



STANCHLOR – CHLORINATED PARAFFIN

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PRODUCT DESCRIPTION

STANCHLOR-Chlorinated Paraffin is a transparent viscous liquid having characteristic odour. It is essentially insoluble in water but soluble in other Chlorinated Solvents.

Chlorinated Paraffin's are straight chain hydrocarbons but have chlorinated. Chlorinated Paraffin's are classified according to their carbon chain length and percentage of



chlorination with carbon chain lengths generally ranging from C10-C30 and chlorination 30% to 72% by weight. Chlorinated Paraffin's is made by fractions obtained from petroleum distillation. The three most common commercial feed stocks are paraffin's with carbon number ranges of Short Chain (C10-C13), Intermediate Chain (C14-C17) and Long Chain (C18-C20).

INCREASING PERFORMANCE STANCHLOR - CHLORINATED PARAFFIN FOR

- ✓ PVC compounds for Wires and Cables, Foot wear and Toys.
- ✓ PVC flexible gardening pipes used for irrigation, gardening and other industrial works.
- ✓ PVC flooring, films & sheets, PVC resin, coating and lubricants.
- ✓ Rubber products like V belts, conveyer belts.
- ✓ It is also used in artificial leather and leather chemicals.
- ✓ It is used as flame retardant for impregnating textiles & fabric of all kinds.
- ✓ Find applications in paint industries for the manufacturing of fireproof paints.
- ✓ They have also found application in adhesives, sealants, and caulks.
- ✓ It is also used in the automotive and metalworking industries as lubricants for wide range of machining and engineering operations.

STANCHLOR-CHLORINATED PARAFFIN

KEY FUNCTIONS

STANCHLOR- Chlorinated Paraffin belongs to a group of Chlorinated Hydrocarbons having straight carbon chain lengths (C_nH_{2n+2}) with carbon number range from C10 onwards.

STANCHLOR- premium grades is manufactured by the controlled chlorination of carefully selected paraffin's of required carbon chain lengths.

STANCHLOR- is available in various grades having chlorine content varying from 30% to 70% chlorine contents. Different grades of **STANCHLOR** can be used for different applications.

KEY FEATURES

- ✓ Excellent resistance to water
- ✓ Chemically inert and non corrosive
- ✓ Non – flammable (flash point > 200 deg C) and imparts flame resistant properties.

PHYSICAL AND CHEMICAL PROPERTIES

- ✓ **Appearance:** Colourless to pale yellow viscous liquid
- ✓ **Odour:** Almost odourless having slightly characteristics odour
- ✓ **Boiling Point:** Decomposes before boiling
- ✓ **Solubility:** Practically insoluble in water but soluble in other chlorinated solvents. Slightly soluble in aromatic hydrocarbons, aliphatic hydrocarbons, ketones, esters, vegetable and animal oils, Miscible with benzene, chloroform, ether, carbon tetrachloride

CHLORINATED PARAFFIN (MID CHAIN)

General Formula: $C_xH_{(2x+x+2)}Cl_y$

Typical Formula: $C_{14}H_{24}Cl_6$

CAS Number: 85535-85-9

Chemical Composition: $C_nH_{2n+2} + YCl_2 = C_nH_{2n+2-Y}Cl_Y$

| S. No. | PARTICULARS | TEST METHOD | STANCHLOR M40 | STANCHLOR M45 | STANCHLOR M52 | STANCHLOR M62 | STANCHLOR M70 |
|--------|--|----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 | Appearance | Visual | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid |
| 2 | Chlorine Content % | ISI- 1448-77 | $40 \pm .2$ | $45 \pm .2$ | $52 \pm .2$ | $62 \pm .2$ | $70 \pm .2$ |
| 3 | Colour in Hazen Units (HU) | ASTM-D-1045-86 | 120 Max | 120 Max | 120 Max | 120 Max | 120 Max |
| 4 | Specific Gravity @ 27 °C | ASTM-D-1045 | 1.120 ± 0.02 | 1.200 ± 0.02 | 1.280 ± 0.02 | 1.400 ± 0.02 | 1.470 ± 0.02 |
| 5 | Viscosity @ 27 °C, Poise | ASTM-D-445 | 0.5 - 1.5 | 2.0-5.0 | 12-16 | 26-32 | 300-550 AT 50 DEG C |
| 6 | Free Mineral Acidity as mg KOH / gm | SC/QCD/FP-1.5 | 0.001 Max | 0.001 Max | 0.001 Max | 0.001 Max | 0.001 Max |
| 7 | Free Chlorine, % | ISI-9189-79 | NIL | NIL | NIL | NIL | NIL |
| 8 | Heat Stability @ 180 °C for 20 min. | SC/QCD/FP-1.9 | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow |
| 9 | Thermal Stability after 4 hrs. @ 175 °C | SC/QCD/FP-1.8 | 0.10 Max | 0.10 Max | 0.10 Max | 0.10 Max | 0.10 Max |
| 10 | Volatile loss @ 180 °C for 4 hrs., percent by mass | SC/QCD/FP-1.7 | 2.00 Max | 2.00 Max | 2.00 Max | 2.00 Max | 2.00 Max |

