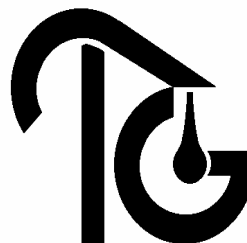


# TENNANTS DISTRIBUTION LIMITED

NORTHERN DIVISION  
HAZELBOTTOM ROAD  
CHEETHAM  
MANCHESTER  
M8 0GR  
TEL 44(0)161 205 4454  
FAX 44(0)161 203 4298  
E-mail sales.manchester@tennantsdistribution.com



SOUTHERN DIVISION  
BOTANY WAY  
PURFLEET  
ESSEX  
RM19 1SN  
TEL 44 (0)1708 860075  
FAX 44 (0)1708 860074

## PRODUCT DATA SHEET

(This booklet incorporates the Specification and M.S.D.S.)

<b>PRODUCT</b>	<b>ACETONE</b>	
CAS NO.	67-64-1	
TARIFF NO.	291411000	
U.N NO.	3-1/1090	
EINECS NO.	2006622	
IMCO CLASS	CLASS 3	
HAZARDS	HIGHLY FLAMMABLE. IRRITANT	
SPECIFICATION REFERENCE	AN218/5	DATE OCT 95
REFERENCE NO.	AC/4	DATE MAR 02
PREVIOUS EDITION.	AC 3	DATE FEB 01

<b>PRODUCT SPECIFICATION</b>			
Product Name	Acetone N Grade		
Alternative Name			
Product Grade	2-propanone		
<b>SALES SPECIFICATION</b>			
<b>PROPERTY</b>	<b>UNITS</b>	<b>VALUE</b>	<b>TEST</b>
Acetone content	% mass	99.5 min	BP Chemicals GC method
Density	kg/l @ 20°C	0.790 min 0.792 max	ASTM D4052-86
Water Content	% mass	0.3 max	BS 2511:1970(1986))(using suitable Karl Fischer titrator)
Acidity	% mass as acetic acid	0.002 max	BS 509 (part 2):1984
Appearance	(fixed)	Clear, and free from matter in suspension	Visual
Colour		5 max	BS 5339:1984
Residue on evaporation	Hazen units	0.001 max	BS 4524:1983
Distillation range	% mass		BS 509(part 2):1984
initial boiling point (BP)		55.8 min	
dry point (DP)	°C	56.6 max	
Alcoholic impurities	°C	Complies with BS limit test	BS 509(part 2):1984
Alkalinity		Complies with BS limit test	BS 509(part 2):1984
Permanganate time	hours	3 minimum	BS 509(part 2):1984
<b>PHYSICAL PROPERTIES</b>			
<b>PROPERTY</b>	<b>CONDITIONS</b>	<b>UNIT</b>	<b>VALUE</b>
Molecular mass			58.06
Density	20°C	kg/litre (vacuo)	0.790
Relative Density	20°C/20°C		0.7911
Coefficient of Cubical expansion	per °C		1.487 x 10 <sup>-3</sup>
Change in Relative Density	per °C		1.14 x 10 <sup>-3</sup>
Melting point		°C	-94.7
Boiling point	1.013 bar	°C	58.2
Change in boiling point	1013 bar	°C/mbar	0.0293
Vapour pressure	20°C	mbar	247
Flammable limits			
Upper	20°C	% volume	13.0
Lower	20°C	% volume	2.6
Flash point	Abel closed cup	°C	-18
Auto ignition temperature		°C	465
Specific heat (liquid)	20°C	kJ/kg°C	2.18
Specific heat (vapour)	20°C	kJ/kg°C	1.28
Latent heat			
(of fusion)		kJ/kg	97.97
(of vaporisation)	at boiling point	kJ/kg	501.15
Heat of combustion	20°C	Mj/kg	30.86
Critical temperature		°C	235.0
Critical pressure		bar	47
Volume Resistivity	25°C	ohm.m	4.2 x 10 <sup>7</sup>
Thermal Conductivity	20°C	mW/m °C	150
Dielectric constant	20°C		21
Refractive index	20°C	n <sup>20</sup> <sub>D</sub>	1.3591
Absolute viscosity	20°C	cP	0.322
Evaporation rate	21.5°C		18.11
Relative to n-BuAc = 1			

## NOTES

Tennants ACETONE complies with the following standards:

British Standard BS 509:1987  
American Standard ASTM D329-86  
German Standard DIN 53247  
British Pharmacopoeia 1988  
American Pharmacopoeia

### **Exclusion of Liability**

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

Any information or advice obtained from Tennants otherwise than by means of this publication and whether relating to Tennants materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Tennants materials are suitable for the particular purpose intended.

