

Manufacturer of Chlorinated Chemicals



About Anugrah

At **ANUGRAH**, we take pride in being a leader in the Indian chemical intermediates industry. Since our establishment in 2001, we have built a strong reputation for delivering high-quality chemical products to both domestic and international markets.

Headquartered in Vadodara, Gujarat, our state-of-the-art manufacturing facilities and commitment to innovation have been the foundation of our success. To meet growing market demand, we have made significant capital investments and expanded our operations with a new, world-class manufacturing plant in the Dahej Industrial Area, Gujarat—one of India's most rapidly developing industrial hubs.

Spanning over approx. 60,000 square meters, this advanced facility, became operational in March 2024, further strengthening our production capabilities and commitment to excellence.

Our Cutting-Edge Manufacturing Facility

Our new Dahej plant is equipped with advanced technology and automation systems, enabling us to deliver precision and efficiency in production. The facility has an initial monthly production capacity of:

- Mono Chloro Acetic Acid (MCAA): 2,000 MT
- Sodium Mono Chloro Acetate (SMCA): 500 MT
- Glycine: 500 MT
- Glycolic Acid (70%): 500 MT
- Other Allied Products: 500 MT

Certified with ISO 9001:2015 and additional accreditations like Halal, Kosher, GMP, and HACCP, the plant adheres to the highest international quality standards.



Our Commitment to Excellence

We specialize in the production of Mono Chloro Acetic Acid (MCAA), its derivatives, and other chlorinated products, serving industries such as:

- Organic Chemicals
- Agrochemicals
- Pharmaceuticals
- Surfactants
- Oil Field Chemicals
- Specialty Chemicals

Our unwavering focus on quality, sustainability, and innovation has positioned us as a trusted partner in these industries. With one of the most advanced pollution control systems and safety systems, we are committed to environmental & safety related responsibility and creating a greener and safe future.

Driving Growth Through Innovation

From our humble beginnings in 2001, we have scaled our production capacity from 1,000 MPTA to 24,000 MPTA through continuous innovation and strategic investments. Our dedicated R&D and Engineering teams play a critical role in developing cutting-edge solutions and optimizing production processes.

Our Achievements Include:

- Perfecting the production processes for MCAA and SMCA.
- Developing advanced MCAA derivatives, including Methyl MCAA and Isopropyl MCAA, through extensive R&D efforts.

At ANUGRAH, we remain committed to advancing the chemical industry with sustainable solutions, unparalleled product quality, and exceptional customer satisfaction.



Mono Chloro Acetic Acid (MCAA) (CAS#79-11-8) & Sodium Salt of MCAA (SMCA) (CAS#3926-62-3)

ANUGRAH is one of the India's key player in MCAA, which is produced at both facility in India. MCAA plants at vadodara as well as Dahej follows international manufacturing standards and as well equipped with the latest scientific instruments for quality control and assurance. ANUGRAH is recognised as a reliable MCAA producer with the required focus on safety and superior logistics.

MCAA crystals are hygroscopic crystalline substance with a characteristic pungent odour and classified as Hazardous, Toxic and Corrosive.

SMCA is a white hygroscopic powder and is also classified as Hazardous Toxic and corrosive

Applications

MCAA and SMCA are used directly or indirectly as an important intermediate to produce

| End Product | Uses |
|--|---|
| Carboxy Methyl Cellulose (CMC) Poly Anionic Cellulose (PAC) | Thickening agent for food, oil, mining, personal care products, detergents, adhesives |
| 2,4-Dichlorophenoxy acetic acid(2,4-D), Dimethoate, Glyphosate, 2-Methyl-4-Chloro Phenoxy-Acetic Acid (MCPA) | Crop Protection Chemicals |
| Thioglycolates | Thermo Stabilizers for PVC, Hair care and other cosmetics |
| Carboxymethyl Starch, Cynoacetic acid (incl, Esters) Malonates | Adhesives |
| Betaines, Imidazolines, Ethercarboxylic Acids, EDTA | Surfactants, Sequestering agents |
| Chloro Acetyl Chloride (CAC), Glycine, Phenoxyacetic Acid | Pharmaceuticals |
| Cynoacetic Acid (Caffeine) | Food Products |

Quality Assurance

ANUGRAH has a state of the art facilities for Chemical and Analytical testing. Control samples are preserved and maintained in closed containers. All shipments are comprehensively tested and inspected before dispatch.