| | | | | | | | |
|----|----------------------------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 11 | PH Value of 10 % aqueous extract | ASTM-D/QCD/FP-1.11 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 |
| 12 | Refractive Index @ 27 °C | ASTM-D-1807 | $1.49 \pm .002$ | $1.49 \pm .002$ | $1.49 \pm .002$ | $1.49 \pm .002$ | $1.49 \pm .002$ |

Note: Specific grades of **STANCHOR-CHLORINATED PARAFFIN** can be made on request. The above properties are indicative and represent the values tested in our laboratories. There is no guarantee/warranty whatsoever. Suitability of the product for particular application may be verified before use.

CHLORINATED PARAFFIN (SHORT CHAIN)

General Formula: $C_xH_{(2x+x+2)}Cl_y$

Typical Formula: $C_{14}H_{24}Cl_6$

CAS Number: 85535-85-9

Chemical Composition: $C_nH_{2n+2} + YCl_2 = C_nH_{2n+2} - Y$

| S. No. | PARTICULARS | TEST METHOD | STANCHLOR S40 | STANCHLOR S45 | STANCHLOR S52 | STANCHLOR S62 | STANCHLOR S70 |
|--------|-------------------------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 | Appearance | Visual | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid | Clear to Pale Yellow viscous Liquid |
| 2 | Chlorine Content % | ISI- 1448-77 | $40 \pm .2$ | $45 \pm .2$ | $52 \pm .2$ | $62 \pm .2$ | $70 \pm .2$ |
| 3 | Colour in Hazen Units (HU) | ASTM-D-1045-86 | 80 Max | 80 Max | 80 Max | 80 Max | 80 Max |
| 4 | Specific Gravity @ 27 °C | ASTM-D-1045 | 1.120 ± 0.02 | 1.200 ± 0.02 | 1.280 ± 0.02 | 1.400 ± 0.02 | 1.500 ± 0.02 |
| 5 | Viscosity @ 27 °C, Poise | ASTM-D-445 | 0.5 - 1.00 | 2.0-4.00 | 10-15 | 15-20 | 350-600 @ 50 DEG C |
| 6 | Free Mineral Acidity as mg KOH / gm | SC/QCD/FP-1.5 | 0.001 Max | 0.001 Max | 0.001 Max | 0.001 Max | 0.001 Max |

| | | | | | | | |
|----|--|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 7 | Free Chlorine, % | ISI-9189-79 | NIL | NIL | NIL | NIL | NIL |
| 8 | Heat Stability @ 180 °C for 20 min. | SC/QCD/FP-1.9 | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow | Colour changes to dark yellow |
| 9 | Thermal Stability after 4 hrs. @ 175 °C | SC/QCD/FP-1.8 | 0.10 Max | 0.10 Max | 0.10 Max | 0.10 Max | 0.10 Max |
| 10 | Volatile loss @ 180 °C for 4 hrs., percent by mass | SC/QCD/FP-1.7 | 4.00 Max | 4.00 Max | 4.00 Max | 4.00 Max | 4.00 Max |
| 11 | PH Value of 10 % aqueous extract | ASTM-D/QCD/FP-1.11 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 | 6.0 ± 0.5 |
| 12 | Refractive Index @ 27 °C | ASTM-D-1807 | 1.49 ± .002 | 1.49 ± .002 | 1.49 ± .002 | 1.49 ± .002 | 1.49 ± .002 |

Note: Specific grades of **STANCHLOR-CHLORINATED PARAFFIN** can be made on request. The above properties are indicative and represent the values tested in our laboratories. There is no guarantee/warranty whatsoever. Suitability of the product for particular application may be verified before use.