Tennants accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Tennants materials or the use of Tennants materials in conjunction with such other materials.

### **Health and Safety**

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product:	Acetone	
COMPANY:	TENNANTS DISTRIBUTION LIMITED	
	Hazelbottom Road	Botany Way
	Cheetham	Purfleet
	Manchester	Essex
	M8 0GR	RM19 1SN
	Tel No. 44(0)161 205 4454	Tel No. 44(0)1708 860075
	Fax No. 44(0)161 203 4298	Tel No. 44(0)1708 860074
	Emergency Tel No.	01865 407333

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formulae:	
Chemical Family Name:	Aliphatic ketone
CAS No.:	67-64-1
EINECS No.:	200-662-2

### 3. HAZARDS IDENTIFICATION

Physical/Chemical Hazards	Highly flammable
Human Health Hazards	Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. <b>MAY CAUSE RESPIRATORY TRACT IRRITATION</b>
Effects And Symptoms	
Eyes	Causes eye irritation
Skin	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis
Inhalation	Inhalation causes headaches, dizziness, drowsiness and nausea and may lead to unconsciousness. <b>MAY CAUSE RESPIRATORY TRACT IRRITATION.</b> Symptoms similar to alcohol intoxication
Ingestion	Ingestion may cause gastro-intestinal irritation and diarrhoea. Causes mild irritation of the mouth, throat and oesophagus. Ingestion may cause nausea, weakness and central nervous system effects

### 4. FIRST AID MEASURES

First Aid - Eyes	In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention immediately
First Aid - Skin	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before re-use. Clean shoes thoroughly before re-use. Get medical attention if irritation develops
First Aid - Ingestion:	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Obtain medical attention immediately
First Aid - Inhalation	

### 5. FIRE FIGHTING MEASURES

Extinguishing Media	In case of fire, use water spray (fog), foam, dry chemical or CO2
Hazardous Decomposition Products	These products are carbon oxides (CO, CO2)
Unusual Fire/Explosion Hazards	This material is combustible/flammable and is sensitive to fire, heat and static discharge Highly flammable liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas, travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard
Special Fire Fighting Procedures	<b>DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL.</b> Withdraw from fire and let it burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from the windows Cool closed containers exposed to fire with water
Protection Of Fire Fighters	Fire fighters should wear self contained positive pressure breathing apparatus (SCBA) and full turnout gear

<b>6. ACCIDENTAL RELEASE MEASURES</b>	
Large Spill or Leak	Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5). Do not touch or walk through spilled material If emergency personnel unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimise contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information
Personal Protection – Large Spill	Splash goggles, full suit, boots, gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient, consult a specialist BEFORE handling this product
<b>7. HANDLING AND STORAGE</b>	
Handling	Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling
Storage	Store in a segregated and approved area. Keep container in a cool, well ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame)
Packaging Materials	Use original container
<b>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
Engineering Measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are close to the workstation location Wash hands after handling compounds and before eating, smoking, using lavatory and at the end of the day
Occupational Exposure Limits	STEL 1500 ppm TWA 500 ppm (8h)
Personal Protection	
Respiratory System	Use only with adequate ventilation. Do not breathe vapour or mist. If ventilation is inadequate, use certified respirator that will protect against organic vapour
Skin And Body	Avoid contact with skin. Wear clothing and footwear that cannot be penetrated by chemicals or oil
Hand	Wear gloves that cannot be penetrated by chemicals or oil
Eyes	Avoid contact with eyes. Chemical splash goggles
<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
Physical State	Liquid
Colour	Colourless. Clear
Odour	Pungent
Boiling Range/Point (°C)	56.0
Melting Point (°C)	-95°C
Explosion Limits (%)	2.6 to 13
Solubility in Water	Easily soluble in cold water
Partition Coefficient (Log Pow)	-0.24
Vapour Pressure (kPa)	24.7 at 20°C
Density	0.79 g/cm <sup>3</sup>
Auto-flammability (°C)	465°C
Relative Vapour Density (Air =1)	2
Evaporation Rate	9.46 compared to Butyl Acetate
Specific Gravity	0.79 (water = 1)
<b>10. STABILITY AND REACTIVITY</b>	
Conditions To Avoid	Avoid all possible sources of ignition (spark or flame). Exposure to water or moisture
Incompatibility With Various Substances	Highly reactive with oxidising agents

