SAFETY DATA SHEET
PLASTICLOR P45VL
CHLORINATED PARAFFIN

Reg. No. 2003/017152/07

SDS 013/R10
2021-06-20

Safety Data Sheet (SDS) According to ISO/SANS 11014:2009/2010; UN Transport of Dangerous Goods; UN Globally Harmonised System of Classification & Labelling, SA HCA Regulations and EC Directive 1272/2008

SECTION 1. Identification – Chemical Product and Company

Trade Name	:	Plasticlor 45VL
Chemical Name	:	Environmentally Hazardous Substances Liquid O.S
UN Number	:	3082
CAS Number	:	85535-85-9
GHS product identifier	:	Alkanes, C14-17, Chlorinated Paraffin, C14-17
Chemical Family	:	Halogenated hydrocarbons
Chemical Formula	:	$C_xH_{(2x-y+2)}$ Cl_y where x = 14-17 and y =1-17
Other means of identification	:	Clear, pale yellow mobile liquid, slight characteristic odour.
Recommended use of the chemical	:	Plasticizer for flexible PVC compounds, other Polymers and to partially replace expensive flame-retardants and to partially replace expensive flame-retardants
Restrictions on use	:	Not for use in products used in children'' toys or food contact application

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Supplier's details	:	NCP Chlorchem (Pty) Ltd, a Bud Group company
Address	:	Cnr. Allandale Road and Chloor Road Chloorkop, Gauteng South Africa
Telephone Number	**:**	**+27 (0) 11 976 2115**
24hour Emergency Phone Number	**:**	**+27 (0) 11 921 3333**

SECTION 2. Hazards Identification

GHS classification of the substance: corrosive liquid, irritating to skin and eyes, and harmful to aquatic life

Hazard classes/Hazard categories	GHS Hazard Statement
Aquatic Acute 1	H400 Very toxic to aquatic life
Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects
Lactation	H362 May cause harm to breast -fed children
Skin Corrosion/Irritation Category 2	H315 Causes skin irritation
Eye Irritation Category 2	H319 Causes serious eye irritation
STOT SE 3	H335 May cause respiratory irritation

NB According to the **harmonised classification and labelling** (ATP01) approved by the European Union, this substance is very toxic to aquatic life, is very toxic to aquatic life with long lasting effects and may cause harm to breast-fed children. It is included in the EU CoRAP – Community Rolling Action Plan

The most important adverse effects to know in emergency are –
GHS label elements, including precautionary Statements:

GHS 07 Skin & eye irritation health hazard - exclamation mark GHS 09 Aquatic toxicity – dead tree and fish

Signal word: Warning

Hazard Statements - Skin and eye irritant - causes skin and serious eye irritation; May cause respiratory irritation; Very toxic to aquatic life with long lasting effects.

Precautionary statements:
P273 Avoid release to the environment
P391 Collect spillage
P280 Wear protective gloves
P270 do not eat, drink or smoke when using /handling this product
P302 + P352 if on skin wash off with plenty of water
P332 + P313 if skin irritation continues, get medical attention
P280 Wear eye / face protection
P305 + P351 + P338 if in eyes rinse cautiously
P362 + P364 take off contaminated clothing and wash before reuse
P261 + P271 avoid breathing mist, wear eye and face protection and use in well ventilated area
P304 & P340 if mist inhaled and breathing difficulty – remove person to fresh air and get medical attention
P301 if swallowed and feel unwell, get medical attention
P263 Avoid contact during pregnancy and while nursing

Response:
Refer Sections 5, 6 and 8
Storage:
Refer Section 7
Special Labelling requirements – refer Section 14 for transport labels

SECTION 3. Composition/information on ingredients

Chemical identity	Substance
Other means of identity	Clear, pale yellow mobile liquid, slight characteristic odour
Common name, synonyms, etc	Chlorinated Paraffin (C14-17), Chloroalkanes, Chloroparaffin, Medium-chain chlorinated paraffin, C14-17
CAS number	85535-85-9
EC number	287-477-0
IUPAC name	Alkanes C14-17, chloro; Chlorinated paraffin C14-17
Stabilizing additives	epoxidized Soya Bean oil

Ingredient name	UN Number	CAS number	%	EC List number
Alkanes, C14-17, choro; chlorinated paraffins, C14-17	3082	85535-85-9	100%	287-477-0

Product description C14-C17Chlorinated hydrocarbons, (containing less than 1% C10-C13).
Chlorination: 45%. Contains long-chain epoxidised soya oil as additive at concentration of <1% by weight.

