 - Keep container tightly closed.
P234 - Keep only in original container.
P260 - Do not breathe vapours or spray.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye or face protection.

Response statement(s):
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE, doctor or physician.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.

Storage statement(s):
P405 - Store locked up.
P406 - Store in corrosive-resistant container with a resistant inner liner.

Disposal statement(s):
P501 - Dispose of unused content as chemical waste.

2.3 Other hazards
No other hazards known.

2.4 Classification diluted product
Recommended maximum concentration (%): 13

Corrosive to the respiratory tract, AUH071
Skin irritation, Category 2
Serious eye damage, Category 1

2.5 Label elements diluted product

Danger.

AUH071 - Corrosive to the respiratory tract.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.

P233 - Keep container tightly closed.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P332 + P313 - If skin irritation occurs: Get medical advice or attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE, doctor or physician.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P362 - Take off contaminated clothing.
P501 - Dispose of unused content as chemical waste.

SECTION 3: Composition/information on ingredients

3.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
nitric acid	7697-37-2	231-714-2	Ox. Liq. 2 (H272) Skin Corr. 1A (H314) AUH071 Met. Corr. 1 (H290)	30-60
phosphoric acid	7664-38-2	231-633-2	Skin Corr. 1B (H314) Met. Corr. 1 (H290)	3-10

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE, doctor or physician.

Skin contact: Take off immediately all contaminated clothing and wash it before re-use. Immediately call a POISON CENTRE, doctor or physician.

Eye contact: Immediately rinse eyes cautiously with lukewarm water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

Ingestion: Rinse mouth. Immediately drink 1 glass of water. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

First aid facilities: Shower and eyewash facilities should be considered in a workplace where necessary.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	Corrosive to the respiratory tract.
Skin contact:	Causes severe burns.
Eye contact:	Causes severe or permanent damage.
Ingestion:	Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

4.3 Indication of any immediate medical attention and special treatment needed
No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

Poison Information Center: Call 13 11 26 (Australia Wide).

SECTION 5: Firefighting measures

5.1 Extinguishing media
Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
No special hazards known.

5.3 Advice for firefighters
As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

5.4 Hazchem code
2R
2 - Fine water spray.
R - Liquid-tight chemical protective clothing and breathing apparatus. Dilute.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions
Do not allow to enter drainage system, surface or ground water. Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up
Use neutralising agent. Absorb onto dry sand or similar inert material. Ensure adequate ventilation.

6.4 Reference to other sections
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Measures to prevent fire and explosions:
No special precautions required.

Measures to prevent aerosol and dust generation:
Avoid formation of aerosol.

Measures required to protect the environment:
For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless adviced by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapours or spray. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)
No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits

Air limit values, if available:

Ingredient(s)	Long term value(s) (TWA)	Short term value(s) (STEL)	Peak value(s)
nitric acid	2 ppm 5.2 mg/m³	4 ppm 10 mg/m³	
phosphoric acid	1 mg/m³	3 mg/m³	

Biological limit values, if available:

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:
Covering activities such as filling and transfer of product to application equipment, flasks or buckets

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible Train personnel

Personal protective equipment
Eye / face protection: Safety glasses or goggles (EN 166). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.
Hand protection: Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: >= 480 min Material thickness: >= 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: >= 30 min Material thickness: >= 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.
Body protection: Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).
Respiratory protection: Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (%): 13

Appropriate engineering controls: Use only in well ventilated areas.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment
Eye / face protection: Goggles (EN 166).
Hand protection: Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: >= 480 min Material thickness: >= 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: >= 30 min Material thickness: >= 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.
Body protection: Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).
Respiratory protection: Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Method / remark

Physical State: Liquid

Colour: Clear, Colourless
Odour: Product specific
Odour threshold: Not applicable
pH: < 1 (neat)
Dilution pH: < 2 (1%)
Melting point/freezing point (°C): Not determined
Initial boiling point and boiling range (°C): Not determined
Flash point (°C): Not applicable.
Sustained combustion: Not applicable.
Evaporation rate: Not determined
Flammability (solid, gas): Not determined
Upper/lower flammability limit (%): Not determined
Vapour pressure: Not determined
Vapour density: Not determined
Relative density: 1.27 g/cm³ (20 °C)
Solubility in / Miscibility with Water: Fully miscible
Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
Viscosity: Not determined
Explosive properties: Not explosive.
Oxidising properties: Not oxidising

9.2 Other information
Surface tension (N/m): Not determined
Corrosion to metals: Corrosive Weight of evidence

SECTION 10: Stability and reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid
None known under normal storage and use conditions.

10.5 Incompatible materials
Reacts with alkali and metals. Keep away from products containing chlorine-based bleaching agents or sulphites.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:.