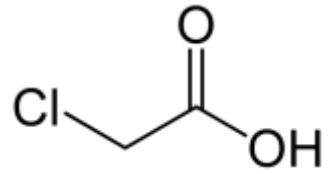
Following Quality Tests are performed on MCAA & SMCA Raw Materials and Finished Product:

| | |
|-------------------------|--|
| Acetic Acid | Purity By Chemical Analysis and other Parameters likes, Freezing Point, Formic Acid and Acetaldehyde are tested as per International Standard. |
| Chlorine | Supplier Test Methods and it is Validated in our Laboratory |
| MCAA | Purity by Gas Chromatography (GC) |
| Set Point Test | Measured by Chemical Analysis |
| Moisture Content | Estimated by Karl Fischer Test (KF) |
| Heavy Metals | By Atomic Absorption Spectrophotometry (AAS) |



Mono Chloro Acetic Acid (MCAA)

- » **Product :** Monochloroacetic Acid
- » **CAS Reg No :** 79-11-8
- » **Molecular Weight :** 94.5
- » **Molecular Formula :** C₂H₃ClO₂
- » **Appearance :** White Deliquescent Crystals
- » **Specifications :**

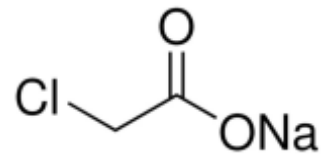


| Item | | Value | Testing Method |
|-------------------------|-----|--------|----------------|
| Mono Chloro Acetic Acid | NLT | 99.25% | GC |
| Dichloro Acetic Acid | NMT | 00.50% | GC |
| Acetic Acid | NMT | 00.25% | GC |
| Moisture Content | NMT | 00.50% | Kari Fischer |
| Iron | NMT | 10 ppm | AAS |
| Heavy Metal (as Pb) | NMT | 10 ppm | AAS |

- » **UN No :** 1751
- » **Storage :** Store in a closed ventilated & shaded area.
- » **IMCO Class :** 6.1(8)
- » **Precaution :** Avoid contact with skin and eyes.
- » **Uses :** Mono Chloro Acetic Acid is used as a versatile intermediate in the manufacturing of various Agrochemicals viz 2, 4-D, Glyphosate etc. It is widely used as a main raw material for various pharmaceuticals viz. Ibuprofen, Dichlofenac, etc. & in the manufacturing of Carboxy Methyl Cellulose (CMC) and Coco Amido Propyl Betaine (CAPB).
- » **Packing :** 25/50 Kgs Net HDPE Bags with Inside Liner. 500/1050 Kgs. PP FIBC Jumbo Bags.

Sodium Mono Chloro Acetate (SMCA)

- » **Product :** Sodium Salt of Mono Chloro Acetic Acid
- » **CAS Reg No :** 3926-62-3
- » **Molecular Weight :** 116.48
- » **Molecular Formula :** C₂H₂ClNaO₂
- » **Appearance :** White Free Flowing Powder
- » **Specifications :**



| Item | | Value | Testing Method |
|---------------------------|-----|---------|----------------|
| SMCA Purity (ondry basis) | NLT | 98.00 % | GC |
| Sodium Chloride | NMT | 1.00 % | Titration |
| Sodium Dicholoro Acetate | NMT | 0.50% | GC |
| Sodium Glycolate | NMT | 0.30% | GC |
| Free Monochloroacetic | NMT | 0.20% | GC |
| Moisture | NMT | 2.00% | Kari Fischer |
| pH of 5% solution | | 6 to 8 | pH Meter |

- » **UN No :** 1751
- » **Storage :** Store in a closed ventilated & shaded area
- » **IMCO Class :** 6.1(8)
- » **Precaution :** Avoid contact with skin and eyes
- » **Packing :** 25/50 Kgs Net HDPE Bags with Liner Inside . 500/1050 Kgs. PP FIBC Jumbo Bags.

