

Product List



PRODUCT		APPLICATION
GENERAL PURPOSE DETERGENTS	Chemserve Help-U	Dish washing and all hard surface cleaning
	Synapol A	All neutral detergent applications
	Chemserve Nukleen	Highly concentrated detergent for vehicles and spray applications
	Chemserve 480	Powdered steam cleaning detergent
	Solox AH	General purpose detergent
	Chemserve WS	Wash and shine
SOLVENT DETERGENTS	Aerowash AC18	Medium duty solvent degreaser SABS 1344
	Chemserve Aerodet	Hard surface cleaner for road transport, mining equipment and high pressure cleaners
	Chemserve Multisolve	Removal of light oil and grease from all hard surfaces
	Magnus 148X	Multi purpose water-based aircraft and transport cleaner
	Magnus 149X	Liquid exterior aircraft cleaner
	Solox 10	Medium duty solvent detergent
	Solox12	Water based detergent and steam cleaning additive
	Solox180	Medium duty solvent detergent (meets the requirements of SABS 1344)
SOLVENT EMULSION DEGREASING FLUIDS	Chemserve Degreasolene	High flash point degreasing fluid for mining and transportation equipment
	Chemserve Minesol 30	Solvent emulsion cleaner with foaming applications
	Chemserve Bitu-Solve	Heavy duty emulsion degreasing fluid for tanker cleaning
	Magnus 1007	Heavy duty degreasing fluid
	Magnus Magnusol 728	Solvent emulsion foam cleaner for general exterior aircraft cleaning
	Magnus PMC Degreaser	Solvent emulsion cleaner
	Mechsol 5	Solvent emulsion degreasing fluid SABS 1216 Type 3
	Mechsol 6	Solvent emulsion degreasing fluid SABS 1216 Type 2
	Penetone Citrikleen	Solvent degreasing fluid
	Penetone EHD	Heavy duty degreasing fluid
	Penetone Navee 42	Solvent emulsion degreasing fluid
SAFETY SOLVENTS	Chemserve Lectrosolve	Non flash rapid drying safety solvent
	Chemserve Solvene 33	Safety solvent for cleaning electrical parts
	Chemserve Solvene 55	Solvent cleaner
	Chemserve Solvene 77	Volatile safety solvent for cleaning electrical and mechanical parts
	Chemserve Solvene 111	Safety solvent for cleaning electrical and mechanical parts
	Chemserve Solvene 222	Non flash high solvency cleaner leaving no residue
	Chemserve Solvent D	Safety solvent for use on bare metals, painted surfaces, plastics, rubber and ceramics
	Chemserve Solvent P	Safety solvent for cleaning electrical and mechanical parts
	Chemserve Solvent 150	Slow drying safety solvent
	Electromec 1	Electrical safety solvent SABS 1365
	Electromec 3	Medium drying safety solvent
	Electromec 10	Non flash fast drying solvent
	Trichloroethylene	Vapor degreasing
PAINT AND CARBON REMOVERS	C/S Decarb-C	Cold immersion type paint and carbon remover - Multi metal safe
	Turco 5351 (Aplication)	Application type paint remover for polyurethane and epoxy surface coatings
	Turco 5668	Hot bath heavy duty paint and carbon remover
	Derostan 135	Heavy duty alkaline for removing carbon, light rust, grease and paint from ferrous metals
	Magnus 755	Heavy duty emulsifiable solvent decarboniser
	Magnus 763NF	Acid based paint remover
	Magnus 1100	Hot bath paint remover
	Penstrip 5061	Application paint stripper
ACID CLEANERS, DESCALERS AND RUST REMOVERS	Chemserve Chloracid 90	Liquid inhibited pickling and descaling compound
	Magnus 88 XL	All purpose acid detergent cleaner
	Chemserve Phoskleen	Removing tarnish and corrosion from aluminium and steel
	Derostan 37	Phosphoric Acid detergent
ACID INHIBITORS	Acitrol 86	Non-foaming inhibitor for hydrochloric acid
	Acitrol 88	Liquid inhibitor for sulphuric acid
	Acitrol 100	Pickling bath inhibitor additive
ALKALINE CLEANERS	Chemserve Aludip	Soak cleaning of ferrous & non ferrous alloys
	Chemserve 1066	Low foaming heavy duty alkaline cleaner
	Magnus 215DT	Heavy duty steam cleaning and floor cleaning
	Magnus 91X3	Aluminium safe low foaming alkaline spray cabinet cleaner
	Ipro 1341SC	Heavy duty aluminium safe low foaming alkaline spray cabinet cleaner
	Chemserve 680 L	Alkaline carbon, lead and rust remover