Hazardous Polymerisation	Will not occur
<b>11. TOXICOLOGICAL INFORMATION</b>	
Acute Toxicity	1700-1070 mg/kg (rat) LC50 >6700 mg/l 4h (rat) LD50 >15688 mg/kg (rabbit)
Chronic Toxicity	
Carcinogenic Effects	No components of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research of Cancer (IARC) or the European Commission (EC) Classified A4 (Not classifiable for humans or animals) by ACGIH (Acetone)
Mutagenic Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen
Reproductive Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a reproductive toxin
Teratogenic Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic
<b>12. ECOLOGICAL INFORMATION</b>	
Ecotoxicity	Practically non toxic to aquatic organisms LC50 >5500 mg/l 96h (fish) EC50 >10022 mg/l (daphnia)
Persistence Potential	This product is readily biodegradable BOD5 is 38-56% ThOD BOD20 is 76-84% ThOD
Mobility	This product is likely to volatilise rapidly into the air because of its high vapour pressure This product may move with surface or groundwater flows because its water solubility is: 100% soluble The product is poorly absorbed onto soils or sediments
Bioaccumulative Potential	This product is not expected to bioaccumulate through food chains in the environment
<b>13. DISPOSAL CONSIDERATIONS</b>	
Product Disposal	Dispose of in accordance with all applicable local and national regulations. Avoid contact of spilled material and runoff with soil and surface waterways. Consult an environmental professional to determine if state or federal regulations would classify spilled or contaminated material as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities
Container Disposal	Labels should not be removed from containers until they have been cleaned. Empty containers may contain harmful, flammable/combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Do not incinerate closed containers
Water Classification	Not applicable
<b>14. TRANSPORT INFORMATION</b>	
UK Transport Information	UK Transport Emergency Action Code: 3(Y)E UK Transport Class No. 3
UN No.	1090
Proper Shipping Name	Acetone
ADR/RID Substance Identification No.	1090
ADR/RID - Class	3
ADR/RID - Item No.	3(b)
ADR/RID - Hazard Identification No.	33
IDMG - Packaging Group	II
IDMG - Class	3.1
IDMG - Marine Pollutant	No
IDMG - Ems No.	3-06
IDMG - MFAG Table Number	300
IATA - Packaging Group	II
IATA - Class	3
Tremcard No. TEC(R)	30
<b>15. REGULATORY INFORMATION</b>	
Labelling Information	

Health	Not Classified
Physico-Chemical Properties	Highly Flammable. Irritant
Environment	Not Classified
R phrases	R11: Highly flammable R36: Irritating to eyes R66: Repeated exposure may cause skin dryness or cracking R67: Vapours may cause drowsiness and dizziness.
S phrases	S2: Keep out of reach of children. S24 Avoid contact with skin S46 If swallowed, seek medical advice immediately and show this container or label S51 Use only in well ventilated areas
EINECS No.	2006622
EC Annex No.	606-001-00-8
EC Annex 1 Classification	Highly flammable irritant
TSCA Listing	Yes
AICS/NICNAS Listing	Yes
DSL/NDSL (Canadian) Listing	DSL listed
INCI Name	Acetone
Australian Inventory (AICS)	Listed on inventory
Canada Inventory (DSL)	Listed on inventory
China Inventory (IECS)	Listed on inventory
Japan Inventory (ENCS)	Listed on inventory
Korea Inventory (ECL)	Listed on inventory
Philippine Inventory (PICCS)	Listed on inventory
<b>16.</b>	<b>OTHER INFORMATION</b>