Mono Chloro Acetic Acid Aqueous Solution

» **Product :** Mono Chloro Acetic Acid, technical pure, 80% aqueous solution

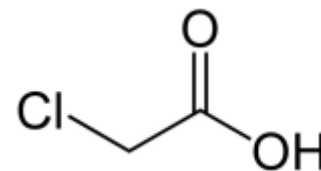
» **Molecular Weight :** 94.5

» **CAS Reg No :** 76-11-8

» **Appearance :** Clear Colourless Liquid

» **Molecular Formula :** C₂H₃ClO₂

» **Specifications :**



| Item | | Value | Testing Method |
|-----------------------|-----|------------|----------------|
| Monochloroacetic Acid | NLT | 99.25% | GC |
| Dichloroacetic Acid | NMT | 00.50% | GC |
| Acetic Acid | NMT | 00.25% | GC |
| Total Acid Content | W/W | 79-80% | Titration |
| Water Content | W/W | 21.00% Max | Karl Fischer |
| Iron | NMT | 10 ppm | AAS |
| Heavy Metal (as Pb) | NMT | 10 ppm | AAS |

» **IMCO :** 1750

» **IMCO Class :** 8

» **Storage :** Store in a closed Ventilated & shaded area.

» **Precaution :** Avoid contact with skin and eyes.

» **Packing :** 250 Kg HM HDPE Barrels, 1200 kgs IBCs or ISO Tanks

» **Uses :** Used as an intermediate in Pharmaceuticals, Textile Auxiliaries and manufactures of Esters & Carboxy Methyl Cellulose

Methyl Mono Chloro Acetate (MMCA)

» **Product :** Methyl Mono Chloro Acetate

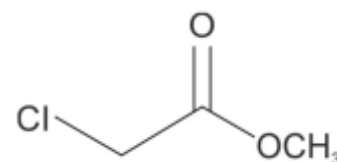
» **CAS Reg No :** 96-34-4

» **Molecular Weight :** 108.52

» **Molecular Formula :** ClCH₂COOCH₃

» **Appearance :** Colorless Lacrimatory liquid with pungent odour.

» **Specifications :**



| Item | | Value | Testing Method |
|----------------------------|----------|---------------------|----------------|
| Methyl Mono Chloro Acetate | NLT | 99.00 % | GC |
| Single Maximum Impurities | NMT | 0.50 % | GC |
| Moisture content | NMT | 0.50 % | Karl Fischer |
| Specific Gravity @ 20oC | Between | 1.230 – 1.240 | |
| Miscibility | Miscible | With Alcohol, Ether | |

» **UN No. :** 2295

» **IMCO Class :** 6.1

» **Storage :** Store it in a cool ventilated & shaded area.

» **Precaution :** Avoid contact with skin and eyes.

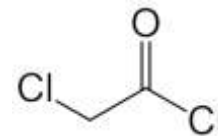
» **Packing :** 30/60 Kgs Net HMHDPE Carboys, 250 Kgs Net HMHDPE Drums

» **Uses :** Widely used in the products productions such as agricultural chemicals, medicine, plastics, dyestuff, rubber, leather etc.

Engineering molecules
Shaping futures.

Chloro Acetyl Chloride (CAC)

- » **Product :** Chloro Acetyl Chloride
- » **Molecular Weight :** 112.94
- » **Appearance :** Colorless to pale yellow clear liquid with pungent odour.
- » **Specifications :**
- » **CAS Reg No :** 79-04-9
- » **Molecular Formula :** C₂H₂Cl₂O

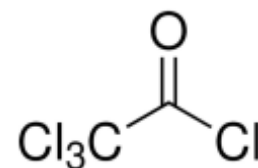


| Item | | Value | Testing Method |
|---------------------------|---------|---------------|----------------|
| Chloro Acetyl Chloride | NLT | 98.00 % | GC |
| Di Chloro Acetyl Chloride | NMT | 1.00 % | GC |
| Sulphur related content | NMT | 0.20 % | Iodometric |
| Specific Gravity @ 20oC | Between | 1.616 – 1.621 | |

- » **UN No :** 1752
- » **IMCO Class :** 6.1
- » **Packing :** 30/60 Kgs Net HMHDPE Carboys, 250 Kgs Net HMHDPE Drums
- » **Uses :** Used as an intermediate in the production of herbicides in chloroacetanilides family including metolachlor, acetochlor, alchlor and butachlor. As key ingredient in the production of Pharmaceutical, APIs, pesticides and other Chemicals.
- » **Storage :** Store it in a cool ventilated & shaded area.
- » **Precaution :** Avoid contact with skin and eyes.