Product List



PRODUCT		APPLICATION
FLOOR CLEANING POWDERS	Chemsil 100P Magnus 92PR	Alkaline powder detergent containing no free caustic Powder detergent for cement floors
PROTECTIVE COATINGS	Ipro 515 S Ipro 540 Ipro 565	Water displacing and temporary corrosion preventative Medium duty corrosion preventative Heavy-duty corrosion preventative
HAND CARE PRODUCTS	Alpha Hand Cleaner Magnus Waterless H/C Chemserve Barrier Cream Penetone Grit H/C	Liquid hand cleaner Cream emulsifiable hand cleaner Water soluble/water repellent barrier creams Cream emulsifiable hand cleaner
GENERAL	C/S Brassbrite Biophix Chemserve 625 Chemserve Aerowax Chemserve Aerosan Chemserve Zorball	Brightener for copper and brass Bioside for control of bacteria Temporary rust-preventive liquid Liquid wax emulsion polish for aircraft and road transport vehicles Detergent sanitizer Granular all-purpose floor absorbent
NON DESTRUCTIVE TESTING	Supramor 4 Black Checkmor 200 Checkmor 222 Ely LD 7 Solvene 55 Ely S 76 Ferromor ND 5 G Ferromor ND 8 Y Lumor X3 Ely WCP 712 Lumor J Powder Lumor J [W] Britermor 4455 Britermor 668A Ely PD 3 Britermor 600 UCA 263 Gel UCA 2M Gel Ely H91A	High sensitivity black magnetic ink Visible red dye penetrant (water washable) Visible red dye penetrant (solvent removable) Solvent based developer spray Remover for white contrast background [ELY WCP 712] Penetrant remover - Halogen free Grey dry magnetic powder Yellow dry magnetic powder High sensitivity fluorescent magnetic ink (ready to use aerosol) White background lacquer High sensitivity fluorescent magnetic powder (solvent diluteable) High sensitivity fluorescent magnetic powder (water diluteable) Water washable fluorescent penetrant (Mil-I-25135D) Post- Removable Fluorescent Penetrant Dry powder developer for Britermor series High sensitivity post emulsifiable fluorescent penetrant (Mil-I-25135D) Clear ultrasonic couplant UV Ultrasonic couplant Hydrophilic emulsifier for Britermor 600 penetrants
METAL WORKING FLUIDS	Aguaquench 140 Aquaquench 365 Houghtoquench N Cindol 2820 Cindolube 3102X Cindolube 80/20 FQAR Hocut 711 Hocut B60 Hocut B80S Hocut 3380 Houghtogrind 50 Houghtogrind 560 Houghtogrind 590 Houghtogrind A21 Houghtodraw 650 Houghtodraw 7007 Houghtodraw 7047 Houghtolubric HF 130 Houghtosafe 620 Mouldlubric 116 Raylubric 13 Rustvito 135 Ipro 1606VA	Advanced polymer quenchant for induction hardening applications Nitrite free polymer quenchant for ferrous metals Normal speed quenching oil Soluble lubricant designed for Properzi Mill applications Metal cutting lubricant for Aluminium and other metals Metal cutting lubricant for Aluminium and other metals Fast quench additive for Houghtoquench N Advanced water dilutable machining coolant Biostable EP semi synthetic machining coolant High performance chlorine free biostable coolant for Aluminium High lubricity Chlorine free soluble oil Chemical grinding compound - RR approval Synthetic grinding coolant Synthetic grinding coolant Coolant for grinding and cutting of hard metals Water extendable heavy duty drawing paste Light duty drawing compound Medium duty drawing compound Synthetic hydraulic fluid Fire-resistant Water Glycol hydraulic fluid High performance cold forming lubricant Binder for glass fiber fabric Water soluble paste for the short term protection of mild steel Heavy duty oil for drawing of stainless steel and mild steel alloys

