



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

- **1.1 Product identifier**
- **Trade name:** PEROXAN AZDN-Paste 50 SI
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Reaction initiator
For industrial use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** PERGAN GmbH
Hilfsstoffe für industrielle Prozesse
Schlavenhorst 71
D-46395 Bocholt
Tel: +49 2871 9902-0
Fax: +49 2871 9902-50
- **Further information obtainable from:** Environment protection / Security of labour
Competent person:
* Sales Manager Germany: Mr. Ansgar Pappenheim, e-mail: a.pappenheim@pergan.com
* Export Sales Manager: Mr. Dr. Thomas Philipps, e-mail: dr.philipps@pergan.com
* Environment protection / : Mr. Christoph Wiltig, e-mail: c.wiltig@pergan.com
Security of labour
- **1.4 Emergency telephone number:** - Tel: +49 2871 9902-0

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Self-react. C	H242	Heating may cause a fire.
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H332	Harmful if inhaled.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

GHS02 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:** 2,2'-dimethyl-2,2'-azodipropionitrile
- **Hazard statements**

H242	Heating may cause a fire.
H302+H332	Harmful if swallowed or if inhaled.
H412	Harmful to aquatic life with long lasting effects.
- **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy metal compounds and amines).
P234	Keep only in original container.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P411+P235	Store at temperatures not exceeding +40°C. Keep cool.
P420	Store away from other materials.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Dangerous components:

CAS: 78-67-1	2,2'-dimethyl-2,2'-azodipropionitrile	40-50%
EINECS: 201-132-3	Self-react. C, H242; Acute Tox. 4, H302; Acute Tox. 4, H332; Aquatic Chronic 3, H412	
Index number: 608-019-00-1		
Reg-No.: 01-2119488882-21		

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.



Take care of personal protection for the first aider.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Take affected persons into fresh air and keep quiet.

After skin contact:

Immediately remove contaminated clothing.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

Under certain fire conditions, traces of other toxic gases cannot be excluded.

5.3 Advice for firefighters

Protective equipment:

Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

Additional information

Cool endangered receptacles with water spray.

Self-protection first!

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In case of further temperature should be cooled with waterspray from a safe distance.

Wear breathing apparatus with filter A during decomposition of materials.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.



Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Soak up with absorbant material (e. g. Vermiculit) and dispose of in accordance with government regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

In case of large spillage the environmental authority should be informed.

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* SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Restrict the quantity stored at the work place.
Use only in well ventilated areas.
Before break and at the end of work hands should be thoroughly washed.
Only use tools made of suitable materials (e. g. polyethylene or stainless steel).
Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-metal compounds and amines).
While using do not eat, drink or smoke.
Do not generate flames or sparks.
Keep product and emptied container away from heat and sources of ignition.
Take precautionary measures against static discharges.



Do not smoke.

· Information about fire - and explosion protection:

Protect from heat.
Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.
Formation of flammable or explosive gas/air-mixtures is possible.



Avoid open flames, sparks, direct sunlight and other sources of ignition.

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities

· **Storage:** Pay attention to the special requirements of your local authorities for storing dangerous goods.

· **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
Use only receptacles specifically permitted for this substance/product.

· **Information about storage in one common storage facility:** Store away from foodstuffs, drinks and feeding stuffs.

· **Further information about storage conditions:** Keep container tightly sealed.
Storage in a collecting room is required.

· **Recommended storage temperature (To maintain quality):** max.: +25 °C

· **Storage class:** 5.2

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters





· **Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs		
78-67-1 2,2'-dimethyl-2,2'-azodipropionitrile		
Dermal	DNEL Longterm System	194,17 mg/kg bw/day (Worker)
Inhalative	DNEL Acute Local	199 mg/m3 (Worker)
	DNEL Longterm System	0,14 mg/m3 (Worker)
· PNECs		
78-67-1 2,2'-dimethyl-2,2'-azodipropionitrile		
PNEC Marinewater sed	0,091 mg/kg sed dw	
PNEC Freshwater	0,15 mg/l (AF 10)	
PNEC Freshwater sed	0,912 mg/kg sed dw	
PNEC Soil	0,094 mg/kg soil dw	