Section 4. First Aid Measures

Product in eye – can cause serious eye irritation
Immediately flush eyes thoroughly for at least 10 minutes with running water. Hold eyelids open during flushing. If irritation persists, repeat flushing and obtain medical attention immediately.

Product on skin – can cause skin irritation
Remove contaminated clothing. Wash affected areas with soap and water. If irritation persists, obtain medical advice immediately.
Wash contaminated clothing before reuse.

Product ingested - Do not induce vomiting. Drink water or milk if conscious. Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious, or convulsing. Obtain medical assistance immediately.
Product inhaled – may cause respiratory irritation

Move victim to fresh air. Give artificial respiration only if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing and no pulse. Obtain medical advice immediately.

Section 5. Fire Fighting Measures – non-flammable

Product does not burn - but if heated to >70º for prolonged periods or >200º will decompose with emission of hydrogen chloride gas.

Fire and explosion hazard Slight fire hazard.

Suitable Extinguishing Media Use regular dry chemical, carbon dioxide, water, and regular foam.

For large fires use regular foam or flood with fine water spray.

Special hazards During a fire in which this material is involved, hydrogen chloride (HCl) may be liberated. Avoid inhalation of material, stay upwind and keep out of low areas.

Protective clothing - Wear full protective clothing and self-contained, positive breathing apparatus for large fires suitable for Hydrogen chloride fumes.

Section 6. Accidental Release Measures

Personal precautions
Restrict access to the area until completion of the clean-up. Ensure clean-up is conducted by trained personnel only. Wear safety goggles or face shield, protective clothing, gloves and boots preferably made of butyl nitrile

Environmental precautions May be harmful to aquatic life, do not allow to enter surface waters or sewers. No quantitative data is available on low level aquatic toxicity.

Clean-up methods
Small spills
Contain the spill. Mop up or soak with inert absorbent such as sand or clay for disposal. Wash spill area with large volumes of water, prevent from running into the environment, especially waterways. Dispose of residue in accordance with local or state regulations.

Large spills
Contain by diking with soil or other non-combustible sorbent material and pump into approved waste containers or absorb with non-combustible absorbent material. Collect product and contaminated soil for recovery or disposal. Wash spill area with large volumes of water and allow to drain into a waste treatment system. Comply with all local regulations on spill reporting, handling and disposal of waste.

GHS Disposal Precautionary Statement - P501 dispose of product and containers in accordance with National and / or regional Regulations refer SA National Environmental Management Waste Act - NEM: WA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za

SECTION 7. Handling and Storage

Precautions for safe handling – avoid contact with skin and eyes. wear appropriate personal protective equipment – see Section 8.
Eating, drinking and smoking shall be prohibited in areas where chemicals are handled, stored or processed**.** Workers must wash hands before eating, drinking or smoking to remove any chemicals that could be ingested or inhaled. Remove contaminated clothing and protective equipment before entering eating areas.

Storage requirements: Store only in original container, in a cool place out of direct sunlight and avoid sources of potential contamination. Keep away from heat, sparks and flames. Use only with adequate ventilation.

Suitable materials
Store in lined mild steel containers, Stainless steel, HDPE – High Density Polyethylene, or reinforced UP Resin

Unsuitable materials
PVC – Poly Vinyl Chloride, PP – Polypropylene, PTFE - Polytetrafluoroethylene, most rubbers

Handling/storage precautions
Store in a cool well ventilated area. Keep containers closed.
Avoid breathing vapour, use only with adequate ventilation.
Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

SECTION 8. Exposure Controls/Personal Protection

Control parameters e.g. occupational exposure limit values or biological limit values

Ingredient name	%	Exposure limits – South Africa HCA Regs 2021
Alkanes, C14-17, chloro chlorinated paraffins, C14-17	100%	Not listed

ACGIH TLV(TWA) No data available
TLV(STEL) No data available

Engineering control measures: Local ventilation should be available if mists are produced.

Personal protection – respiratory: Unlikely route of exposure, but if mists are encountered could be irritating to the respiratory tract, use NIOSH approved respirator.

Personal protection – hand: listed skin irritant thus avoid skin contact with this chemical. Wear rubber gloves.

Personal protection – eye: listed eye irritant thus wear safety glasses with side shields at all times. Contact lenses should not be worn.

Personal protection – skin: listed skin irritant thus wear overalls, safety shoes/boots and apron.

Personal protection – ingestion: Restrict access to unauthorized persons. Wash hands after contact.

Other protection - A safety shower and eye wash facility should be nearby and ready for emergency use.