Product List



PRODUCT		APPLICATION
AVIATION PRODUCTS	Turco 4181	Electrolytic cleaner for ferrous alloys
	Turco 4338-C	Hot section jet engine cleaning compound
	Turco 4409	Liquid acid cleaner and deoxidizer
	Turco 5351	Neutral remover for epoxy and polyurethane coatings
	Turco 5351 Thin	Neutral remover for epoxy and polyurethane coatings
	Turco 5668	Diphase hot tank paint remover
	Turco 5854-2L	Toilet deodorant disinfectant liquid
	Turco 5948 DPM Thick	Environmentally advantaged thixotropic water based aircraft cleaner
	Turco 5948-R	Alkaline water based concentrated cleaner for painted & unpainted aircraft surfaces.
	Turco 6045	Silicon rubber remover
	Turco 6783-50	In place turbine engine compressor cleaner
	Turco 6849	Aqueous alkaline degreaser concentrate
	Turco Aviation	Non-silicated, non-chromated granular cleaner for spray and immersion applications
	Turco Liquid Sprayze NP-LT	Liquid alkaline wide temperature range cleaner for spray and dip systems
Turco Scale Gon 5	Mildly acidic scale conditioner	
Turco Transpo S2	Cold tank carbon and paint remover	
FIRE DRY CHEMICAL POWDERS	Pyro-Chem BCS	Dry chemical extinguishing powder for BC fires
	Pyro-Chem ABC 40	Dry chemical extinguishing powder for ABC fires
	Pyro-Chem ABC 90	Dry chemical extinguishing powder for ABC fires
	Grunau Dicosal 951	Dry chemical extinguishing powder for Metal fires
	Chubb Fat Out (Liquid)	Extinguishing agent for cooking oil and fat fires
FIRE FOAMS & ADDITIVES	Chemserve Airmaster	Class A Foam for forest fire fighting applications
	Chemserve Flame Block	Synthetic fire fighting wetting agent
	Chemserve Fluorofoam 3% & 6%	Fluoroprotein fire fighting foam concentrate
	Chemserve Protein Foam 3% & 6%	Protein fire fighting foam concentrate
	Chemserve RLF 4	Synthetic A class fire fighting foam concentrate for low, medium & high expansion
	Chemserve Super Hi-Ex	High expansion fire fighting foam concentrate
	Sthamex AFFF 3% & 6%	Synthetic Aqueous Film Forming foam concentrate
	Foamousse FFFP-AR	Film Forming Fluoroprotein foam concentrate, alcohol resistant
	Moussol- APS	Alcohol resistant universal AFFF foam concentrate
	Pyrosal 1303	Liquid extinguishing agent for hand held fire extinguishers
Chemserve Foamcrete	Protein based concrete admixture	
Chemserve Syncrete	Synthetic concrete admixture	
EMULSIFIERS, SURFACTANTS & DEFOAMERS	Akasol 4295	Detergent emulsifier package for solvent based solutions
	Akasol 9277	Detergent emulsifier package for solvent based degreasers
	Akasol 4210	Anionic Surfactant for non aqueous solutions
	Bevaloid 1299	Anionic Surfactant that is water soluble
	Bevaloid 4236	Non-ionic foam control agent - 10% active silicone
Bevaloid 4237	Anti foam liquid for a broad spectrum of non aqueous systems	
HIGH PERFORMANCE LUBRICANTS	MOLYKOTE RANGE	All data available on request

SAFETY DATA SHEET

C/S Aerowash AC 18 S



1. Identification of the substance/preparation and of the company/undertaking

Product name : C/S Aerowash AC 18 S **Manufactured/Supplied by** : Chemsolve Systems
Emergency telephone number : Hazchem Emergency: 083 255 8360 **Information Contact:** (011) 922 1600 / or 922 1888
 after hours **Information Contact:** (011) 922 1600 / or 922 1888
 200 Berg River Drive
 Chlookop Ext 24

