



Sina Chemical Industries Co. (Public Joint Stock)

Profile



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Overview

Sina Chemical Ind. Co. plants of FA 37-42 Percent, Hexamine min 99.5 Percent, Paraformaldehyde min 98 Percent Powder, benefits a well managed architectural back bone based on BIP England and Josef Meissner Germany, established on 1985 and was put into production on year 1990.

Current Situation

Thanks god that by now Sina chem. Ind. Co has the ability to design, construct and commission 100 TPD Formalin plants along with silver regeneration technology and other derivatives plants at any place inside or outside Iran.

Production Units

Sina and her affiliated companies produce following chemicals:

1) **REGULAR PRODUCTS :**

- A) Formalin 37– 42 Percent
- B) Hexamine Min. 99.5 Percent
- C) Paraformaldehyde 96 Percent Powder
- D) UFC 85 Percent

2) **BY ORDER PRODUCTS (OPTIONAL):**

- E) UF Glue Powder
- F) Fortified Rosin size for paper sizing
- G) Purified Phenolic resin for break, clutch and abrasive
- H) Oil Products



A) Formalin (CH₂O)

Capacity: 70,000 MTPY

Commercially, formaldehyde is marked chiefly in the form of aqueous solutions containing 37-52 percent by weight dissolved formaldehyde.

Higher concentration of formalin contains sufficient methanol to prevent precipitation of polymer under ordinary conditions of transportation and storage.



UN No.	2209
IMDG Code	8176-1
IMCO Class	8

CAS Number	50-00-0
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EC Number	200-001-8
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A-1) Specification:

Spec.	Result
Appearance	Colorless liquid
Formaldehyde wt%	37 - 42
Methanol * wt%	Min. 3
Acidity wt%	Max. 0.05
PH	2.4 - 4
SPG gr/cm ³	1.09 - 1.12
Iron Content	Nil



* Higher Methanol content can be adjusted upon request.

A-2) Application:

- Polyacetal
- Amino Resins
- Phenolic Resins
- MDI
- Pentaerythritol
- Synthetic Rubber
- TMP, TME, NPG
- Paraformaldehyde
- Hexamethylenetetramine
- Other

A-3) Storage:

If kept in room or at slightly higher temperature in a non corrosive tank, it will avoid polymerization and contamination.

A-4) Packaging:

- In 220 Liter net HM-HDPE drums, 4 drums on pallet, 20 pallets = 18.4 MT net in 20 FCL.
- In 24-25 MT net Iso tanks.

B) Hexamine (C₆H₁₂N₄)

Capacity: 5000 MTPY

Hexamine is formed by the reaction of formaldehyde and ammonia, it reacts as formaldehyde in many instances and therefore may be regarded as a special form of formaldehyde from the stand point of use.



UN No.	1328
IMDG Code	4033
IMCO Class	4.1
Packing Code	5H3

CAS Number	100-97-0
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EC Number	202-905-8
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B-1) Specification:

B-1-1) Hexamine Unstabilized

Spec.		Result
Appearance		white Crystalline
Purity	wt. %	Min. 99.5
Ash Content	wt. %	Max. 0.03
Humidity	wt. %	Max. 0.2
Ammonia	wt. %	Max. 0.02
Formaldehyde	wt. %	Max. 0.02



Chloride	Nil
Sulphate	Nil
Heavy metal	Nil
PH (10% Aq. soln.)	8 - 9.5
Particle Size μ	80 - 800

Molecular Weight	gr	140.2	
Melting Point	$^{\circ}\text{C}$	270	
Density	gr/cm^3	1.33	
Bulk density	gr/cm^3	0.7 - 0.8	
Solubility In 20 $^{\circ}\text{C}$	Water	wt.%	81.3
	Methanol	wt.%	7.25
	Ethanol	wt.%	2.89
	Acetone	wt.%	0.65

B-1-2) Hexamine Stabilized (0.5Wt% Silica) *

Spec.	Status
Appearance	white Crystalline
Purity wt.%	Min. 99
Ash Content wt.%	Max. 0.03
Humidity wt.%	Max. 0.2
Ammonia wt.%	Max. 0.02
Formaldehyde wt.%	Max. 0.02



Chloride	Nil
Sulphate	Nil
Heavy metal	Nil
PH (10% Aq. soln.)	8 - 9.5
Particle Size μ	80 - 800

