



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 31.10.2018

Revision: 31.10.2018

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name: 14% Formaldehyde**
- **Synonyms: 14% Formalin**
- **Relevant identified uses of the substance or mixture and uses advised against :**
- **Identified/Recommended uses:**
 - Preservative
 - Fertiliser
 - Bactericide
 - Disinfectant
 - Dyestuff/Colouring agent
 - Reducing agent/ Deoxidiser
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - Chang Chun Plastics Co. Ltd.
 - 7th Fl., No. 301, SongJiang Rd.
 - Taipei City, 10483, TAIWAN
 - Tel: +886-2-2500-1800 Fax:+886-2-2501-8018
 - WWW.CCP.COM.TW
- **Further information obtainable from: SDS-info@ccp.com.tw**
- **Emergency telephone number:** During normal opening times: +886 2 2500 - 1800 (8:30-17:30; GMT+8)

2 Hazards identification

- **Classification of the substance or mixture:**
 - Acute Tox. 4 H302 Harmful if swallowed.
 - Acute Tox. 4 H312 Harmful in contact with skin.
 - Acute Tox. 4 H332 Harmful if inhaled.
 - Skin Irrit. 2 H315 Causes skin irritation.
 - Eye Dam. 1 H318 Causes serious eye damage.
 - Skin Sens. 1 H317 May cause an allergic skin reaction.
 - Muta. 2 H341 Suspected of causing genetic defects.
 - Carc. 1B H350 May cause cancer.
 - STOT SE 2 H371 May cause damage to the central nervous system and the eyes. Route of exposure: Inhalation.
 - Aquatic Acute 3 H402 Harmful to aquatic life.

- **Label elements:**
- **Hazard pictograms:**



GHS05 GHS07 GHS08

- **Signal word: Danger**
- **Hazard-determining components of labelling:**
 - formaldehyde
 - methanol
- **Hazard statements:**
 - Harmful if swallowed, in contact with skin or if inhaled.
 - Causes skin irritation.
 - Causes serious eye damage.

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- May cause an allergic skin reaction.
- Suspected of causing genetic defects.
- May cause cancer.
- May cause damage to the central nervous system and the eyes. Route of exposure: Inhalation.
- Harmful to aquatic life.
- **Precautionary statements:**
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER/doctor.
- Specific treatment (see on this label).
- Rinse mouth.
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture: consisting of the following components.

- **Dangerous Components:**

50-00-0	formaldehyde Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Acute 2, H401	14.0-14.8%
67-56-1	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	<4%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **After inhalation:**
- Supply fresh air; consult doctor in case of complaints.
- Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
- Immediately wash with water and soap and rinse thoroughly.
- If skin irritation continues, consult a doctor.
- **After eye contact:**
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Seek immediate medical advice.
- **After swallowing:**
- Do not induce vomiting; call for medical help immediately.
- Rinse mouth thoroughly with water.
- **Most important symptoms and effects, both acute and delayed:**
- Headache
- Dizziness
- Allergic reactions
- Irritation

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Shock

Coughing

Shortness of breath

Bronchitis

- **Indication of any immediate medical attention and special treatment needed**

Later observation for pneumonia and pulmonary oedema.

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.

- **Advice for firefighters**

- **Protective equipment:**

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

Use respiratory protective device against the effects of fumes/dust/aerosol.

- **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dilute with plenty water.

Ventilate the area.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Keep receptacles tightly sealed.

Use only in well ventilated areas.

Wear protective gloves/protective clothing/eye protection/face protection.

Do not get in eyes, on skin, or on clothing.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Use explosion-proof apparatus / fittings and spark-proof tools.

Fumes can combine with air to form an explosive mixture.

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- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in cool, dry place in tightly closed receptacles.
Provide ventilation for receptacles.
- **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

50-00-0 formaldehyde

PEL (USA)	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)
REL (USA)	Long-term value: 0.016 ppm Ceiling limit: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (USA)	Short-term value: 0.37 mg/m ³ , 0.3 ppm Long-term value: 0.12 mg/m ³ , 0.1 ppm DSEN; RSEN
TLV (Korea)	Short-term value: 1.5 mg/m ³ , 1 ppm Long-term value: 0.75 mg/m ³ , 0.5 ppm

67-56-1 methanol

PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (USA)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI
IOELV (EU)	Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (Korea)	Short-term value: 310 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin

Ingredients with biological limit values:

67-56-1 methanol

BEI (USA)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Be sure to clean skin thoroughly after work and before breaks.

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Ensure that washing facilities are available at the work place.

- **Respiratory protection:**

Organic vapour/particulate respirator conforming to EN143 type P3 should be worn.

- **Protection of hands:**

The selected protective gloves have to satisfy the specifications of standard EN 374 or its equivalent.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses with side shields conforming to EN166, ANSI 87.1-2010, or equivalent.