2. Composition / information on ingredients

Substance/Preparation : Preparation

Chemical name*	CAS No.	%	EC Number	Classification
Europe 2-BUTOXY ETHANOL	111-76-2	0-10	203-905-0	Xn; R20/21/22 Xi; R37
Sodium meta silicate	6834-92-0	0-10	229-912-9	C; R34 Xi; R37
Diphosphoric acid, tetrasodium salt	7722-88-5	0-5	231-767-1	Xi; R38, 41 R43
See Section 15 for the full text of the R Phrases declared above				

* Occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

Physical/Chemical Hazards : Not applicable.
Human health hazards : Prolonged contact may cause skin irritation.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.
Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Get medical attention if required.
Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Effects and symptoms

Inhalation : Not expected to be an inhalation hazard under normal conditions of use with good ventilation.
Ingestion : May cause burns to mouth, throat and stomach.
Skin Contact : Hazardous in case of skin contact (corrosive).
Eye Contact : Hazardous in case of eye contact (irritant, corrosive).
Aggravating conditions : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.

5. Fire-fighting measures

Extinguishing Media

Suitable : Not applicable.

6. Accidental release measures

- Personal precautions** : Splash goggles. Overalls. Boots. Gloves.
- Environmental Precautions and Clean-up Methods** : Stop leak if without risk.

7. Handling and storage

- Handling** : Do not ingest. Do not breathe gas/fumes/ vapor/spray. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.
- Packaging materials**
- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Ingredient Name

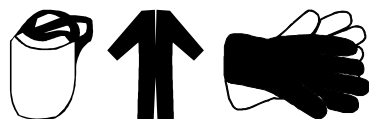
Occupational Exposure Limits

C/S Aerowash AC 18 S

ACGIH TLV (United States). Notes: Weight averaged theoretically calculated.
TWA: > 100 mg/m³ 8 hour(s).

Personal protective equipment

- Respiratory system** : Wear appropriate respirator when ventilation is inadequate.
- Skin and body** : Overalls.
- Hands** : Gloves.
- Eyes** : Face shield.



9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Yellow. (Light.)
- Odor** : No characteristic odour.
- Boiling Point** : Weighted average: 103.98°C (219.2°F)
- Melting Point** : Weighted average: -4.27°C (24.3°F)
- Density** : 1.022 g/cm³
- Vapor Density** : Weighted average: 1.18 (Air = 1)
- Vapor Pressure** : Weighted average: 2.17 kPa (16.28 mmHg) (at 20°C)
- Evaporation rate (butyl acetate = 1)** : 0.072 (2-BUTOXY ETHANOL) compared to (n-BUTYL ACETATE=1)
- Solubility** : Easily soluble in cold water , hot water, methanol, acetone.
Insoluble in diethyl ether, n-octanol.
- Octanol/water partition coefficient** : The product is much more soluble in water.
- pH** : >12 (Conc. (% w/w): 100) [Basic.]
- Flash point** : Not flammable.
- Explosive properties** : Not considered as a product presenting risks of explosion.

10. Stability and reactivity

- Stability** : The product is stable.
- Materials to avoid** : Reactive with acids.
Non-reactive with oxidizing agents, reducing agents, combustible materials, organic materials, metals, alkalis.

11. Toxicological information

Local effects

- Skin irritation** : Hazardous in case of skin contact (corrosive).
- Eye irritation** : Hazardous in case of eye contact (corrosive).
- Acute toxicity** : Acute oral toxicity (LD50): 2900 mg/kg [Rat - Weighted average theoretically calculated.].
- Chronic toxicity** : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.
- Specific effects**
- Carcinogenic Effects** : Classified None by OSHA and NIOSH.

12. Ecological information

- Ecotoxicity** : Ecotoxicity in water:
(LC50): >50 mg/l [Weight averaged theoretically calculated], 96 hours [Fish].
Harmful to aquatic organisms.
- If used responsibly this product is not expected to cause adverse effects to the environment.

