

SAFETY DATA SHEET

Prefere 5219

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Prefere 5219

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/
mixture : Industrial/Professional Use: Hardener. Woodworking industry.

1.3 Details of the supplier of the safety data sheet

Supplier : Dynea AS
P.O.Box 160, N-2001 Lillestrøm
Norway
Tel. +47 63897100
Fax. +47 63897610

e-mail address of person
responsible for this SDS : sds@dynea.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Not available.

Supplier

Telephone number : +47 63897100

Hours of operation : 24 hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Eye Dam. 1, H318

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

SECTION 2: Hazards identification

Hazard statements	: H318 - Causes serious eye damage.
Precautionary statements	: P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling. P305 + P351 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Immediately call a POISON CENTER or physician.
Hazardous ingredients	: aluminium nitrate
Supplemental label elements	: Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.

Special packaging requirements

Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture
Chemical characterisation : Waterbased.

Product/ingredient name	Identifiers	%	Classification	Type
aluminium nitrate	REACH #: 01-2119979577-14 EC: 236-751-8 CAS: 13473-90-0	≥5 - <10	Eye Dam. 1, H318	[1] [2]
ammonium chloride	REACH #: 01-2119487950-27 EC: 235-186-4 CAS: 12125-02-9 Index: 017-014-00-8	≥1 - <3	Acute Tox. 4, H302 Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. If breathing is difficult, give oxygen. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician.
- General** : Move the victim to a safe area as soon as possible. If unconscious, place in recovery position and seek medical advice. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Allow the victim to rest in a well-ventilated area.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 pain
 watering
 redness
- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
- Ingestion** : Adverse symptoms may include the following:
 stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 halogenated compounds
 metal oxide/oxides

5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with liquid-binding material (sand, diatomite, universal binders etc.) or use a spill kit.
- Large spill** : Approach the release from upwind. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
 See Section 8 for information on appropriate personal protective equipment.
 See Section 13 for additional waste treatment information.

SECTION 6: Accidental release measures

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : See Section 8 for information on appropriate personal protective equipment. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from incompatible materials (see Section 10). Store locked up. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
aluminium nitrate	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 2 mg/m ³ 8 hours.
ammonium chloride	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 20 mg/m ³ 15 minutes. Form: Fume TWA: 10 mg/m ³ 8 hours. Form: Fume

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
ammonium chloride	DNEL	Long term Dermal	190 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	33,5 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	9,9 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	114 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	11,4 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
aluminium nitrate	-	Fresh water	0,0003 mg/l	Assessment Factors
	-	Marine water	0,00003 mg/l	Assessment Factors
	-	Sewage Treatment Plant	20 mg/l	Assessment Factors
	-	Fresh water sediment	0,0025 mg/kg dwt	-
	-	Marine water sediment	0,00025 mg/kg dwt	-
	-	Soil	0,00032 mg/kg dwt	-
ammonium chloride	PNEC	Fresh water	1,2 mg/l	-
	PNEC	Fresh water	11,2 mg/l	-
	PNEC	Sewage Treatment Plant	16,2 mg/l	-
	PNEC	Soil	0,163 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use eye protection according to EN 166, designed to protect against liquid splashes. Recommended: Tightly-fitting goggles

Hand protection : Wear suitable gloves tested to EN374. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.
Recommended : Protective Index 6 / Breakthrough time >480 minutes: neoprene rubber 0.7 mm thickness or nitrile rubber 0.4 mm thickness

Other skin protection : Wear work clothing with long sleeves. Cotton or cotton/synthetic overalls or coveralls are normally suitable.
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Long Term Exposure / high concentrations : Self-contained respirator (DIN EN 133) or full face mask (DIN EN 136)
Short term exposure / Low exposure : Half-face mask (DIN EN 140)

SECTION 8: Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid.
Colour : Greyish-white.
Odour : None identified.
Odour threshold : Not available.

pH : 2,7 to 3,3
Melting point/freezing point : Not available.
Initial boiling point and boiling range : Not available.
Flash point : Closed cup: >100°C
Evaporation rate : Not available.
Flammability (solid, gas) : Not available.
Burning time : Not applicable.
Burning rate : Not applicable.
Upper/lower flammability or explosive limits : Not available.
Vapour pressure : Not available.
Vapour density : Not available.
Relative density : Not available.
Density (liquid) : 1,32 g/cm³ [25°C]
Solubility : Dispersible in water
Partition coefficient: n-octanol/ water : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Dynamic: 1800 to 4000 mPa·s [25 °C]
Explosive properties : Not available.
Oxidising properties : Not available.

9.2 Other information

VOC content (Without volume exclusion) : 0,0011 % (w/w)
 0,015 g/l

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Potential Adverse effects

- Inhalation** : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : May cause burns to mouth, throat and stomach.
Adverse symptoms may include the following:
stomach pains
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eye contact** : Causes serious eye damage.
Adverse symptoms may include the following:
pain
watering
redness

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
aluminium nitrate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	2060 mg/kg	-
ammonium chloride	LD50 Oral	Rat - Male, Female	1410 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-

ammonium chloride: Harmful if swallowed.

Acute toxicity estimates

Product	ATE value
Oral	70500 mg/kg

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ammonium chloride	Skin - Oedema	Rabbit	0	24 hours	48 hours
	Skin - Erythema/Eschar	Rabbit	0	24 hours	48 hours

Skin : **aluminium nitrate:** Slightly irritating to the skin.
ammonium chloride: Non-irritating to the skin.

Eyes : **aluminium nitrate:** Risk of serious damage to eyes.
ammonium chloride: Irritating to eyes.

Product Conclusion/ Summary : Causes serious eye damage.

Sensitisation

SECTION 11: Toxicological information

Product/ingredient name	Route of exposure	Species	Result
ammonium chloride	skin	Guinea pig	Not sensitizing

Skin : **aluminium nitrate**: Not sensitizing
ammonium chloride: Not sensitizing

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Chronic toxicity

Mutagenicity

Product/ingredient name	Test	Experiment	Result
ammonium chloride	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: + & -	Positive
	-	Experiment: In vitro Subject: Mammalian-Animal	Positive
	-	Experiment: In vivo Subject: Mammalian-Animal	Negative

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Based on available data, the classification criteria are not met.

Aspiration hazard

Product Conclusion/ Summary : Based on available data, the classification criteria are not met.

Interactive effects : No specific data.

Other information : No specific data.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
aluminium nitrate ammonium chloride	Acute NOEC >1000 mg/l EC50 1618 mg/l Fresh water	Fish Micro-organism	96 hours 30 minutes Static
	NOEC 26,8 mg/l Marine water	Algae - Navicula sp.	10 days Static
	Acute EC50 101 mg/l Fresh water	Daphnia - Daphnia magna	48 hours Static
	Acute LC50 209 mg/l	Fish - Cyprinus carpio	96 hours Semi- static
	Chronic NOEC 14,6 mg/l Fresh water	Daphnia - Daphnia magna	21 days Static
	Chronic NOEC 11,8 mg/l	Fish - Pimephales promelas	28 days Flow through

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ammonium chloride	-3,2	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

SECTION 13: Disposal considerations

European waste catalogue (EWC)

Waste code	Waste designation
08 04 99	wastes not otherwise specified

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Europe inventory : Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Seveso II Directive

This product is not controlled under the Seveso II Directive.

National regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Dam. 1, H318	Calculation method
Full text of abbreviated H statements :	
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

SECTION 16: Other information

Full text of classifications [CLP/GHS]	: Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
	Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Date of issue/ Date of revision : 06.11.2015.

Date of previous issue : 04.11.2015.

Previous product name : Not available.

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