



MATERIAL SAFETY DATA SHEET

ACETONE

Effective Date : June 2012

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Norski Holdings urges the customer receiving this Material Safety Data Sheet to study it carefully to become aware of hazards, if any, of the product involved. In the interests of safety, you should, (1) notify your employees, agents, and contractors, of the information on this sheet; (2) furnish a copy to each of your customers for the product; (3) request your customers to inform their employees and customers as well.

I. Identification

SUPPLIER: Norski Holdings Ltd, 10 Northpoint Street, Plimmerton, 5024 New Zealand

SHIPPING NAME: Acetone

OTHER NAMES: Norski Cleaning Fluid

SYNONYMS: Propanone, Pyroacetic ether, Dimethyl ketone, Dimethylformaldehyde, Methyl ketone.

UN NO: 1090

CAS NO: 67-64-1

ERMA APPROVAL CODE: HSR001070

USE: Used as a chemical precursor to methyl methacrylate and as an industrial, pharmaceutical and laboratory solvent. Also used in many general medical and cosmetic applications.

II. Hazards Identification

HAZARD LABELLING: Danger

EMERGENCY OVERVIEW

HSNO Classifications: 3.1B, 6.1E (oral), 6.3B, 6.4A

Highly flammable liquid and vapour

May be harmful if swallowed

Causes mild skin irritation

Causes serious eye irritation

CONTROLS APPLYING TO THIS SUBSTANCE ARE:

- Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001
 - F1 (R7), F2 (R8), F3 (R55), F4 (R56), F5 (R58, 59), F6 (R60-70), F11 (R76), F12 (R77), F14 (R81), F16 (R83)
- Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001
 - T1 (R11-27), T2 (R29, 30), T4 (R7), T7 (R10), T8 (R28)
- Hazardous Substances (Packaging) Regulations 2001
 - P1 (R5, 6, 7(1), 8), P3 (R9), P5 (R11), P13 (R19), PG2 (Schedule 2)
- Hazardous Substances (Disposal) Regulations 2001
 - D2 (R6), D4 (R8), D6 (R10), D7 (R11, 12), D8 (13, 14)
- Hazardous Substances (Emergency Management) Regulations 2011
 - EM1 (R6, 7, 9-11), EM6 (R8e), EM8 (R12-16, 18-20), EM9 (R17), EM10 (R21-24), EM11 (R25-34), EM12 (R35-41), EM13 (R42)
- Hazardous Substances (Identification) Regulations 2001
 - I1 (R, 7, 32-35, 36.1-36.7), I5 (R11), I8 (R14), I9 (R18), I13 (R22), I16 (R25), I19 (R29-31), I21 (R37-39, 47-50), I25 (R43), I28 (R46), I29 (51, 52), I30 (R53)
- Hazardous Substances (Personnel Qualifications) Regulations 2001
 - AH1 (R4-6)
- Schedule 10 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004.

Variation Codes applying to the Hazard Classifications as amended under Section 67A of the HSNO Act: 1, Reg 36.

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PRECAUTIONARY STATEMENTS

Prevention

- Read label and SDS before use
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment. .
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools
- Take precautionary measures against static discharge.
- Wear protective gloves/protective clothing/eye protection.
- Keep out of reach of children.
- Wash thoroughly after handling.

Response

- If ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
- If medical advice is needed, have product container/label/SDS at hand.
- Call a POISON CENTRE or doctor if you feel unwell.
- If skin irritation occurs, get medical advice.
- In case of fire: Use dry chemical, alcohol foam or carbon dioxide for extinction.
- If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists, get medical advice.

Storage

- Store in a well ventilated place. Keep cool.

Disposal

- Dispose of contents and container in accordance with relevant legislation. See Section 13 of this SDS Document for more information.

III. Composition/Information on Ingredients

CHEMICAL NAME: 2-Propanone

CAS NO: 67-64-1

PROPORTION: >90

HAZARDOUS: Yes

IV. First Aid Measures

SWALLOWED: Keep the persons calm. Rinse mouth. Immediately give them a small amount of water or milk to drink: ($\frac{1}{4}$ to $\frac{1}{2}$ cup for a child or 1 to 2 cups for an adult). DO NOT induce vomiting. If in doubt or if symptoms occur, get medical attention.

EYE: Immediately flush eyes with plenty of water for at least 15 minutes. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Get medical attention.

SKIN: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical

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attention if symptoms occur. Wash clothing before re-use.

INHALED: Remove patient to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen administered by trained personnel. Obtain medical attention immediately.

NOTES TO PHYSICIAN: Treat symptomatically.

EMERGENCY: 0800 POISON (764 766)

V. Fire Fighting Measures

EXTINGUISHING MEDIA: Dry chemical, foam or carbon dioxide. If not available, use fine water spray or water fog.