13. Disposal considerations

- Disposal Consideration** : DO NOT RE-USE CONTAINERS. Puncture all plastic containers. Flatten all metal containers. Shred all polywoven bags.
- Methods of disposal** : Waste must be disposed of in accordance with federal, state and local environmental control regulations.
- Waste Classification** : No additional information.
- European Waste Catalogue (EWC)** : No known data.
- Hazardous Waste** : The classification of the product may meet the criteria for a hazardous waste

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
ADR/RID Class Land - Road/Railway	Not regulated.	-	-			-
ADN Class Inland waterways	Not regulated.	-	-			-
IMDG Class Sea	Not regulated.	-	-			-
IATA-DGR Class Air	Not regulated.	-	-			-

15. Regulatory information

EU Regulations

Hazard symbol(s) :



Classification :

Irritant

Risk Phrases :

R36/38- Irritating to eyes and skin.

C/S Aerowash AC 18 S

- Safety Phrases** : S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.
- Product Use** : Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.
- Consumer applications.

16. Other information

Other Special Considerations : No additional remark.

HISTORY

- Date of issue** : 11/9/2006.
- Date of Previous Issue** : No Previous Validation.
: Validated by Louise Wilken on 11/9/2006.
: Verified by Colin Anstis.

Notice to Reader

The information and recommendations presented on this data sheet are to the best of our knowledge and belief accurate and reliable, but do not constitute a warranty. None of our representatives or agents are authorised to give any guarantee or warranty or make any representation in addition or contrary to the above, and we do not accept liability for claims of any kind for any loss including, without limitation, consequential loss, injury or damage arising from the use of the information or recommendations, or of the products which are subject to the subject matter hereof. These products are sold subject to our standard conditions of sale and tender, copies of which are available on request.

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SAFETY DATA SHEET



C/S Mechsol 6

1. Identification of the substance/preparation and of the company/undertaking

Product name : C/S Mechsol 6 **Manufactured/Supplied by** : Chemsolve Systems
Emergency telephone number : Hazchem Emergency: 083 255 8360
Information Contact: (011) 922 1600 / or 922 1888
after hours : 200 Berg River Drive
 Chlookop Ext 24

2. Composition / information on ingredients

Substance/Preparation : Preparation

Chemical name*	CAS No.	%	EC Number	Classification
Europe Solvent naphtha petroleum, medium aliphatic. SODIUM DODECYLBENZENE SULFONATE	64742-88-7 25155-30-0	50-60 1-10	265-191-7 246-680-4	Xn; R65 F; R11 Xn; R22 Xi; R37/38, 41
Poly(oxy-1,2-ethanediyl),a-(4-nonylphenol)-w-hydroxy 2-BUTOXY ETHANOL	26027-38-3 111-76-2	1-10 0.5-7	203-905-0	Xi; R41 Xn; R20/21/22 Xi; R37
See Section 15 for the full text of the R Phrases declared above				

* Occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

Physical/Chemical Hazards : Not applicable.
Human health hazards : Prolonged skin contact may defat the skin.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. Get medical attention.
Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Skin Contact : Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention if irritation occurs.

Effects and symptoms

Inhalation : Not expected to be an inhalation hazard under normal use conditions.
Ingestion : Slightly hazardous in case of ingestion.
Skin Contact : Hazardous in case of skin contact (permeator). Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Eye Contact : Slightly hazardous in case of eye contact (irritant, corrosive).
Aggravating conditions : Defatting of the skin may occur on prolonged contact.

5. Fire-fighting measures

Extinguishing Media

Suitable : SMALL FIRE: Use DRY chemical powder.
 LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Unusual fire/explosion hazards : Not a high fire risk. Not explosive.
Hazardous thermal (de)composition products : These products are carbon oxides (CO, CO₂), sulfur oxides (SO₂, SO₃...).
Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

- Personal precautions** : Splash goggles. Overalls. Boots. Gloves.
- Environmental Precautions and Clean-up Methods** : Keep away from sources of ignition. Stop leak if without risk.

