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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Isopropylamine, 99% Product Code: I 1671 CAS No : 75-31-0

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email <u>info@ottokemi.com</u>

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Flammable liquids (Category 1), H224 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Skin corrosion (Sub-category 1A), H314 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Danger Hazard statement(s) H224 Extremely flammable liquid and vapor. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. May cause respiratory irritation. H335 Precautionary statement(s) Keep away from heat, hot surfaces, sparks, open flames and P210 other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsina. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. Supplemental Hazard none Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Danger Hazard statement(s) H224 Extremely flammable liquid and vapor.

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H314	Causes severe skin burns and eye damage.			
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.			
Precautionary statement(s)				
P210	Keep away from heat, hot surfaces, sparks, open flames and			
1210	other ignition sources. No smoking.			
P233	5 F			
P280	Keep container tightly closed.			
P200	Wear protective gloves/ protective clothing/ eye protection/ face			
D000 + D001 + D050	protection.			
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated			
	clothing. Rinse skin with water.			
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable			
	for breathing. Immediately call a POISON CENTER/ doctor.			
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes.			
	Remove contact lenses, if present and easy to do. Continue			
	rinsing.			
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.			
Supplemental Hazard	none			
Statements				
2.3 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.				
Ecological information:				
The substance/mixture does not contain components considered to have endocrine				
disrupting properties according to REACH Article 57(f) or Commission Delegated regulation				
(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.				
Toxicological information:				
The substance/mixture does not contain components consi	dered to have endoaring			

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances	
Synonyms	: 2-Aminopropane
Formula	: C3H9N
Molecular weight	: 59,11 g/mol
CAS-No.	: 75-31-0
EC-No.	: 200-860-9
21	

Component	Classification	Concentration
2-aminopropane; isopropylamine		
CAS-No. 75-31-0 EC-No. 200-860-9	Flam. Liq. 1; Acute Tox. 3; Skin Corr. 1A; STOT SE 3; H224, H301, H331, H311, H314, H335	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures
General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
In case of skin contact:
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.
Remove contact lenses.

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If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing media Carbon dioxide (CO2) Foam Dry powder Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Carbon oxides Nitrogen oxides (NOx) Combustible. Pay attention to flashback. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures. 5.3 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. 5.4 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

SECTION 6: Accidental release measures

contaminating surface water or the ground water system.

6.1 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.
6.2 Environmental precautions Do not let product enter drains. Risk of explosion.
6.3 Methods and materials for containment and cleaning up 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.
6.4 Reference to other sections For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities

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Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons. Storage stability Recommended storage temperature 2 - 8 °C Storage class Storage class (TRGS 510): 3: Flammable liquids 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated **SECTION 8: Exposure controls/personal protection** 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles 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: www.kcl.de). Splash contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 60 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M) Body Protection Flame retardant antistatic protective clothing. Respiratory protection required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type AX The entrepeneur 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. Control of environmental exposure Do not let product enter drains. Risk of explosion. **SECTION 9: Physical and chemical properties** 9.1 Information on basic physical and chemical properties a) Physical state liquid b) Color colorless, to, yellow c) Odor Ammonia odor d) Melting Pour point: < -90 °C at 1.013 hPa - ISO 3016 point/freezing point e) Initial boiling point 33 - 34 °C - lit. and boiling range f) Flammability (solid, No data available gas) g) Upper/lower Upper explosion limit: 10,4 %(V) flammability or Lower explosion limit: 4,2 %(V) at 43,1 hPa explosive limits

<= -25 °C - closed cup - ISO 2719 No data available

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h) Flash point

i) Autoignition

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temperature j) Decomposition temperature k) pH

I) Viscosity

m) Water solubility n) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information Surface tension

Dissociation constant

Relative vapor density

SECTION 10: Stability and reactivity

10.1 Reactivity Vapors may form explosive mixture with air. 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) . 10.3 Possibility of hazardous reactions Violent reactions possible with: Strong acids Oxidizing agents Halogenated hydrocarbon anhydrides Ketones Nitriles Alcohols Aldehydes Esters phenols Mercury Risk of explosion with: perchloryl fluoride Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines! 10.4 Conditions to avoid Warming. 10.5 Incompatible materials No data available 10.6 Hazardous decomposition products In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L.

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No data available

13,1 at 25 °C - DIN 19268 Viscosity, kinematic: 0,47 mm2/s at 20 °C - OECD Test Guideline 114 Viscosity, dynamic: No data available at 20 °C - OECD Test Guideline 105soluble Pow: 0,3; log Pow: -0,5 at 25 °C - Bioaccumulation is not expected. 631 hPa at 20 °C 0,688 g/cm3 at 20 °C - lit. 0,687 at 20 °C - DIN 51757 2,04 - (Air = 1.0)

No data available

No data available none

68,5 mN/m at 1g/l at 20 °C - OECD Test Guideline 115 10,8 at 23,5 °C - OECD Test Guideline 112 2,04 - (Air = 1.0)

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	ans: Not available. nykiss (rainbow trout) - 40 mg/l - 47,4 mg/l - 48 h us subspicatus (green algae) - 18,9			
12.3 Bioaccumulative potential	Contraction of the second seco			
No data available				
12.4 Mobility in soil No data available				
12.5 Results of PBT and vPvB assessment				
This substance/mixture contains no components	considered to be either persistent,	ere .		
bioaccumulative and toxic (PBT), or very persiste				
levels of 0.1% or higher.				
12.6 Endocrine disrupting properties				
Product: Assessment : The substance/mixture doe	a pat contain companente			
considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission				
Delegated regulation (EU) 2017/2100 or Commission				
Regulation (EU) 2018/605 at	t levels of 0.1% or higher.			
12.7 Other adverse effects				
Do not empty into drains.	a set			
Discharge into the environment must be avoided				
SECTION 13: Disposal considerations				
13.1 Waste treatment methods				
No data available				
SECTION 14: Transport information				
14.1 UN number ADR/RID: 1221	IMDG: 1221	IATA: 1221		
14.2 UN proper shipping name		WATA. 1221		
ADR/RID : ISOPROPYLAMINE				
IMDG : ISOPROPYLAMINE				
IATA : Isopropylamine				
14.3 Transport hazard class(es)				
ADR/RID: 3 (8)	IMDG: 3 (8)	IATA: 3 (8)		
14.4 Packaging group				
ADR/RID: I 14.5 Environmental hazards	IMDG: I	IATA: I		

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ADR/RID: no IMDG Marine pollutant: no IATA: no 14.6 Special precautions for user Impose the pollutant: no IATA: no Tunnel restriction code : (C/E) Further information : No data available	
SECTION 15: Regulatory information 15.1 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.	
National legislation	
Seveso III: Directive 2012/18/EU of the	
European Parliament and of the Council on the control of major-accident hazards	
involving dangerous substances.	
H2 ACUTE TOXIC	
P5a FLAMMABLE LIQUIDS	
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. 15.2 Chemical Safety Assessment	
For this product a chemical safety assessment was not carried out	
SECTION 16: Other Information	

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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