


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

- **1.1 Product identifier**
- Trade name: PROMOTOR A
- CAS Number: 123-54-6
- EC number: 204-634-0
- Index number: 606-029-00-0
- Registration number: 01-2119458968-15
- **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**
Accelerator for polymerisation / crosslinking
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
Qualified person: E-mail: msds@pergan.com
- **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**
Flam. Liq. 3 H226 Flammable liquid and vapour.
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms** 
GHS02 GHS06
- **Signal word** Danger
- **Hazard-determining components of labelling:** pentane-2,4-dione
- **Hazard statements** H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H311+H331 Toxic in contact with skin or if inhaled.
- **Precautionary statements** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** This substance does not meet the PBT/vPvB criteria of UK REACH, Annex XIII.
- **vPvB:** This substance does not meet the PBT/vPvB criteria of UK REACH, Annex XIII.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description** 123-54-6 pentane-2,4-dione
- **Identification number(s)**
- **EC number:** 204-634-0
- **Index number:** 606-029-00-0

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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:** Take affected persons into fresh air and keep quiet. Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately remove contaminated clothing. Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Rinse out mouth and then drink plenty of water. 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.

- **For safety reasons unsuitable extinguishing agents:**

Water with full jet

- **5.2 Special hazards arising from the substance or mixture**

Under certain fire conditions, traces of other toxic gases cannot be excluded.
In case of fire, the following can be released:
Carbon monoxide (CO)
Carbon dioxide

5.3 Advice for firefighters

- **Protective equipment:** 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**

Keep away from ignition sources.
Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**



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 section 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Keep away from heat and direct sunlight.
Prevent formation of aerosols.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Before break and at the end of work hands should be thoroughly washed.
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.

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Take precautionary measures against static discharges.



Do not smoke.

Information about fire - and explosion protection:

Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.
Highly volatile, flammable constituents are released during processing.
Fumes can combine with air to form an explosive mixture.



Wear shoes with conductive soles.

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.
Store receptacle in a well ventilated area.
Protect from contamination.

Recommended storage temperature (To maintain quality): max.: +30 °C

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

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace: Not required.

DNELs**123-54-6 pentane-2,4-dione**

Dermal	DNEL Longterm System	12 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm System	84 mg/m3 (Worker)

PNECs**123-54-6 pentane-2,4-dione**

PNEC Marinewater sed	0.191 mg/kg sed dw
PNEC Freshwater	0.2 mg/l (AF 50)
PNEC Freshwater sed	1.909 mg/kg sed dw
PNEC Soil	0.193 mg/kg soil dw (-)
PNEC STP	1.32 mg/l (AF 10)
PNEC Marinewater	0.02 mg/l (AF 500)

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.





Individual protection measures, such as 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.

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· 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.
	 Filter A2
· Hand protection	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/face 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	
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	139 °C
	Not applicable.
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	2.4 Vol %
· Upper:	11.4 Vol %
· Flash point:	30 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Undetermined.
· Partition coefficient n-octanol/water (log value)	not determined
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	0.972 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void

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· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.3 Possibility of hazardous reactions** Product is not explosive. However, formation of explosive air/dust mixtures are possible.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide
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 hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
Toxic in contact with skin or if inhaled.

· **LD/LC50 values relevant for classification:****123-54-6 pentane-2,4-dione**

Oral	LD50	575 mg/kg (rattus)
Dermal	LD50	790 mg/kg (rattus)
Inhalative	LC50 / 4h	5.1 mg/l (rattus)

- **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.
- **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.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

Substance is not listed.

SECTION 12: Ecological information· **12.1 Toxicity**· **Aquatic toxicity:****123-54-6 pentane-2,4-dione**

LC50 / 96h	72 mg/l (oncorhynchus mykiss)
EC50 / 48h	75 mg/l (daphnia)

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· **12.2 Persistence and degradability**· **Degree of elimination:**· **Classification:****123-54-6 pentane-2,4-dione**

Degradation (Readily biodegradable) (OECD 301 C)

· **12.3 Bioaccumulative potential**· **Partition coefficient: nOctanol/water: [Log Kow]**

0,68 (20°C)

· **12.4 Mobility in soil**

No further relevant information available.

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

This substance does not meet the PBT/vPvB criteria of UK REACH, Annex XIII.

· **vPvB:**

This substance does not meet the PBT/vPvB criteria of UK REACH, Annex XIII.

· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**· **Additional ecological information:**· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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 or ID number**· **ADR, IMDG, IATA**

UN2310

· **14.2 UN proper shipping name**· **ADR**

UN2310 PENTANE-2,4-DIONE

· **IMDG, IATA**

PENTANE-2,4-DIONE

· **14.3 Transport hazard class(es)**· **ADR**· **Class**

3 (FT1) Flammable liquids.

· **Label**

3+6.1

· **IMDG**· **Class**

3 Flammable liquids.

· **Label**

3/6.1

· **IATA**· **Class**

3 Flammable liquids.

· **Label**

3 (6.1)

· **14.4 Packing group**· **ADR, IMDG, IATA**

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· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	
· Hazard identification number (Kemler code):	Warning: Flammable liquids. 36
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IMO instruments Not applicable.	
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· RID / GGVSEB: like ADR	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

* SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

· Regulated explosives precursors
Substance is not listed.

· Regulated poisons
Substance is not listed.

· Reportable explosives precursors
Substance is not listed.

· Reportable poisons
Substance is not listed.

· Directive 2012/18/EU
· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
Substance is not listed.

· Regulation (EC) No 273/2004 on drug precursors
Substance is not listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
Substance is not listed.

· National regulations:
· Other regulations, limitations and prohibitive regulations
· Please note: Take care of the respective local regulations.

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.

· Department issuing SDS:	Environment protection / Security of labour
· Contact:	Tel: +49 2871 9902-0 E-mail: mail@pergan.com

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Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

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Trade name: **PROMOTOR A**

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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)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international 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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3

* **Data compared to the previous version altered.**

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