7. Handling and storage

- Handling** : Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
- Storage** : Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).
- Packaging materials**
- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Should not be required if used in an open area with sufficient ventilation. If required provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Occupational Exposure Limits** :

<u>Inгредиент Name</u>	<u>Occupational Exposure Limits</u>
C/S Mechsol 6	ACGIH TLV (United States, 2002). Notes: Theoretically calculated TLV: >150 ppm

Personal protective equipment

- Respiratory system** : Wear appropriate respirator when ventilation is inadequate.
- Skin and body** : Overalls.
- Hands** : Gloves.
- Eyes** : Splash goggles.



9. Physical and chemical properties

- Physical state** : Liquid. (Clear liquid.)
- Color** : Clear red
- Odor** : Slight.
- Odor Threshold** : The lowest known value is 0.1 ppm (2-BUTOXY ETHANOL)
- Boiling Point** : 247°C (476.6°F)
- Melting Point** : -7°C (19.4°F)
- Density** : 0.88 g/cm³
- Vapor Density** : 3.5 (Air = 1)
- Vapor Pressure** : 1.1 kPa (8 mmHg) (at 20°C)
- Evaporation rate (butyl acetate = 1)** : No additional information.
- Solubility** : Easily soluble in hot water, methanol, diethyl ether, n-octanol, acetone.
Soluble in cold water .
- Octanol/water partition coefficient** : The product is more soluble in octanol.
- pH** : >7 [Neutral.]
- Flash point** : Closed cup: >85°C (185°F). (Pensky-Martens.)
- Fire Hazards in Presence of Various Substances** : Not high flammability risk.
- Autoignition temperature** : >245°C (473°F)
- Explosive properties** : Not explosive, not high flammability risk.
- Lower explosion limit** : No additional information.

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : Avoid heat, flame, ignition sources.
- Materials to avoid** : Non-reactive with metals.
- Hazardous Decomposition Products** : These products are carbon oxides (CO, CO₂), sulfur oxides (SO₂, SO₃..).

11. Toxicological information

Local effects

- Skin irritation** : Slightly hazardous in case of skin contact (irritant).
- Eye irritation** : Slightly hazardous in case of eye contact (irritant).
- Acute toxicity** : Acute oral toxicity (LD₅₀): >2000 mg/kg [Rat - Weighted average theoretically calculated.].
- Chronic toxicity** : Defatting of the skin may occur on prolonged contact.

Specific effects

- Carcinogenic Effects** : Not classified.
- Mutagenic Effects** : Not classified.
- Reproduction toxicity** : Not classified.
- Teratogenic effects** : Not classified.

12. Ecological information

- Persistence/degradability** : **BOD and COD:**
The BOD is >550000 ppm (55%) [5 day(s)] Theoretically calculated.
Theoretical Oxygen Demand:
ThOD: 29000 ppm [5 day(s)] [salt water, non acclimated] [2-BUTOXY ETHANOL]
- Ecotoxicity** : Ecotoxicity in water:
(LC₅₀): >1400 mg/l, 96 hours [Fish].

13. Disposal considerations

- Disposal Consideration** : DO NOT RE-USE CONTAINERS. Puncture all plastic containers. Flatten all metal containers. Shred all polywoven bags.
- Methods of disposal** : Waste must be disposed of in accordance with federal, state and local environmental control regulations.
- Waste Classification** : No additional information.
- European Waste Catalogue (EWC)** : No known data.
- Hazardous Waste** : Not controlled.

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
ADR/RID Class Land - Road/Railway	Not regulated.	-	-			-
ADN Class Inland waterways	Not regulated.	-	-			-
IMDG Class Sea	Not regulated.	-	-			-
IATA-DGR Class Air	Not regulated.	-	-			-

15. Regulatory information

EU Regulations

Hazard symbol(s)

:



Classification

: Irritant

Risk Phrases

: R36- Irritating to eyes.

Safety Phrases

: S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39- Wear eye/face protection.
S46- If swallowed, seek medical advice immediately and show this container or label.