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PNEC STP	100 mg/l (AF 10)
PNEC Marinewater	0,015 mg/l (AF 100)
Additional information:	The lists valid during the making were used as basis.
8.2 Exposure controls	
Personal protective equipment:	
General protective and hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Do not eat, drink, smoke or sniff while working. Use skin protection cream for skin protection. Be sure to clean skin thoroughly after work and before breaks.
Respiratory protection:	In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Use suitable respiratory device when it exceed exposure limit and when insufficiently ventilated.
	 Filter A2
Protection of hands:	Only use chemical-protective gloves with CE-labelling of category III.
	 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
	Protective gloves
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Butyl rubber, BR Fluorocarbon rubber (Viton) Nitrile rubber, NBR Neoprene
Penetration time of glove material	The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:	 Tightly sealed goggles
Body protection:	 Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Appearance:	
· Form:	Pasty
· Colour:	Whitish
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
Change in condition	
· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	Not applicable.
· Flash point:	Not determined.
· Flammability (solid, gas):	Not applicable.
· Decomposition temperature:	< +55 °C (SADT)
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.

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· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Undetermined.
· Partition coefficient: n-octanol/water:	not determined
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Self-accelerating decomposition at SADT.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Danger of forming toxic pyrolysis products.
No hazardous decomposition products if used and stored according to specifications.
- **Additional information:** Emergency procedures will vary depending on conditions. The customer should have an emergency response plane in place.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Harmful if swallowed or if inhaled.

· **LD/LC50 values relevant for classification:**

78-67-1 2,2'-dimethyl-2,2'-azodipropionitrile

Oral | LD50 | 300-2.000 mg/kg (rattus)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

78-67-1 2,2'-dimethyl-2,2'-azodipropionitrile

EC50 / 72h | 4,5 mg/l (alga)

LC50 / 96h | 100 mg/l (piscis)

EC50 / 48h | 367 mg/l (daphnia magna)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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· **Additional ecological information:**


- **General notes:** Harmful to aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**



- **Recommendation**  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Waste disposal key:** Please contact your hazardous waste disposers to assign the right EWC-(European waste catalog)-number.

· **Uncleaned packaging:**

- **Recommendation:** This material and its container must be disposed of as hazardous waste.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG	UN3234
· 14.2 UN proper shipping name · ADR · IMDG	UN3234 SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED (2,2'-AZODI((ISOBUTYRONITRILE)) SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED (2,2'-AZODI((ISOBUTYRONITRILE))
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	4.1 (SR2) Flammable solids, self-reactive substances and solid desensitised explosives. 4.1
· IMDG	
	
· Class · Label	4.1 Flammable solids, self-reactive substances and solid desensitised explosives. 4.1
· IATA · Class · Label	X X
· 14.4 Packing group · ADR, IMDG	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Stowage Category · Stowage Code · Segregation Code	Warning: Flammable solids, self-reactive substances and solid desensitised explosives. D SW1 Protected from sources of heat. SW3 Shall be transported under temperature control. SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis.

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· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Transport category	1
· Tunnel restriction code	D
· RID / GGVSEB:	
	no admission
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· IATA	
· Remarks:	no admission
· Control temperature:	+40 °C
· Emergency temperature:	+45 °C

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances**
- **- ANNEX I** None of the ingredients is listed.
- **Seveso category** P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases** H242 Heating may cause a fire.
H302 Harmful if swallowed.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.
- **Department issuing SDS:** Environment protection / Security of labour
- **Contact:** Tel: +49 2871 9902-0
E-mail: mail@pergan.com
- **Abbreviations and acronyms:** RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Self-react. C: Self-reactive substances and mixtures – Type C/D
Acute Tox. 4: Acute toxicity – Category 4
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- *** Data compared to the previous version altered.**