QUALITY CONTROL

STANCHLOR-CHLORINATED PARAFFIN is produced with strict quality control. Our laboratory is equipped with modern state of the art testing equipments, which guarantees effective quality control as well product development.

We are able to deliver customised products & solutions to our customers. We exercised at all levels right from the procurements of raw materials, manufacturing, finished product analysis and up to the delivery of finished product at destinations.

PRINCIPLE USES

STANCHLOR-CHLORINATED PARAFFIN IS USED AS

- ✓ A plasticizer for PVC compounding
- ✓ An extreme pressure additive for metal working oils/lubricants
- ✓ A fire retardant additive for various polymeric materials
- ✓ As a filler/plasticizer in various chemicals applications
- ✓ Also used as additive in paints & sealants for desired properties.

APPLICATIONS

- ✓ The largest application for Chlorinated Paraffin's is as a plasticizer, generally in conjunction with primary plasticizers such as certain phthalates like DOP & DBP etc. in flexible PVC.
- ✓ The use of Chlorinated Paraffin's in PVC imparts a number of technical benefits, of which the most significant is the enhancement of flame-retardant properties.
- ✓ This is particularly of benefit in PVC flooring and cables.
- ✓ Chlorinated Paraffin's are also used as plasticizers in paint, sealants and adhesives where the main advantages over alternatives are their inertness and the enhancement of flame-retardant properties.
- ✓ Higher Chlorine content grades are used as flame-retardants in a wide range of rubbers and polymer systems, where they are often used in preference to phosphate and bromine-based additives.
- ✓ The other major outlet for Chlorinated Paraffin's is in the formulation of metalworking lubricants where they have long been recognized as one of the most effective extreme pressure additives for lubricants used in a wide range of machining and engineering operations.
- ✓ In all of these applications, there is a long history of safe use and some major customers have been using chlorinated Paraffin's for over 50 years.

PACKING

- ✓ 250 / 260 Kg Net Weight HDPE barrels
- ✓ Bulk in road tanker, ISO Tank and Flexi Tank containers
- ✓ 1200 / 1250 / 1300 Kg IBC (Inter Mediate Bulk Containers)

HANDLING & STORAGE

STANCHLOR-CHLORINATED PARAFFIN can be stored or processed in stainless steel vessel. Mild steel vessels can also be used but it is strongly recommended that these be internally lined with a suitable lacquer, for example a cold-curing epoxy resin. Discoloration of the product as a result of iron contamination can happen if storage is done in MS vessels.

Avoid PVC and rubber gaskets and hoses.

PRECAUTIONS FOR SAFE HANDLING

- ✓ Avoid contact with eyes
- ✓ Avoid prolonged skin contact
- ✓ Provide adequate ventilation where operational procedures demand it
- ✓ Do not allow to enter drains, sewers or watercourses
- ✓ Keep only in original container
- ✓ Keep container dry
- ✓ Keep away from direct sunlight



ABOUT STANDARD CHEMICALS

STANDARD CHEMICALS is in major business of manufactures, suppliers and exporters of Chlorinated Paraffin and HCL. The chemical business of **STANDARD CHEMICALS** spans over India as well as overseas market.

We are committed to follow customer's satisfaction and ensured through competitive price, timely delivery and customization of products and process according to requirements. Research and development facilities at various locations have the latest equipment to determine the physical and chemical parameters of newly developed products and their applications.

The quality excellence of the organization is already acclaimed through customer accolades as well as by ISO – 9001 (Quality Management System), ISO -14001 (Environment Management System)

Safety is given pride of place at **STANDARD CHEMICALS**. The devising of processes, the choice of machinery, and the selection of intermediates –all are carefully weighed keeping the safety factor in mind. Safety of our employees as well as that of end users of our products is of paramount importance to us.

FOR MORE DETAILS PLEASE CONTACT:
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