SECTION 9. Physical and Chemical Properties

Appearance	Clear, pale yellow mobile liquid
Odour	Slight characteristic odour.
Odour Threshold	Not known
pH	Not applicable.
Initial boiling point/range	>395F (>200°C) @103100Pa. Decomposes with the release of HCl
Freezing point/range	- 49 to 32 F (-45 to 0°C)
Flash point	> 210°C.
Flammability	UEL: Not applicable LEL: Not applicable.
Auto flammability	No data available.
Explosive properties	Not applicable
Oxidizing properties	None.
Vapour pressure	(2.7 x 10-4) KPa at 20°C
Specific gravity	1,16 - 1,19 at 20°C.
Viscosity	0.25 – 0.4 Pa-s at 20°C
Solubility	Practically insoluble in water.

Soluble in many organic solvents. Slightly soluble in alcohol.
Miscible with benzene, chloroform, ether, carbon tetrachloride; Insoluble in glycerine.
Soluble in aromatic hydrocarbon, aliphatic hydrocarbons, ketones, esters, vegetable, and animal oils

SECTION 10. Stability and Reactivity

Reactivity and Chemical Stability: Non- reactive and stable under normal conditions of storage and handling. Non-flammable under normal handling and storage conditions.

Hazardous polymerization Will not occur.

Conditions to avoid High temperatures and poor ventilation.

Corrosivity to metals Contact with iron, zinc or aluminium or their compounds, especially at elevated temperatures, may cause hazardous reaction and decomposition.

Incompatible materials Reacts with alkaline or alkaline earth metals which have a strong affinity for chlorine. "plasticlor" tends to soften or swell most rubbers.

Hazardous decomposition products Prolonged heating at temperatures in excess of 70°c or heating above 200°c for short periods will result in decomposition and liberation of hydrogen chloride.

SECTION 11. Toxicological Information

Acute toxicity	Result	Species	Dose/ Exposure	Caution
Oral	Not classified	Rats	>2grm/kg body weight	Ingestion may cause nausea and vomiting
Dermal	Slight skin irritation reported	studies using OECD Guideline 404		Can cause skin irritation
Inhalation	No deaths reported from studies	rats	3.3mg/l mix	May cause irritation

GHS – EU Group Classification, and C & L Inventory:
Skin Corrosion/Irritation: Category 2, H315 Causes skin irritation,

Eye Irritation: Category 2, H319 Causes serious eye irritation,
Respiratory or skin Sensitization: H335 May cause respiratory irritation,
Germ Cell Mutagenicity: Studies for mutagenicity were negative,
Carcinogenicity: There is sufficient evidence for the carcinogenicity of a commercial chlorinated paraffin product of average carbon-chain length c12 and average degree of chlorination 60% in experimental animals. There is limited evidence for the carcinogenicity of a commercial chlorinated paraffin product of average carbon-chain length c23 and average degree of chlorination 43% in experimental animals. No data were available from studies in humans on the carcinogenicity of chlorinated paraffins. Overall evaluation: chlorinated paraffins of average carbon-chain length c12 and average degree of chlorination approximately 60% are possibly carcinogenic to humans (group 2b). This product is a C14-C17 chlorinated paraffin, medium chain product.
Reproductive Toxicity: No information is available, but it is listed under REACH as possible Lactation hazard that **m**ay cause harm to breast -fed children
STOT – Specific Target Organ Toxicity Single or Repeat Exposure: May cause respiratory irritation,
Aspiration Hazard: Not Classified but inhalation of mist may irritate the respiratory tract.

SECTION 12. Ecological Information

GHS – EU Group Classification, and C & L Inventory:
Hazardous to the Aquatic Environment
Acute (short term) Category 1 – Hazard Statement H400 very toxic to aquatic life
Chronic (long term) Category 1 – Hazard Statement H410 Harmful to aquatic life with long lasting effects
Laboratory Studies have shown chlorinated paraffin to be toxic to Daphnia, with a low level of toxicity to fish and algae.
Biodegradability - studies in soil showed a 51% degradation after 36 hours,
Bio-accumulation - has limited potential for bioaccumulation,
Mobility - No data available but limited potential,
NB this product is on the EU CoRAP list for evaluation on PBT – persistency, bioaccumulation & toxicity.
Hazardous to the Ozone layer: No evidence - not Classified.

SECTION 13. Disposal Considerations

Disposal methods
Disposal must be made in accordance with the applicable National and Regional Government Regulations at approved and permitted chemical disposal sites – refer to the SA National Environmental Management Waste Act
NEM: WA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za

Disposal of packaging
Packagings and containers, even those that have been emptied, will retain product residue and vapours, handle empty containers as if they were full. Remove all possible traces of product and wash prior to disposal of packaging and containers. Dispose in compliance with Regulations – see above and Industry Best Practice
Always observe and comply with hazard warnings.

