

SAFETY DATA SHEET

Grams Differentiator Acetone

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended.

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

1.1. Product identifier

Product name Grams Differentiator Acetone
Product number PL.7206/25, PL.7206, PL.7207, PL.7208

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

Identified uses Laboratory reagent.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Pro-Lab Diagnostics
3 Bassendale Road
Wirral
Merseyside
CH62 3QL
Tel: 0151 353 1613
Fax: 0151 353 1614
mowen@pro-lab.com

1.4. Emergency telephone number

Emergency telephone +44 (0)151 353 1613 Monday to Friday 9.00 to 17.00
+44 (0)7714 429 646 outside the above hours

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Flam. Liq. 2 - H225
Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards Not Classified

Human health May irritate eyes. Vapours may cause drowsiness and dizziness.
Physicochemical The product is highly flammable.

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P280 Wear protective clothing, gloves, eye and face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	acetone
Supplementary precautionary statements	<p>P233 Keep container tightly closed.</p> <p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p>

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

acetone	50 - 100%
CAS number: 67-64-1	EC number: 200-662-2
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Keep affected person away from heat, sparks and flames.
Inhalation	Immediate first aid is imperative. Loosen tight clothing such as collar, tie or belt. Maintain an open airway. Move affected person to fresh air at once. Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If in doubt, get medical attention promptly.
Skin contact	Rinse cautiously with water for several minutes. Remove contaminated clothing. Wash contaminated clothing before reuse.

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Eye contact Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water. Get medical attention if symptoms are severe or persist after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation Symptoms following overexposure may include the following: Coughing, chest tightness, feeling of chest pressure. Drowsiness, dizziness, disorientation, vertigo. May cause discomfort.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Causes serious eye irritation. Pain. Profuse watering of the eyes. Prolonged contact may cause redness and/or tearing.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters

Protective actions during firefighting Fight fire from safe distance or protected location. Use water spray to reduce vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take care as floors and other surfaces may become slippery. Contain spillage with sand, earth or other suitable non-combustible material. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

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Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid breathing vapours. Avoid contact with eyes and prolonged skin contact. Avoid the formation of mists. Ground/bond container and receiving equipment.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep at temperature not exceeding 25°C.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

acetone

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

WEL = Workplace Exposure Limit.

acetone (CAS: 67-64-1)

DNEL	Workers - Inhalation; Long term systemic effects: 1210 mg/m ³ Workers - Inhalation; Short term local effects: 2420 mg/m ³ Workers - Dermal; Long term systemic effects: 186 mg/kg/day General population - Inhalation; Long term systemic effects: 200 mg/m ³ General population - Dermal; Long term systemic effects: 62 mg/kg/day General population - Oral; Long term systemic effects: 62 mg/kg/day
PNEC	Fresh water; 10.6 mg/l Fresh water, Intermittent release; 21 mg/l marine water; 1.06 mg/l STP; 100 mg/l Sediment (Freshwater); 30.4 mg/kg Sediment (Marinewater); 3.04 mg/kg Soil; 29.5 mg/kg

8.2. Exposure controls

Appropriate engineering controls Avoid inhalation of vapours and spray/mists. Good general ventilation should be adequate to control worker exposure to airborne contaminants. In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended. The breakthrough time for any glove material may be different for different glove manufacturers.
Other skin and body protection	Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Hygiene measures	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Seek advice from supervisor on the company's respiratory protection standards. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Alcoholic.
pH	Not relevant.
Melting point	Not relevant.
Initial boiling point and range	~ 56°C @ 1013 hPa
Flash point	~ -17°C
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: ~ 2 % Upper flammable/explosive limit: ~ 13 %
Vapour pressure	Not determined.
Vapour density	Not relevant.
Relative density	~ 0.791 @ 25°C
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Acids. Alkalis. Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Acids. Alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Hydrocarbons. Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

Serious eye damage/irritation Eye Irrit. 2 - H319 Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

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STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation Symptoms following overexposure may include the following: Pain or irritation. Irritation of nose, throat and airway. Coughing. Wheezing/breathing difficulties.

Ingestion May cause discomfort if swallowed.

Skin contact No specific symptoms known. Prolonged and frequent contact may cause redness and irritation.