Tri Chloro Acetyl Chloride (TCAC)

- » **Product :** Tri Chloro Acetyl Chloride
- » **Molecular Weight :** 181.83
- » **Appearance :** Colorless to light yellow clear liquid with pungent odour.
- » **Specifications :**
- » **CAS Reg No :** 76-02-8
- » **Molecular Formula :** C₂Cl₄O



| Item | | Value | Testing Method |
|----------------------------|---------|---------------|----------------|
| Tri Chloro Acetyl Chloride | NLT | 99.00 % | GC |
| Di Chloro Acetyl Chloride | NMT | 0.50 % | GC |
| Chloro Acetyl Chloride | NMT | 0.50 % | GC |
| Specific Gravity @ 20oC | Between | 1.616 – 1.621 | |

- » **UN No. : 2442**
- » **IMCO Class : 8**
- » **Storage :** Store it in a cool ventilated & shaded area.
- » **Precaution :** Avoid contact with skin and eyes.
- » **Packing :** 30/60 Kgs Net HMHDPE Carboys, 250 Kgs Net HMHDPE Drums
- » **Uses :** Used as an intermediate in Pharmaceuticals, Textile Auxiliaries and manufacturers of Esters. Basic Raw Material for Manufacturing of Production of Chlorpyrifos.

Catalyzing success
**One reaction
at a time**



Trichloroacetic Acid (TCAA)

» **Product :** Trichloroacetic Acid

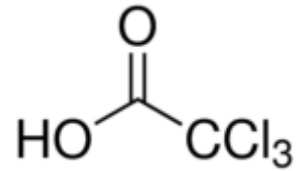
» **Molecular Weight :** 163.4

» **Appearance :** White Deliquescent Crystals

» **Specifications :**

» **CAS Reg No :** 76-03-09

» **Molecular Formula :** C₂HCl₃O₂



| Item | | Value | Testing Method |
|-----------------------|-----|--------|----------------|
| Trichloroacetic Acid | NLT | 98.00% | GC |
| Monochloroacetic Acid | NMT | 01.00% | GC |
| Dichloroacetic Acid | NMT | 01.00% | GC |
| Moisture | NMT | 00.50% | Karl Fischer |
| Iron | NMT | 10 ppm | AAS |
| Heavy Metal (as Pb) | NMT | 10 ppm | AAS |

» **UN No :** 1839

» **Storage :** Store in a closed ventilated & shaded area

» **IMCO Class :** 8

» **Precaution :** Avoid contact with skin and eyes

» **Packing :** 30/60 Kgs net HM HDPE Carboys

» **Uses:** Used as an intermediate in Pharmaceuticals, Textile Auxiliaries and manufacture of Esters

Calcium Chloride (CaCl₂)

» **Product :** Calcium Chloride

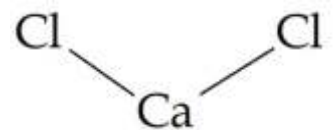
» **Molecular Weight :** 110.98

» **Appearance :** Crystalline Powder

» **Specifications :**

» **CAS Reg No :** 10043-52-4

» **Molecular Formula :** CaCl₂



| Item | | Value | Testing Method |
|------------------------|-----|---------|----------------|
| Calcium Chloride | NLT | 94.00 % | Titration |
| Other Chloride content | NMT | 3.00 % | Titration |
| Other Impurity | NMT | 1.00 % | Titration |
| Moisture content | NMT | 0.50 % | Karl Fischer |

» **UN No :** NA

» **Storage :** Store it in a cool ventilated & shaded area.

» **IMCO Class :** NA

» **Precaution :** Avoid contact with skin and eyes.

» **Packing :** 25/50 Kgs Net HDPE Bags with Inside liner, 500/1000 Kgs PP FIBC Jumbo Bags.

