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5

1. Identification of the substance	mixture and of the company/undertaking		
1.1. Product identifier	mixture and of the company/andertaxing		
Trade name :	: FORMIC ACID 98% AR		
Product code :	: 23325		
Identification of the product			
CAS No :	64-18-6		
Chemical formula :	$CH_2O_2$		
1.2. Relevant identified uses of th	<b>1.2. Relevant identified uses of the substance or mixture and uses advised against</b>		
Use	: Industrial. For professional use only.		
<b>1.3.</b> Details of the supplier of the			
Company identification	: MOLYCHEM		
	Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor,		
	Mumbai – 400 002 (INDIA)		
	Tel:+91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.		
	Email: info@molychem.net		
	Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat		
	Textile Co., Kulgaon, Badlapur (E), DistThane-421 503.		
1.4. Emergency telephone numbe	r		
Emergency number :	+91 22 4066 8111 (10:00am - 6:00 pm).		
2. Hazards identification -DSD			
2.1. Classification of the substance	e or mixture		
e .	Code(s), Regulation (EC) No 1272/2008 (CLP)		
Flammable liquids (Category 3	s), H226		
Acute toxicity, Oral (Category 4), H302			
Acute toxicity, Inhalation (Category 3), H331			
Skin corrosion (Sub-category 1	A), H314		
Serious eye damage (Category	1), H318		
2.2. Label elements			
Labelling EC 67/548 or EC 1			
$\mathbf{\underline{Symbol}}(\mathbf{s}):\mathbf{C}:$	Corrosive		
<b>R</b> Phrase(s) :			
R35 :	Causes severe burns.		
S Phrase(s) :			
S24 :	Avoid contact with skin.		

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eek medical advice. contact with skin, wash immediately with naterial and its container must be disposed of in a safe way. suitable protective clothing, gloves and eye/face protection.	
naterial and its container must be disposed of in a safe way.	
1 4	
suitable protective clothing, gloves and eye/face protection.	
Wear suitable protective clothing, gloves and eye/face protection.	
e of accident or if you feel unwell, seek medical advice	
ediately (show the label when possible).	
r to manufacturer/supplier for information on recovery/recycling.	
8 (CLP)	
er	
Flammable liquid and vapour.	
Harmful if swallowed.	
Causes severe skin burns and eye damage.	
e if inhaled.	
away from heat, sparks, open flames or hot surfaces. – No ing.	
protective gloves, protective clothing, eye protection, face	
ction.	
ot breathe dust, fume, gas, mist, vapours, spray.	
Keep container tightly closed.	
Wash thoroughly after handling.	
ALLOWED: Call a POISON CENTER/ doctor if you feel	
EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.	
(EU)	
ive to the respiratory tract.	

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# 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.

### 3. Composition/information on ingredients

### 3.1 Substances

Formula :	$CH_2O_2$
Molecular weight :	46.03 g/mol
CAS-No. :	64-18-6

## 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.

# If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Pulmonary failure possible after aspiration of vomit. Call a physician immediately. 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

# 5. Fire-fighting measures

# 5.1. Extinguishing media

**Suitable extinguishing media** Water Foam Carbon dioxide (CO2) Dry powder

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Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Nature of decomposition products not known.

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

# 5.3. Advice for fire-fighters

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. Prevent fire extinguishing water from contaminating surface water or the ground water system.

# 6. Accidental release measures

# 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 material 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.

# 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**

Flater full bullety Duta	Sheet	MOLYCHEM
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after working with substan For precautions see section 7.2. Conditions for safe stora Storage conditions	nce. n 2.2. <b>ge, including</b>	
		orming gaseous products, especially when stored over long to enable internal pressure to escape (e.g. excess pressure
from heat and sources of i authorized persons	-	er tightly closed in a dry and well-ventilated place. Keep away b locked up or in an area accessible only to qualified or
Storage class		
Storage class (TRGS 510)	: 3: Flammab	le liquids
7.3. Specific end use(s)		
Apart from the uses menti	oned in sectio	on 1.2 no other specific uses are stipulated
8. Exposure controls/persona	Invotation	
8.1. Exposure controls		
Personal protection	· Avoid all	unnecessary exposure.
Respiratory protection	: Wear appr	• •
Hand protection	11	ective gloves.
Skin protection		able protective clothing.
Eye protection		goggles or safety glasses.
Others		ng, do not eat, drink or smoke.
8.2. Control parameters	. ,, nen usn	15, so not out, attain of billono.
-	imits : No da	ta available.
Occupational Exposure L	imits : No da	ta available.
Occupational Exposure L		ta available.
Occupational Exposure L 9. Physical and chemical pro	<u>perties</u>	
Occupational Exposure L <u>9. Physical and chemical pro</u> 9.1. Information on basic phy	<u>perties</u> ysical and ch	emical properties
Occupational Exposure L	<u>perties</u>	emical properties
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state	<u>perties</u> y <b>sical and ch</b> liquid	emical properties l ess
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color	<b>perties</b> y <b>sical and ch</b> liquid colorl stingin	emical properties l ess ng
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color c) Odor d) Melting	<b>perties</b> y <b>sical and ch</b> liquid colorl stingin	emical properties l ess
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color c) Odor d) Melting point/freezing point	perties ysical and ch liquid colorl stingin Meltir	emical properties l ess ng ng point/range: 8.5°C - lit.
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point	perties ysical and ch liquid colorl stingin Meltir	emical properties l ess ng
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range	perties ysical and ch liquid colorl stingin Meltir 100.80	emical properties l ess ng ng point/range: 8.5°C - lit. P°C - lit.
Occupational Exposure L 9. Physical and chemical pro 9.1. Information on basic phy a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point	perties ysical and ch liquid colorl stingin Meltir 100.80 s) No da	emical properties l ess ng ng point/range: 8.5°C - lit.