FIRE FIGHTING: Alert fire brigade and tell them location and nature of hazard. Wear full body protective clothing with self contained, positive pressure breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. If safe, switch off electrical equipment until vapour fire hazard removed. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD: Highly flammable liquid, vapours may form an explosive mixture with air. Dangerous when exposed to heat, sparks, flame or oxidants. Vapours can flow along surfaces to a distant ignition source and flash back.

Flash Point: -17°C (Closed cup).

Autoignition temperature: 456°C

Flammable limits in air (% by volume): Lower: 2.15 Upper: 13

HAZARDS FROM COMBUSTION PRODUCTS: Will emit toxic fumes on burning.

PERSONAL PROTECTIVE EQUIPMENT: Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Eliminate ignition sources.

HAZCHEM CODE: 2YE

VI. Accidental Release Measures

MINOR SPILLS: Clean up spills immediately. Ventilate area of spill. Remove all ignition sources. Wear protective clothing, impervious gloves, safety glasses and respiratory protection. Avoid contact with skin and eyes. Avoid breathing vapours. Absorb with an inert material and place in a chemical waste container. Do not use combustible materials. Refer to major spills.

MAJOR SPILLS: Personnel involved in the clean up should wear full protective clothing. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation or work upwind. Stop leak if safe to do so. Isolate the danger area. Contain and recover liquid wherever possible. Absorb liquid with an inert material such as dry sand, earth, vermiculite and place in a suitable container. Do not use combustible materials. DO NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority. Use spark-proof tools and equipment. Collect in a labelled chemical waste container and seal for disposal. Wash spill area with plenty of water. Personal Protective Equipment advice is contained in Section 8 of the SDS.

VII. Handling and Storage

PROCEDURE FOR HANDLING: Use good occupational work practice. Read the label and observe all precautions listed for the product. Avoid skin and eye contact. Avoid ingestion and inhalation. Wear protective gloves/protective clothing/eye protection/respiratory protection. Avoid all ignition and heat sources. Avoid physical damage to containers. Handle and open container with care. Use in a well-ventilated area. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices. Wash thoroughly after handling. Take precautionary

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measures against static discharges by bonding and grounding equipment. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. Observe all precautions when handling empty containers. They may be hazardous due to hazardous residues.

SUITABLE CONTAINER: Packaging as recommended by manufacturer. Storage containers should be bonded and grounded for transfers to avoid static sparks. Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY: Avoid storage with incompatible materials including strong oxidising agents. See Section 10 for further information.

STORAGE REQUIREMENTS: Store in a cool, dry and well ventilated place. Keep storage area free of debris, waste and combustibles. Outside or detached storage is recommended. Store away from incompatible materials. No smoking, naked lights, heat or ignition sources. Keep containers securely sealed. Protect containers against physical damage. Protect from sunlight, moisture and static discharges. Ground equipment.

This product has a UN classification of 1090 and a Dangerous Goods Class 3 and must be labelled accordingly.

VIII. Exposure Controls/Personal Protection

EXPOSURE CONTROLS:

Source	Material	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	Peak ppm	Peak mg/m3	TWA F/CC
New Zealand WES 2002	Acetone (biological monitoring)	500	1,185	1,000	2,375			
Australia ASCC	Acetone	500	1,185	1,000	2,375			

PERSONAL PROTECTION EQUIPMENT (PPE):

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the containment at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (eg lubricants, cutting fluids, glycerine, etc) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. See Australian/New Zealand Standard, AS/NZS 1715:2009 and AS/NZS 1716:2003.

SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

EYE PROTECTION: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

OTHER: Cotton washable overalls buttoned to the neck and wrist and washable hat and PVC apron. Ensure there is ready access to an emergency shower. Ensure that there is ready access to an eye wash unit.

IX. Physical Data

APPEARANCE: Colourless, volatile liquid with a sweet, pungent odour.

MOLECULAR WEIGHT: 58.08

MELTING RANGE (°C): -95.35

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SOLUBILITY IN WATER (g/L): Completely miscible

pH: -7

VOLATILE COMPONENT (%vol) 20°C: 100

LOWER EXPLOSIVE LIMIT (%): 2.15

AUTOIGNITION TEMP (°C): 456

STATE: Liquid

BOILING RANGE: 56.2

SPECIFIC GRAVITY (WATER=1): 0.79

pH (as supplied): Not available

VAPOUR PRESSURE (kPa): 181

EVAPORATION RATE: >7.0

FLASH POINT (°C): -17

UPPER EXPLOSION LIMIT (%): 13

DECOMPOSITION TEMP (°C): Not available

VISCOSITY (cPs @ 25°C): 0.303

X. Chemical Stability and Reactivity

CONDITIONS CONTRIBUTING TO INSTABILITY: Stable under recommended conditions of use and storage. Avoid heat, flames and ignition sources. Avoid contact with concentrated nitric and sulphuric acid mixtures, oxidizing materials, chloroform, alkalis, chlorine compounds, acids potassium t-butoxide. Carbon dioxide and carbon monoxide may form when heated to decomposition. Hazardous polymerization will not occur.