B-1-3) Hexamine Stabilized (1 Wt% Silica) *

Spec.	Status
Appearance	white Crystalline
Purity wt. %	Min. 98.5
Ash Content wt. %	Max. 0.03
Humidity wt. %	Max. 0.2
Ammonia wt. %	Max. 0.02
Formaldehyde wt. %	Max. 0.02
Chloride	Nil
Sulphate	Nil
Heavy metal	Nil
PH (10% Aq. soln.)	8 - 9.5
Particle Size μ	81 - 800

* Benzoic, Salycilic,....., and their mineral salts can be supplied by request



B-2) Application:

- Hardener in synthetic resins
- Pharmaceuticals
- Agriculture
- Leather and Textile
- Explosives
- Rubber
- Photography
- Organic chemicals
- Paper
- Oil
- Metal Industry

B-3) Storage:

Hexamine is sensitive to humidity, but is not a hygroscopic substance. It may cake at low humidity, excess pressure and temperature. Suitable storage condition is recommended.

B-4) Packaging: (Group III)

- In 25 kg net PP/PE or a 3 layer pressed Polyethylene bag, 40 bags on pallet, 20 Pallets = 20 MT in 20 FCL.
- In 675 Kg net Jumbo bag without pallet, 30 jumbos = 20.25 MT in 20 FCL.
- In 1000Kg net jumbo bag without pallet, 20 jambo bag =20 MT in 20FCL



C) Paraformaldehyde O-(CH₂O)_n-O

Capacity: 3000 MTPY

Paraformaldehyde is the commercial linear polymer of formaldehyde. It is the mixture of low molecular weight of polyoxymethylene glycols. The polymer behaves chemically as a solid form of formaldehyde. It is much more stable and suitable both for storage and economical transportation.

UN No.	2213
IMDG Code	4164
IMCO Class	4.1

CAS Number	30525-89-4
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EC Number	200-001-8
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C-1) Specification:

Spec.	Result
Appearance	White Crystalline Powder without visible impurities
Assay (as Formaldehyde)	Min. 96
Ash Content wt. %	Max. 0.1
Acidity (As Formic Acid)	Max. 0.05
Fe wt. %	Max. 0.002
Average Molecular weight	240 – 3000
Average Chain Length	8 – 100
Melting Point °C	120 – 170
Flash Point °C	71



Mesh Analysis	mm	2-3
Particle size through 200	mesh	Max. 3

C-2) Application:

- Thermosetting resins
- Coating resins, Enamels
- Glyphosate
- Disinfectants, insecticides & pesticides
- Fungicide and bactericide
- Ion exchange resins
- Abrasives
- Pharmaceuticals
- Textile dyes & special plasticizers
- Automotive paints and Stoving finishes
- Electro coatings and water born finishes
- Ink industries

C-3) Storage:

In tightly closed bags prevented from direct sun light and humidity.

C-4) Packaging:

- In 25 kg net PP/PE or 3 layer pressed Polyethylene bag, 40 bags on pallet, 20 Pallets = 20 MT in 20 FCL.
- In 675 Kg net Jumbo Bag without pallet, 30 jumbos = 20.25 MT in 20 FCL.



D) UFC 85

Capacity: 15000 MTPY

UFC is a concentrated Urea Formaldehyde solution. It is an intermediate compound, known as TMU (Tetra Methylol Urea) and Formurea. Its long storage time, high solid and low water content, proper fluidity, water white appearance, makes it an excellent chemical for various industrial purposes.

UN No.	2209
IMDG Code	8176-1
IMCO Class	8

D-1) Specification:

Spec.		Result
Color	Pt-Co	30
SPG	gr/ cm ³	1.310 – 1.323
Refractive index		1.475 - 1.480
PH		6.5 - 7.5
Urea	wt.%	25 ± 0.5
Formaldehyde	wt.%	60 ± 0.5
Water		Balance
Flash Point	°C	≤ 100
Ash	wt.%	< 0.001
Acidity	wt.%	Max. 0.010
Solubility		Complete



Chloride	p.p.m	< 1
Methanol	wt.%	0.3 - 0.7
Viscosity	CP	300 - 400

D-2) Application:

- Conditioner / Urea anti caking agent
- Slow release fertilizer
- Urea formaldehyde resins
- UF powdered resin
- UF molding compound
- UF glue / adhesive
- MUF, PUF resins

D-3) Storage:

UFC 85 should be stored above 0°C to avoid excessive viscosity and below 45°C to avoid polycondensation.