- **Body protection:** Solvent resistant protective clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Solution

Colour: Colourless

- **Odour:** Pungent

- **pH-value:** 2-6

- **Change in condition**

Melting point/freezing point: 0 °C

Initial boiling point and boiling range: 98 °C

- **Flash point:** 99 °C (Close-cup)

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 454 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower: 7.0 Vol %

Upper: 73.0 Vol %

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- **Vapour pressure at 38 °C:** 6.3 kPa
- **Density at 20 °C:** 1.025-1.065 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Soluble.
- **Partition coefficient: n-octanol/water:** 0.35 log POW
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity:** When properly handled and stored, no dangerous reaction is known.
- **Chemical stability:** This product is stable under prescribed use and storage.
Stabilizer: Methanol
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** Forms explosive gas mixture with air.
Violent reactions with strong alkalis and oxidising agents.
- **Conditions to avoid:** Protect from heat. Keep ignition sources away.
- **Incompatible materials:**
 - Phenols
 - Peroxides
 - Isocyanates.
 - Amines.
 - Anilines
 - Strong oxidizing agents
 - Strong acids
 - strong alkalis
 - Reducing agents.
 - Anhydride.
 - Alkali metals
- **Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
 - Harmful if swallowed.
 - Harmful in contact with skin.
 - Harmful if inhaled.

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· LD/LC50 values relevant for classification:		
50-00-0 formaldehyde		
Oral	LD50	>200 mg/kg (rat)
Inhalative	LC50	0.578 mg/l (rat)

- **Skin corrosion/irritation:** Causes skin irritation.
- **Serious eye damage/eye irritation:** Causes serious eye damage.
- **Respiratory or skin sensitization:** May cause an allergic skin reaction.
- **Germ Cell Mutagenicity:** Suspected of causing genetic defects.
- **Carcinogenicity:**
May cause cancer.
Indication of possible carcinogenic effect in animal tests.
The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to occurrence of nasopharyngeal cancer.
- **Reproductive Toxicity:** Not classified based on available data.
- **Specific Target Organ Toxicity - Single Exposure (STOT SE):**
May cause damage to the central nervous system and the eyes. Route of exposure: Inhalation.
- **Specific Target Organ Toxicity - Repeated Exposure (STOT RE):**
Not classified based on available data.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong caustic effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 1B

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Harmful to aquatic life.
- **Persistence and degradability**
Easily biodegradable
Component: Formaldehyde (CAS No 50-00-0)
O2 consumption: 86% (14d, OECD Guideline 301C)
- **Bioaccumulative potential**
Formaldehyde will quickly break down into carbon dioxide and water within body.
Bioconcentration Factor (BCF) : <1
- **Mobility in soil**
Product undergoes decomposition when release into soil regardless aerobic/anaerobic environment.
Component: Formaldehyde (CAS No 50-00-0)
Partition coefficient, soil organic carbon/water (Koc) : 15.9
Henry's Law Constant (H) : 0.034 Pa · m³/mol (37%FM@25 °C)
- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Any disposal method should also comply with national, regional, provincial, and local laws.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Dangerous Goods classification Status:** This product is only classified as dangerous goods under IATA. In other modes of transport, it is classified as a non-dangerous goods.
- **UN-Number**
- **ADR** Not a dangerous good under ADR
- **ADN** Not a dangerous good under ADN.
- **IMDG** Not a dangerous good under IMDG.
- **IATA** UN3334
- **UN proper shipping name**
- **ADR, ADN, IMDG** None (Not a Dangerous Good)
- **IATA** Aviation regulated liquid, n.o.s.
- **Transport hazard class(es)**
- **IATA**
- 
- **Class** 9 Miscellaneous dangerous substances and articles.
- **Label** 9
- **Packing group**
- **ADR, IMDG** None (Not a Dangerous Good)
- **IATA** III
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport/Additional information:**
- **IATA**
- **Remarks:** Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.
- **UN "Model Regulation":** This product is only classified as dangerous goods under IATA. In other modes of transport, it is classified as a non-dangerous goods.

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **Status of global inventories:**
 - USA – TSCA
 - Australia – AICS
 - Canada – DSL
 - China – IECSC
 - EU – EINECS/NLP
 - Japan – ENCS
 - Korea – KECI
 - New Zealand – NZIoC
 - Philippines – PICCS
 - Taiwan – TCSI
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - Flam. Liq. 2: Flammable liquids – Category 2
 - Acute Tox. 3: Acute toxicity – Category 3
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Skin Sens. 1: Skin sensitisation – Category 1
 - Muta. 2: Germ cell mutagenicity – Category 2
 - Carc. 1B: Carcinogenicity – Category 1B
 - STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
 - STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
 - Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3
- **Sources**
Most toxicological and eco-toxicological data are obtained from European Chemical Agency (ECHA)'s public dissemination website.
- **General Disclaimers:**
CCP Group recommends that all the users/customers/recipients to study this Safety Data Sheet (SDS) carefully and understand all the data or any potential hazards associated with this product. Please consult with appropriate expert if necessary. The information herein is provided in good faith and is believed to be accurate on the date of issue. No warranty, expressed or implied, is given. It is the customer's/user's responsibility to ensure that they are complying with local, regional, state, provincial, and/or national laws in using this product, as regulatory requirement may differ at each level. It is also the customer's/user's

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responsibility to determine the necessary condition required for using this product safely, as actual operating or usage conditions are beyond CCP Group's control. CCP Group will not be responsible for any SDS obtained from elsewhere other than from CCP Group. If you are unsure whether the SDS you have is current or have obtained the SDS from another source; please contact us to obtain the latest version.

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