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explosive limits	
h) Flash point	49.5 °C - closed cup
i) Autoignition temperature	528 °C at 1.008 hPa - Tested according to Directive 92/69/EEC.
j) Decomposition temperature	350 °C Method: OECD Test Guideline 113
k) pH	2.2 at 10 g/l at 20 °C
l) Viscosity	Viscosity, kinematic: 1,47 mm2/s at 20 °C - OECD Test Guideline
	1141,02 mm2/s at 40 °C - OECD Test Guideline 114
	Viscosity, dynamic: 1,8 mPa.s at 20 °C - OECD Test Guideline
	1141,22 mPa.s at 40 °C - OECD Test Guideline 114
m) Water solubility	at 20 °C miscible in all proportions, (experimental)
n) Partition coefficient:	log Pow: -2,1 at 23 °C - OECD Test Guideline 107 - n-
octanol/water	Bioaccumulation is not expected.
o) Vapor pressure	171 hPa at 50 °C - OECD Test Guideline 104
p) Density	1.22 g/cm3 at 25 °C - lit.
Relative density	1.22 at 20 °C - OECD Test Guideline 109
q) Relative vapor density	1.59 - (Air = 1.0)
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none
9.2. Other information	
Surface tension	71.5 mN/m at 1g/l at 20 °C
	- OECD Test Guideline 115
Surface tension	71.5 mN/m at 1g/l at 20 °C
	- OECD Test Guideline 115
Relative vapor density	1.59 - (Air = 1.0)
<b>10. Stability and reactivity</b>	
10. Stability and reactivity	
Vapor/air-mixtures are explosiv	ve at intense warming

Vapor/air-mixtures are explosive at intense warming.

# 10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

## **10.3.** Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with: Aluminum Risk of explosion with: organic nitro compounds sodium hypochlorite hydrogen peroxide



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furfuryl alcohol			
Generates dangerous gases or fum	es in contact with:		
alkalines			
Strong oxidizing agents			
sulfuric acid			
nonmetallic oxides			
metal catalysts			
Oxides of phosphorus			
Nitric acid			
nitrates			
Exothermic reaction with:			
alkaline earth hydroxides			
alkali hydroxides			
bases			
Amines			
10.4. Conditions to avoid			
Heating.			
10.5. Incompatible materials			
Strong oxidizing agents, Strong ba	ses, Powdered metals		
10.6. Hazardous decomposition produ	10.6. Hazardous decomposition products		
In the event of fire: see section 5			
<b><u>11. Toxicological information</u></b>			
11.1. Information on toxicological effe			
Acute toxicity (oral) :	Not classified		
5 < 7	Not classified		
5 、 ,	Not classified		
Skin corrosion/irritation :	Causes severe skin burns.		
	pH: 2.2 (10 g/L aqueous solution)		
Serious eye damage/irritation :	Assumed to cause serious eye damage		
	pH: 2.2 (10 g/L aqueous solution)		
Respiratory or skin sensitisation :			
Germ cell mutagenicity :	Not classified		
Carcinogenicity :	Not classified		
Reproductive toxicity :	Not classified		
6 1	Not classified		
1 1	Not classified		
Aspiration hazard :	Not classified		
Viscosity, kinematic	1.47 mm <sup>2</sup> /s at 20°C		

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ralisation, the product may represent a danger to misms. ssified				
nisms.				
ssified				
hort-term (acute)				
Hazardous to the aquatic environment, : Not classified				
long-term (chronic)				
2.2. Persistence - degradability				
No additional information available				
Bioaccumulation is unlikely.				
Does not significantly accumulate in organisms.				
2.5. 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.				
2.6. Endocrine disrupting properties				
xture does not contain components considered to lisrupting properties according to REACH Article sion Delegated regulation (EU) 2017/2100 or gulation (EU) 2018/605 at levels of 0.1% or higher.				
contents/container in accordance with licensed				
contents/container in accordance with licensed sorting instructions.				
Dispose of contents/container to a licensed				
hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as nonhazardous waste. by containers with care because residual vapours ble. Flammable vapours may accumulate in the				

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14. Transport information		
14.1. UN number		
ADR/RID: 1779	IMDG : 1779	IATA: 1779
14.2. UN proper shipping name		
ADR/RID :	FORMIC ACID	
IMDG:	FORMIC ACID	
IATA:	FORMIC ACID	
14.3. Transport hazard class(es)		
ADR/RID : 8(3)	IMDG : 8(3)	IATA : 8(3)
14.4. Packaging group		
ADR/RID : II	IMDG : II	IATA : II
14.5 Environmental hazards		
ADR/RID : no	IMDG : Marine pollutant: no	IATA : no
14.6 Special precautions for user		
Tunnel restriction code	: (D/E)	
Further information	: No data available	

## **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 : ACUTE TOXIC Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : 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

A Chemical Safety Assessment has been carried out for this substance.

# **16. Other information**

Abbreviations and acronyms :

PBT : persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances

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and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

## Further information : None.

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# End of document

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