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >5000

Substance data, where relevant and available, are listed below:.

Acute toxicity
Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
nitric acid		No data available			
phosphoric acid	LD_{50}	2600	Rat	OECD 423 (EU B.1 tris)	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
nitric acid		No data available			
phosphoric acid	LD_{50}	2740	Rabbit	Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
nitric acid	LC_{50}	1.56	Rat	OECD 403 (EU B.2)	
phosphoric acid	LC_{50}	850	Rat	Method not given	2

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
nitric acid	Corrosive	Rabbit	Method not given	
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
nitric acid	Corrosive		Method not given	
phosphoric acid	Severe damage	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
nitric acid	No data available			
phosphoric acid	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
nitric acid	No data available			
phosphoric acid	Not sensitising	Human	Human experience	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
nitric acid	No data available			
phosphoric acid	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
nitric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	
phosphoric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No data available	

Carcinogenicity

Ingredient(s)	Effect
nitric acid	No evidence for carcinogenicity, negative test results
phosphoric acid	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
nitric acid	NOAEL	Developmental toxicity	1500	Rat	OECD 422, oral	28 day(s)	Not toxic for reproduction
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity No evidence for developmental toxicity

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
nitric acid	NOAEL	1500	Rat	OECD 422, oral	28	
phosphoric acid	NOAEL	250	Rat	OECD 422, oral		

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
nitric acid		No data available				
phosphoric acid		No data				

		available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
nitric acid		No data available				
phosphoric acid		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
nitric acid			No data available					
phosphoric acid			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
nitric acid	No data available
phosphoric acid	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
nitric acid	No data available
phosphoric acid	No data available

Aspiration hazard
Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

Potential adverse health effects and symptoms
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
nitric acid	LC_{50}	12.5	*Gambusia affinis*	Method not given	96
phosphoric acid	LC_{50}	138	*Gambusia affinis*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
nitric acid	EC_{50}	8609	*Daphnia magna Straus*	Non guideline test	24
phosphoric acid	EC_{50}	> 100	*Daphnia magna Straus*	OECD 202	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
nitric acid		No data available			-
phosphoric acid	EC_{50}	> 100	*Desmodesmus subspicatus*	OECD 201	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
nitric acid		No data available			-
phosphoric acid		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
nitric acid		No data available			
phosphoric acid	EC_{50}	270	*Activated sludge*	Method not given	

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
nitric acid	LD_{50}	8226	*Oncorhynchus mykiss*	Method not given	96 hour(s)	
phosphoric acid		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
nitric acid		No data available				
phosphoric acid		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
nitric acid		No data available			-	
phosphoric acid		No data available			-	

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT_{50}	Method	Evaluation
nitric acid					Not applicable (inorganic substance)
phosphoric acid					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
nitric acid	-2.3	Method not given	Not relevant, does not bioaccumulate	
phosphoric acid	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
nitric acid	No data available				
phosphoric acid	No data available			No bioaccumulation expected	

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
nitric acid	No data available				Mobile in aqueous environment
phosphoric acid	No data available				Potential for mobility in soil, soluble in water

12.5 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products: The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging

Recommendation: Dispose of observing national or local regulations.

Suitable cleaning agents: Water, if necessary with cleaning agent.

SECTION 14: Transport information

ADG, IMO/IMDG, ICAO/IATA

14.1 UN number: 2031

14.2 UN proper shipping name:

Nitric acid , solution

14.3 Transport hazard class(es):

Class: 8

Label(s): 8

14.4 Packing group: II

14.5 Environmental hazards:

14.6 Special precautions for user: None known.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:
Hazchem code: 2R
IMO/IMDG
EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADG and the provisions of the IMDG Code
Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations:	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
Poison schedule	Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classification	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
Inventory listing(s)	All components are listed on AICS, or are exempt

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS31000166 **Version:** 01.0 **Revision:** 2016-07-28

• H272 - May intensify fire; oxidiser.
• H290 - May be corrosive to metals.
• H314 - Causes severe skin burns and eye damage.
• AUH071 - Corrosive to the respiratory tract.
Exposure standards - Time Weighted Average (TWA) or Workplace Exposure Standard (WES) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

Abbreviations and acronyms:
• AISE - The international Association for Soaps, Detergents and Maintenance Products
• DNEL - Derived No Effect Limit
• EUH - CLP Specific hazard statement
• PBT - Persistent, Bioaccumulative and Toxic
• PNEC - Predicted No Effect Concentration
• REACH number - REACH registration number, without supplier specific part
• vPvB - very Persistent and very Bioaccumulative
• ATE - Acute Toxicity Estimate

End of Safety Data Sheet