

Formazin 400FTU / 1000EBC / 8200ppm

For ALL chemical liquids

The reagents or standards may be toxic or otherwise harmful to human health. Observe appropriate precautions when handling and disposing the reagents. Review the appropriate published material safety data sheets regarding the safe handling and disposal of all reagents or standards. Qualified personnel only must prepare the Formazin suspension.

Non-warranty

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Formazin Suspension

Formazin solutions are typically used to calibrate turbidimeters because their use requires less technique and interpretation for accurate and repeatable static laboratory and process measurements.

REAGENTS

a. Turbidity free water:

Pass distilled water through a membrane filter having a pore size no greater than 100 microns, if such filtered water shows a lower turbidity than the distilled water. Discard the first 945 ml collected. If filtration does not reduce turbidity, use distilled water.

b. Stock turbidity suspension:

- 1) - Dissolve 5g hydrazine sulfate, (NI-12) 2.H₂S₀₄, in 945ml distilled water by using a magnetic stirrer.
- 2) - Add 50g hexamethylenetetramine, (CH₂)₆N₄,
Dissolve the suspension by using a magnetic stirrer.
- 3) - Allow to stand 24 hr. at 20 °C (±2 °C)
The turbidity of this suspension is 4000 FTU / 1000EBC / 8200ppm.
- 4) - Fill the suspension into a sterile bottle

Standards with lower turbidity values can be made by diluting the suspension.

Formazin Suspension

Storing and Handling of the Suspension

- Do not transfer the suspension to another container for storage. Store standards between 5 and 25 °C (avoid exposure to temperatures exceeding 40°C).
- For long-term storage (more than one month between use) refrigerate at 5 °C.
- Do not place used standard from the sample cells back into the original container. Store dark, away from direct sunlight.

The undiluted suspension has a shelf life of maximum 12 months from date of manufacture in case of a storage temperature of 5°C and light protection.

Correct use of the Suspension

1. Invert the bottle with the suspension repeatedly for 2 – 3 minutes (do not shake). This breaks up the condensed suspension into the original particle size.
2. Let the standard sit undisturbed for 5 minutes.
3. Invert the bottle again carefully two or three times before use.
4. Dilute the suspension in a clean, sterile vessel to the required turbidity standard.
5. Rinse the sample cell at least once with this standard.
6. Fill the clean sample cell carefully with the standard (avoid bubbles) and protect against ambient light.
7. The sample cell containing the standard is now ready for measurement.

Please take notice:

In case of shaking the calibration standard, it will take up to 10 hours until all bubbles are escaped. Do not shake the standard before use!

**FORMAZIN TURBIDITY SAFETY DATA SHEET
SUSPENSION 4000 FTU / 1000EBC / 8200ppm**

According to Regulation (EC) No 1907/2006

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME: Formazin Turbidity Suspension 4000 FTU / 1000EBC / 8200ppm
PRODUCT NO.: C402-0970-FO & C402-0971-FO
APPLICATION: General Chemical Reagent
SUPPLIER: Chemtronic Waltemode GmbH
40789 Monheim am Rhein
Germany

Emergency Telephone: +49-(0)211-882280-0 (Mo-Fr 08:00-12:00 & 14.00-17:00)
E-mail: info@schulzchemie.de

2 HAZARDS IDENTIFICATION

May cause sensitisation by inhalation and skin contact.

CLASSIFICATION R42/43.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
METHENAMINE	202-905-8	100-97-0	5-10%	F;R11 R42/43

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES**INHALATION**

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

INGESTION

Do not induce vomiting. Immediately rinse mouth and drink plenty of water. Get medical attention immediately!

SKIN CONTACT

Immediately remove contaminated clothing and wash before re-use. Wash the skin immediately with soap and water. In serious cases or if discomfort continues obtain medical attention.

EYE CONTACT

Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids. If possible remove any contact lenses and continue to wash. Get medical attention.

5 FIRE-FIGHTING MEASURES**EXTINGUISHING MEDIA**

Water spray, dry powder or carbon dioxide.

SPECIFIC HAZARDS

In cases of fire, toxic fumes may be formed. Nitrous gases (NOx). Hydrogen cyanide (HCN). Ammonia or amines.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Wear protective clothing as described in Section 8 of this safety data sheet.

FORMAZINE TURBIDITY CONCENTRATE 4000 FTU

SPILL CLEAN UP METHODS

Absorb in vermiculite, dry sand or earth and place into containers. Wash contaminated area with water.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry and cool place.

STORAGE CLASS

Chemical storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Provide adequate ventilation including appropriate local extraction to maintain airborne concentrations at a low level.

RESPIRATORY EQUIPMENT

In case of inadequate ventilation use suitable respirator.

HAND PROTECTION

Use protective gloves. Rubber or plastic

EYE PROTECTION

Wear safety glasses. If risk of splashing, wear safety goggles or face shield.

OTHER PROTECTION

Wear suitable protective clothing as protection against splashing or contamination. Provide eyewash station and safety shower.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet or contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOUR	Milky.
ODOUR	Amine.

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat.

MATERIALS TO AVOID

Strong oxidising substances. Hydrocarbons - halogenated. Peroxy compounds.

HAZARDOUS DECOMPOSITION PRODUCTS

Formazine is produced by reaction between hexamine (methenamine) and hydrazine sulphate. Small quantities of hydrazine sulphate (Carcinogen Category 2) may be formed in a reverse reaction.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 569 (Hexamine) mg/kg (oral-mouse)

INHALATION

May cause sensitisation by inhalation. May cause irritation to the respiratory system.

INGESTION

Irritation of the mouth, the oesophagus and the gastrointestinal tract. Toxic effect on: kidneys

SKIN CONTACT

May cause sensitisation by skin contact.

EYE CONTACT

Irritating to eyes.

FORMAZINE TURBIDITY CONCENTRATE 4000 FTU

OTHER HEALTH EFFECTS

Contains Hexamine (Methenamine): Found to cause cancer in laboratory animals.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

ADR CLASS	No transport warning sign required. Not classified for transportation.	MARINE POLLUTANT	No.
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15 REGULATORY INFORMATION

LABELLING



Harmful

CONTAINS

METHENAMINE

RISK PHRASES

R42/43 May cause sensitisation by inhalation and skin contact.

SAFETY PHRASES

S23	Do not breathe vapour/spray.
S24	Avoid contact with skin.
S37	Wear suitable gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S60	This material and its container must be disposed of as hazardous waste.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. COSHH essentials: Easy steps to control chemicals. Control of Substances Hazardous to Health Regulations.

GUIDANCE NOTES

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37.

NATIONAL REGULATIONS

Control of Substances Hazardous to Health Regulations 2002 (as amended)

16 OTHER INFORMATION

REVISION COMMENTS

General rewrite Change to section 1

REVISION DATE 25/09/2008

REV. NO./REPL. SDS GENERATED 1

SDS NO. 10099

RISK PHRASES IN FULL

R11 Highly flammable.