Eye contact Causes eye irritation.

Acute and chronic health hazards No specific long-term effects known.

Route of exposure Inhalation Ingestion Dermal

Toxicological information on ingredients.

acetone

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,800.0

Species Rat

Notes (oral LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 7,427.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 7,427.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 54,000.0

Species Rat

Acute toxicity inhalation (LC₅₀ vapours mg/l) 128.0

Species Rat

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Notes (inhalation LC₅₀)	REACH dossier information. Based on available data the classification criteria are not met.
ATE inhalation (gases ppm)	54,000.0
ATE inhalation (vapours mg/l)	128.0
<u>Skin sensitisation</u>	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Gene mutation: Negative. REACH dossier information.
<u>Carcinogenicity</u>	
Carcinogenicity	NOEL 0.1 ml, Dermal, Mouse REACH dossier information. Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	Maternal toxicity: - NOAEC: 2200 ppm, Inhalation, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	STOT SE 3 - H336 Vapours may cause drowsiness and dizziness.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL 20000 ppm, Oral, Mouse REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

acetone

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 6210 mg/l, Pimephales promelas (Fat-head Minnow)
REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 8800 mg/l, Daphnia pulex
REACH dossier information.

Acute toxicity - aquatic plants NOEC, 8 days: 530 mg/l, Microcystis aeruginosa
REACH dossier information.

Acute toxicity - microorganisms EC₁₂, 30 minutes: 1000 mg/l, Activated sludge
REACH dossier information.

Chronic aquatic toxicity

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Chronic toxicity - aquatic invertebrates NOEC, 28 days: 1106 - 2212 mg/l, Daphnia magna
LOEC, 28 days: 2212 mg/l, Daphnia magna
REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

acetone

Persistence and degradability The product is readily biodegradable.

Phototransformation Water - DT₅₀ : 10 days
REACH dossier information.

Biodegradation Water - Degradation (90.9%): 28 days
REACH dossier information.

12.3. Bioaccumulative potential

Bioaccumulative potential Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.

acetone

Partition coefficient log Pow: -0.24 REACH dossier information.

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces. The product contains substances which are water-soluble and may spread in water systems.

Ecological information on ingredients.

acetone

Mobility The product is soluble in water.

Henry's law constant 2.929 Pa m³/mol @ 25°C REACH dossier information.

Surface tension 23700 mN/m @ 20°C REACH dossier information.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not relevant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Reuse or recycle products wherever possible. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

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Disposal methods Absorb in vermiculite, dry sand or earth and place into containers. Place waste in labelled, sealed containers. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1090
UN No. (IMDG)	1090
UN No. (ICAO)	1090
UN No. (ADN)	1090

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ACETONE
Proper shipping name (IMDG)	ACETONE
Proper shipping name (ICAO)	ACETONE
Proper shipping name (ADN)	ACETONE

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•2YE

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Hazard Identification Number 33
(ADR/RID)

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not relevant.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations	EH40/2005 Workplace exposure limits. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 No. 720, as amended.
EU legislation	Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. ATE: Acute Toxicity Estimate. BCF: Bioconcentration Factor. DNEL: Derived No Effect Level. EC ₅₀ : 50% of maximal Effective Concentration. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. LC50: Lethal Concentration to 50 % of a test population. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). NOAEL: No Observed Adverse Effect Level. NOEC: No Observed Effect Concentration. PNEC: Predicted No Effect Concentration. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
Classification abbreviations and acronyms	Flam. Liq. = Flammable liquid Eye Irrit. = Eye irritation STOT SE = Specific target organ toxicity-single exposure
Classification procedures according to SI 2019 No. 720	Flam. Liq. 2 - H225: Expert judgement. Eye Irrit. 2 - H319, STOT SE 3 - H336: Calculation method.
Revision comments	Revised regulations.
Revision date	26/09/2022
Revision	6
Supersedes date	01/10/2017

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SDS number	793
Hazard statements in full	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

The information in this safety data sheet was obtained from current and reliable sources. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond Pro-Lab Diagnostics control, it is the users responsibility to perform thorough testing of this product when used in combination with any other product. It is suggested that users familiarise themselves with this safety data sheet before handling the product.