XI. Toxicological Information

POTENTIAL ACUTE HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED: This substance may cause gastrointestinal irritation, vomiting, narcosis, injury to kidneys and liver, difficulty breathing, drowsiness and unconsciousness.

EYE: This substance is very irritating and painful to the eye and can cause eye injury if left untreated. Severe or permanent injury is unlikely as long as the eye is properly flushed and then assessed by a doctor.

SKIN: This substance causes defatting of the skin and may cause some skin irritation. Prolonged or repeated contact with skin can cause dryness and erythema.

INHALED: Vapour concentration of 2500-3000ppm causes minor irritation of eyes, nose and throat. Inhalation of higher concentrations may cause headache, nausea, confusion, drowsiness, convulsions and coma.

CHRONIC HEALTH EFFECTS: Not expected to cause chronic or cumulative systemic effects.

TOXICITY AND IRRITATION

TOXICITY

6.1E (oral)

Species: Mouse

Endpoint: LD50

Value: 3000 mg/kg

Reference Source: Phenolchemie GmbH Gladbeck

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(122) Pharmaceutical Chemistry Journal (English Translation), Translation of KHFZAN 14, 162 (1980); cited in RTECS database (1991)

IRRITATION

6.3B

Species: Rabbit

Result: Mild

Reference Source: Prehled Prumyslove Toxikologie; Organicke Latky, Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 (-, 280, 1986).

RTECS

6.4A

Species: Rabbit

Result: Irritating

Reference Source: Phenolchemie GmbH Gladbeck

(169) Carpenter, CP & Smyth, HF Jr., Am J. Ophthalmology 29, 1363-1372 (1946) (IUCLID 2000)

R-Phrase: R36 Irritating to eyes (IUCLID 2000)

XII. Ecological Information

ECOTOXICITY: Not expected to cause adverse ecological effects.

LC50 Brook trout 6,070 mg/L

LC50 Fathead minnow: 15,000 mg/L

LC50 Aquatic invertebrates: 2,100 – 16,700 mg/L

PERSISTENCE AND DEGRADABILITY: Not persistent; readily biodegradable.

MOBILITY: High mobility in soils. Highly volatile. Not expected to absorb to solid particles or sediment. Expected to exist solely as a vapour in the ambient atmosphere.

BIOACCUMULATION: BCF: 3, bioconcentration expected to be low.

BOD5 AND COD: Biodegradation (OECD 301D) freshwater: 14%

DO NOT discharge into sewer or waterways.

XIII. Disposal Considerations

Recycle wherever possible. Special hazard may exist – specialist advice may be required. Bury or incinerate residue at an approved site. Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed. Puncture containers to prevent re-use and bury at an authorised landfill. Consult an approved Waste Management company for disposal options or dispose of at an approved waste disposal facility. Where possible retain label warnings and SDS and observe all notices pertaining to the product.

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XIV. Transport Information

LABELS REQUIRED: Flammable Liquid

HAZCHEM: 2YE

UNDG:

Dangerous Goods Class:	3	Subrisk:	None
UN Number:	1090	Packing Group:	II

SHIPPING NAME: Acetone

AIR TRANSPORT IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1090	Packing Group:	II

SHIPPING NAME: Acetone

MARITIME TRANSPORT IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1090	Packing Group:	II

XV. Regulatory Information

REGULATIONS:

ERMA Approval Code: HSR00001070

HSNO Classifications: 3.1B, 6.1E (oral), 6.3B, 6.4A

Approved Handler: Required

Tracking: Not required

Premises Test Certification: Required

2-Propanone (CAS 67-64-1) is found on the following regulatory lists:

New Zealand Transferred List of Single Component Substances

OECD Representative List of High Production Volume (HPV) Chemicals

2-Propanone (CAS 67-64-1) is found on the following inventories:

AICS, TSCA, DSL

Australian High Volume Industrial Chemicals List (HVICL)

SARA 311/312	Acute: Yes
	Chronic: No
	Fire: Yes
	Pressure: No
	Reactivity: No

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XVI. Other Information

NEW ZEALAND POISON CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

INTERPRETATION AND ABBREVIATIONS:

Controls applying to a substance:

- *denotes that changes have been made to these controls, further information on these changes is located in the transfer notice for that substance.
- (R) abbreviation for the term Regulation of the Hazardous Substances regulations.

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