Where every
element counts

Hydrochloric Acid 33%

» **Product :** Hydrochloric Acid (HCL) 33%

» **Molecular Weight :** 36.46

» **Specifications :**

» **CAS Reg No :** 7647-01-0

» **Appearance :** Clear Colourless to Slight Yellow Liquid

| Item | Value |
|--------------------------|-----------------------|
| Strength | 33% (W/W) Min |
| Chloride | 100 PPM Max |
| Iron | 10 PPM Max |
| Specific Gravity @ 25 oC | Between 1.160 – 1.180 |

Uses: It's used industrially to process steel, the material of choice for suspension bridges, cars and trucks. Hydrochloric acid is also used in the production of batteries, photoflash bulbs, and fireworks. It's even used to process sugar and make gelatin.

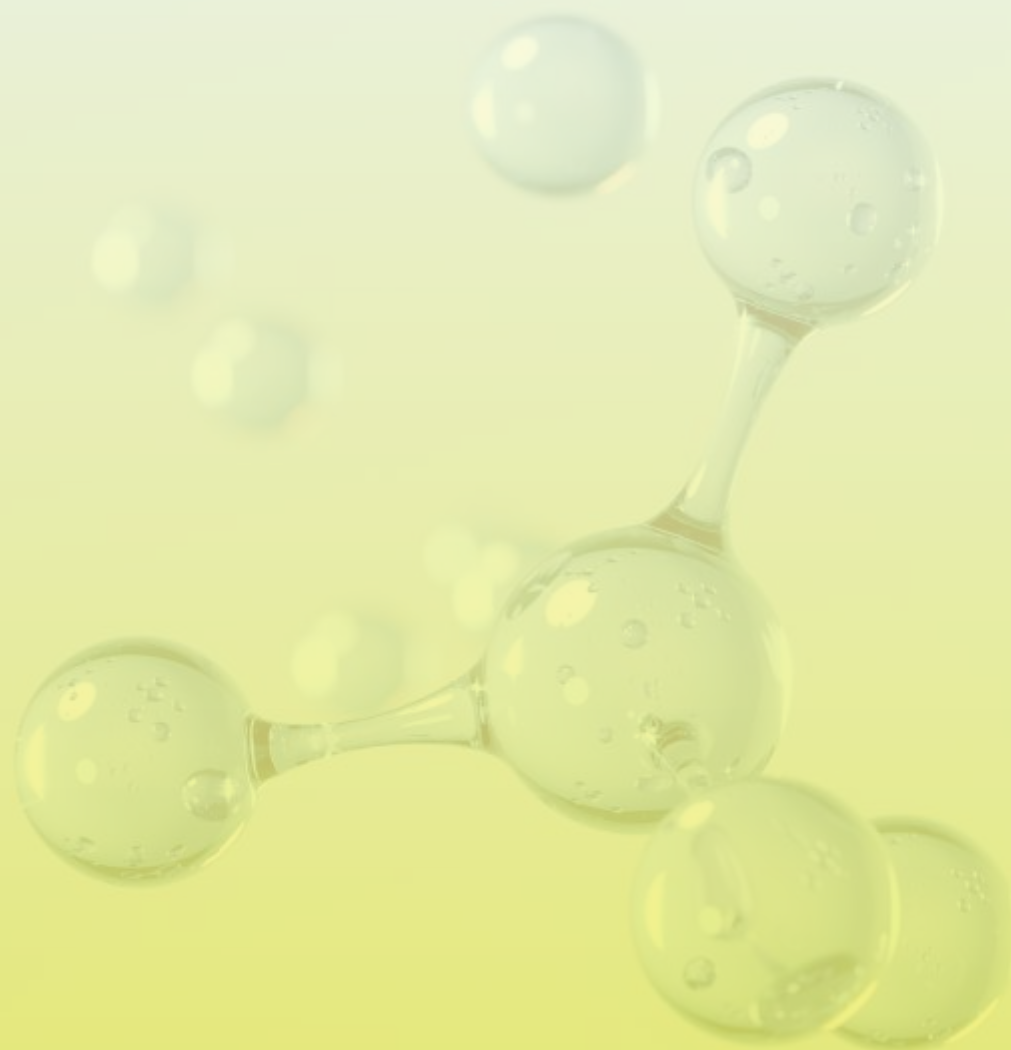
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Because good chemistry
Leads to great results.



anugrah



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