SECTION 14. Transport information

	SANS 10228:2012	IMDG	IATA
UN Number & PSN	UN 3082	UN 3082	UN 3082
UN Proper Shipping Name – PSN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (Chlorinated paraffin C14-C17)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (Chlorinated paraffin C14-C17)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorinated paraffin C14-C17)
Transport Class 9			
Packing group	III	III	III
Environmental hazards	Aquatic Pollutant	IMDG supplement S-F	N/A
Additional information			
Emergency Response Guide - ERG 2020	Refer Guide 171 for info on Emergency response	Refer IMDG 40 -20 2020 Supplement & MARPOL	Refer ICAO & IATA 2021 Guide - ERG 2020

SECTION 15. Regulatory information

OHS Act – Hazardous Chemical Agents Regulations 2021: requires GHS Classification, GHS Compliant Safety Data Sheets and product Labels, as well as use of GHS Classification for Risk Assessment to inform Health and Biological Monitoring requirements to protect workers.
GHS Compliant SDS to be made available to all who handle, store, use and transport the product.

MHI – Major Hazards Installations Regulations - OHS Act: require site Risk Assessment to ascertain potential impacts outside of the site and potential impacts on the public or neighbours. Copy to be lodged with the Dept Labour, and local Emergency Services.
NEMA – National Environmental Management Act 107 of 1998: Duty of Care and Producer Responsibility for products and packaging on a Life Cycle basis. Environmental Impact Assessment Regulations for new installations or proposed increase in capacity over 25%
NEM: WA – National Environmental Waste Act 59 of 2008: Extended Producer Responsibility Regulations for waste management, classification and disposal, amended May 2021
National Department of Health – Hazardous Substances Act
EU Directive EC 1272/2008 (EU GHS /CLP) – Safety Data Sheets and Labelling

SECTION 16. Other information

ECHA – European Chemical Agency Website, Chemical information, C&L Inventory, Chemicals of High Concern (SVHCs) and Chemicals for Community Rolling Action Plan (CoRAP)
ERG 2020 Transport Canada and US Dept Transportation PHMSA - Pipeline and Hazardous Materials Safety Administration

Reg. No. 2003/017152/07

SDS 013/R10
2021-06-20

Other relevant information including information on preparation and revision of the SDS –
ISO 11014:2009 Safety Data Sheets for Chemical Products – content and order of sections adopted as SANS 11014:2010
UN Recommendations for Transport of Dangerous Goods Model Regulations commonly known as the **TDG "Orange Books" 21st** revision published June 2019
UN Globally Harmonized System of Classification and Labelling of Chemicals – GHS commonly known as **the GHS "Purple Book" 8th** revision published July 2019
IMDG – International Maritime Dangerous Goods Code, 2020 edition, amendment 40-20
IATA Technical Regulations 62nd edition, January 2021

Persons handling and working with this product should be Trained in the hazards and safe handling as required in the Chapter 1.3 of the UN Model Regulations for Transport of Dangerous Goods before commencing work with this product.

Date of original MSDS	**1993-10-28**	**Compiled by DD Liebenberg**
Date of Revision 8	**2012-12-06**	**Compiled by HH Maringa**
Date of Revision 9	**2017-07-31**	**Compiled by P Govender**
Date of Revision 10	**2021-06-20**	**Compiled by E Anderson**

Approved as per Management of Change no: 18-8-2021-226

EXCLUSION OF LIABILITY

All information and instructions provided in this Safety Data Sheet (SDS) in respect of the substance is given in terms of the provisions of the Occupational Health and Safety Act No 85 of 1993 and its Regulations.
Information is based on best available scientific and technical knowledge as at the date indicated on this SDS, and is presented in good faith to be correct.

The information provided in this SDS apply only to the product in its present form and not to any formulation or mix. It should be used only as directed, and any formulations or other use is at the responsibility of the user of the product as formulated and/or mixed to investigate and establish any hazards or risks which may arise out of its use, wherever such user may be situated.
It is the legal responsibility of the person in receipt of this SDS, wherever such may be situated, to ensure that the information provided is communicated to, and understood by any person who may come in contact with the product in any place and in any manner whatsoever. If such recipient produces formulations or mixes using the product, then it is the recipient's sole responsibility to comply with the provisions of the Act in respect of the provision of the necessary SDS, and/or to comply with any other applicable legislation.