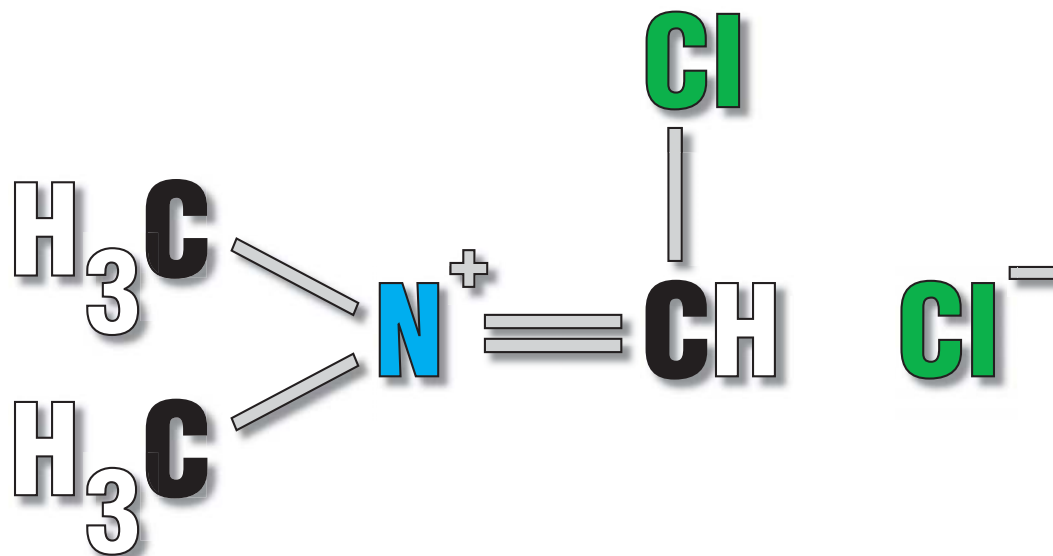


## Vilsmeier Reagent

(CHLOROMETHYLENE)DIMETHYLAMMONIUM CHLORIDE  
N,N-Dimethylchloromethyleneiminium Chloride  
DMF-COCl<sub>2</sub> Vilsmeier-Haack Reagent



Molecular Weight = 128  
CAS #3724-43-4

### SPECIFICATIONS

	Assay	DMF	Fe (ppm)	Ni (ppm)	Cr (ppm)
90% Grade	90% min.	10% max.	12 max.	3 max.	2 max.
95% Grade	95% min.	5% max.	12 max.	3 max.	2 max.
97% Grade	97% min.	3% max.			

### PHYSICAL PROPERTIES

Appearance: White Crystalline Solid

FW: 128.00

MP: 139 - 141°C <sup>(1)</sup>(dec.)

Solubility: 26% in Chloroform

<sup>(1)</sup>(97% Grade)

Vapor Pressure: < 100 Pa (20°C)

Bulk Density: 0.756 kg/m<sup>3</sup>

Flash Point: > 200°F

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**APPLICATIONS**

Vilsmeier Reagent is a stable, free-flowing, crystalline solid prepared from dimethylformamide (DMF) and carbonyl dichloride (phosgene). It is available in several grades depending on the customer's requirements. The use of VanDeMark's pre-formed Vilsmeier Reagent eliminates the need of the user to handle highly toxic phosgene, thionyl chloride, phosphoryl chloride or oxalyl chloride to generate a reagent.

Vilsmeier Reagent has been found to be useful in dehydration, chlorination, and formylation reactions. VanDeMark's Vilsmeier Reagent is one of the purest that can be produced, reducing by-product formation in reactions and simplifying workup. The overall utility of Vilsmeier Reagents in effecting chemical transformations can be found in the references below. The effectiveness of the (chloromethylene) dimethylammonium chloride in any specific reaction in which a Vilsmeier Reagent is used must be determined beforehand, as its reactivity can vary.

**SAFETY AND HANDLING**

Vilsmeier Reagent is classified as a Corrosive Solid, NOS. The product is stable under normal conditions, but will decompose at elevated temperatures and will react violently with water, emitting toxic hydrogen chloride fumes. An organic vapor respirator, approved for use with dimethylformamide, and with a high efficiency particulate filter must be worn when handling this product to provide respiratory protection. Also, acid resistant clothing, gloves, boots and goggles must be worn to provide body protection. Consult the MSDS for more information.

**FIRST AID**

Seek immediate medical attention. Show MSDS to doctor.

**Eye Contact:** Rinse immediately with copious amounts of water for at least 15 minutes. Do not rub.

**Skin Contact:** Wash immediately with soap and water, removing all contaminated clothing and shoes.

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- Ingestion:** Remove from exposure and lie down. Clean mouth with water and then drink plenty of water. Do not induce vomiting without medical advice.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**SPILLS AND DISPOSAL**

Use appropriate PPE (see MSDS). Ensure adequate ventilation. Evacuate personnel to safe areas. Cover powder spills with plastic sheet or tarp to minimize spreading and keep powder dry. Prevent dust cloud. Prevent product from entering drains. DO NOT use water or wet materials for cleaning up. Sweep up and shovel into suitable containers for disposal. Clean contaminated surfaces thoroughly. After cleaning, flush away traces with water. Dispose of contaminated product as hazardous waste. Dispose of empty containers according to local regulations. DO NOT reuse empty containers.

**STORAGE**

The product should be refrigerated and has a recommended shelf life of 6 months when stored below 15°C; however this can be greatly extended by reducing the storage temperature to below 0°C. The product should be stored in its original, sealed containers to maintain product quality and integrity. Consult the MSDS for more information.

**PACKAGING AND SHIPPING**

All grades of VanDeMark's Vilsmeier Reagent are available in either 25 kg or 50 kg containers. The product is sealed under nitrogen in double polyethylene bags and packaged in fiber drums. Vilsmeier Reagent can be shipped via truck, rail, ship and cargo air. Customer specific packaging can be considered upon request.

**EMERGENCY RESPONSE**

\*Contact CHEMTREC 1-800-424-9300 in case of a transportation incident.

\*Contact VanDeMark 1-716-433-6764 for all other incidents.

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