

## 1. Product and Company Identification

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Product Name	Organic solvent N,N-Dimethylacetamide (DMAC)
Part Number	RXSOL-19-1195-110
Company Details:	
RX MARINE INTERNATIONAL 105, A wing , BSEL , TECH PARK. VASHI ,NEW BOMBAY 400703 INDIA	
Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA	
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Email	<a href="mailto:mail@rxmarine.com">mail@rxmarine.com</a>
Website	<a href="http://www.rxmarine.com">www.rxmarine.com</a>

## 2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Whight	Formula
N,N-Dimethylacetamide	127-19-5	204-826-4	87,12 g/mol	C <sub>4</sub> H <sub>9</sub> NO

## 3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H300 + H310 Fatal if swallowed or in contact with skin.
Precautionary statements	P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	None
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 4. First Aid Measures

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General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Eye Contact	After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

Inhalation	Fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
Most important symptoms and effects, both acute and delay	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

## 5. Fire-fighting Measures

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Flammability	May be combustible at high temperature.
Suitable extinguishing media	Carbon dioxide (CO <sub>2</sub> ) Foam Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours.

## 6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Personal Protection	Do not let product enter drains.
Environmental Precaution	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

## 7. Handling and Storage

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Advice on protection against fire and explosion	Work under hood. Do not inhale substance/mixture. Avoid generation of
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Incompatible materials	vapours/aerosols. Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Advice on safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Conditions for safe storage, including any incompatibilities	Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture sensitive.
Storage conditions	Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Store under inert gas. Hygroscopic.
Storage class	Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

## 8. Exposure controls and personal protection

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Exposure controls	No specific additional engineering controls are required. Provide good natural or artificial ventilation.
Engineering Control	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	protective clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: <a href="http://www.kcl.de">www.kcl.de</a> ). Full contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested: Butoject® (KCL 898)
Respiratory protection	Recommended Filter type: Filter A-(P3) The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	Handle in accordance with good industrial hygiene and safety practice.
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 9. Physical and chemical properties

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Physical state	Clear, Liquid
Colour	Colorless
Odour	Ammonia odor
Odor Threshold	Not Applicable
pH	ca.4 at 200 g/l at 20 °C
Melting Point	20 °C
Boiling Point	164,5 - 166 °C
Flash Point	64 °C - closed cup
Evaporation Rate	Not Applicable

Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	Upper explosion limit: 11,5 %(V) Lower explosion limit: 1,8 %(V)
Autoignition temperature	345 °C at 999 - 1.011 hPa - DIN 51794
Decomposition temperature	No data available
Vapour pressure	2 hPa at 21,7 °C
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0,92 mPa.s at 25 °C
Density	0,937 g/mL at 25 °C
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	log Pow: -0,77
Explosive properties	No data available
Solubility	1.000 g/l at 20 °C
Ignition temperature	No information available.
Particle characteristics	No data available

## 10. Stability and reactivity

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Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) . hygroscopic
Possibility of hazardous reactions	No data available
Conditions to avoid	Strong heating
Incompatible materials	Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents
Hazardous decomposition products	In the event of fire: see section 5

## 11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - 4.300 mg/kg Remarks: (RTECS) Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Acute toxicity estimate Inhalation - 4 h - 11,1 mg/l - vapor (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Acute toxicity estimate Dermal - 1.100,1 mg/kg (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Guinea pig Result: negative (OECD Test Guideline 429)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Additional Information	RTECS: UF9625000 Lung irritation, Cyanosis, Central nervous system depression To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. Ecological information

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Persistence and degradability	No data available
Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h (DIN 38412 T15)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h (Regulation (EC) No. 440/2008, Annex, C.2)
Toxicity	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.520 mg/l - 96 h
Toxicity to bacteria	EC10 - Bacteria - 14 mg/l - 72 h Remarks: (Lit.) EC5 - E.coli - 15.000 mg/l Remarks: (Lit.) (maximum permissible toxic concentration)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 500 mg/l - 72 h (DIN 38412)
Products Biodegradation	The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	No data available
Other adverse effects	No data available .

## 13. Disposal considerations

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Waste treatment Method	No data available
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## 14. Transport information

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UN number	ADR/RID: IMDG: IATA:
UN proper shipping name	ADR/RID: IMDG: IATA:
Transport hazard class(es)	ADR/RID: IMDG: IATA:
Packaging group	ADR/RID: II IMDG: II IATA:II
Environmental hazards	ADR/RID: No IMDG: No IATA: No
Special precautions for user	No data available
Further information	Not classified as dangerous in the meaning of transport regulations.

## 15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

## 16. Other information

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Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting
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