Attention: Upon storage, PH needs to be maintained above 6.5

D-4) Packaging:

- In 250 Kg net HM-HDPE drums, 4 drums on pallet, 20 pallet = 20 MT in 20 FCL.
- In 24-26 MT net Iso tanks.



List of products from our sister companies

E) UF Glue Powder (E3) Capacity:

7000 MTPY

UN No.	
IMDG Code	
IMCO Class	
Packing Code	

E-1)

Specification:

Spec.	Result
Appearance	White free flowing powder
Volatile wt. %	Max. 3
Bulk density Kg/m ³	500 +/- 50

50% solution

PH	7 - 9
Free Formaldehyde wt. %	Max. 1.6
Get time @ 90°C sec.	34 - 45
SPG	1.20 +/- 0.05

2 part resin + 1 part water	CP	2500 - 5000
1 part resin + 1 part water	CP	70 - 300



E-2) Application:

- Particle board
- Ply wood
- Furniture
- Parquet

E-3) Storage:

In tightly closed bags prevented from direct sun light and humidity.

E-4) Packaging: (Group 30)

- In 25 kg net paper bag with 3 layer pressed Polyethylene liner, 40 bags on pallet, 20 Pallets = 15 MT in 20 FCL.

F) Rosin Size

Capacity: 3500 MTPY

It is among paper sizing chemicals, manufactured by special modification of fortified rosin.

F-1) Specification:

Spec.	Result
Appearance	Medium viscous light brown solution
Solid wt. %	50 ± 1
PH (2 Wt. %)	9.80-10.50
viscosity @ 35°C Sec.	28-30

F-2) Application:

- paper sizing and paper board



Preparation: Dilute to a 1-3 3 wt%.

F-3) Storage:

If it is kept in closed container, will last long.

F-4) Packaging:

- In 220 Kg net Iron Drums, 4 drums on pallet, 20 pallets = 17.6 MT in 20 FCL.

G) Phenolic resin

Capacity: 220 MTPY

It is a Novolak Phenol resin. Modified resins are available on request.

G-1) Specification: DIN NO.16916

Spec.	Result
Melting Range * °C	70-80
Flow length @ 125°C * mm	65-95
B-time @ 125°C sec	80-120
Hexa content wt. %	8.5- 9.5
Free Phenol wt. %	≤ 1
Ash wt. %	Max. 0.1
Solubility in Alcohol and acetone	Complete
Screen analysis (98%) micron	63-80
Storage life @ 20°C	2 months

* Adjustable on request.



G-2) Application:

- Brake and clutch industries
- Abrasives

G-3) Storage:

To be kept in tightly closed bags and low temperature place.

G-4) Packaging:

- In 25 Kg net PP/PE bags, 40 bags on pallet, 20 Pallets = 20 MT in 20 FCL.

H) OIL PRODUCTS :

- Octane enhancer.
- Advanced pyrolysis gasoline (Benzen Free).
- Pour point decreaser .
- Dispersing oil agent.
- Energetic powder for alc. Fuel.
- Emulgator for gasoline & gasoil.
- Jet fuel additives.
- Synthetic motor oil.

Also:

- We have the ability to check and control completeness of similar technology if such a contract is signed.
- We design and construct water treatment system to produce water with less than one micro siemens electrical conductivity.
- We design utility systems
- We design atmospheric and pressure vessels.

Market

Sina is continuously evaluating her position, finds and solves her diagnosis to supply lean products to the market.

Export:

We export to following countries:

- 1) European countries (Germany, Belgium, Spain, Austria, England, Malta)
- 2) Gulf Countries(UAE, Saudi Arabia, Kuwait)
- 3) Asia (Turkey , India, Malaysia, Pakistan)
- 4) Philippines, Indonesia, Thailand, Vietnam, Japan, S. Korea, Jordan, Myanmar, Turkmenistan)
- 5) Pacific (Australia, New Zealand)
- 6) Africa (Egypt, S. Africa, Libya, Nigeria)

Future Plan

- 1) 10 year strategic planning now is set for the management to improve quality, cost & delivery of the products to satisfy her customers/clients.
- 2) The management aims to expand & invest on value added products.

The engineering department strategy is to co operate transfer of technology with interested sectors.