Product Use

: Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.

16. Other information

Other Special Considerations

: The product contains aliphatic hydrocarbon solvent and water. Due to the formulation of the components the product is not considered combustible or flammable under normal use conditions. It must be noted however, that in conditions of extended exposure to extreme heat conditions where components may partly or completely evaporate, and the raised temperature of the product may coincide with the flashpoint temperature of component(s), the risk may arise of possible combustion on exposure to naked flames or sparks.

HISTORY

Date of issue

: 11/9/2006.

Date of Previous Issue

: No Previous Validation.
: Validated by Louise Wilken on 11/9/2006.
: Verified by Colin Anstis.

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SAFETY DATA SHEET



C/S Solvène 33

1. Identification of the substance/preparation and of the company/undertaking

Product name : C/S Solvène 33 **Manufactured/Supplied by** : Chemserve Systems
Chemical Formula : Formulated Chemical 200 Berg River Drive
Emergency telephone number : **Hazchem Emergency: 083 255 8360** Chlookop Ext 24
Information Contact: (011) 922 1600 / or 922 1888
after hours

2. Composition / information on ingredients

Substance/Preparation : Preparation

Chemical name*	CAS No.	%	EC Number	Classification
Europe Solvent naphtha petroleum, medium aliphatic. Tetrachloroethylene. DICHLOROMETHANE	64742-88-7 127-18-4 75-09-2	50-70 20-30 5-15	265-191-7 204-825-9 200-838-9	Xn; R65 R53 Xi; R37/38, 41 R52/53
See Section 15 for the full text of the R Phrases declared above				

* Occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

Physical/Chemical Hazards : Not applicable.
Human health hazards : Harmful by inhalation and if swallowed.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion : If swallowed, do not induce vomiting unless directed to do so by medical personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Skin Contact : Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if irritation occurs.

Effects and symptoms

Inhalation : Very hazardous in case of inhalation.

Ingestion : Very hazardous in case of ingestion.

Skin Contact : Very hazardous in case of skin contact (permeator). Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact : Slightly hazardous in case of eye contact (irritant).

Aggravating conditions : Repeated exposure to a toxic material may produce general deterioration of health by an accumulation in one or many human organs.

5. Fire-fighting measures

Extinguishing Media

Suitable : Not applicable.

Unusual fire/explosion hazards : May be flammable after continuous exposure to open flames and sparks, or heat.

Hazardous thermal (de)composition products : Toxic or flammable gases may be produced in fires. Decomposes to form phosgene gas and chloride fumes.

Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

- Personal precautions** : Splash goggles. Overalls. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.
- Environmental Precautions and Clean-up Methods** : Stop leak if without risk. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Absorb with DRY earth, sand or other non-combustible material, place in suitable waste disposal container. Allow residue to evaporate. Call for assistance on disposal.

7. Handling and storage

- Handling** : Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.
- Packaging materials**
- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Occupational Exposure Limits** :

Ingredient Name

C/S Solvene 33

Occupational Exposure Limits

ACGIH TLV (United States). Notes: Weight averaged theoretically calculated.
TWA: > 55 ppm 8 hour(s). Form: Vapor or mist.

Personal protective equipment

- Respiratory system** : Wear appropriate respirator when ventilation is inadequate. Be sure to use an approved/certified respirator or equivalent.
- Skin and body** : Overalls.
- Hands** : Gloves.
- Eyes** : Safety glasses.



9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Clear. Colorless. (Light.)
- Odor** : Slight.
- Odor Threshold** : Weighted average: 106.71 ppm
- Boiling Point** : Weighted average: 236.29°C (457.3°F)
- Melting Point** : May start to solidify below -22°C (-8.3°F)
- Density** : 0.92 - 0.94 g/cm³ (20°C / 68°F)
- Vapor Density** : Weighted average: 4.79 (Air = 1)
- Vapor Pressure** : Weighted average: 5.74 kPa (43.05 mmHg) (at 20°C)
- Evaporation rate (butyl acetate = 1)** : 14.5 (DICHLOROMETHANE) compared to (n-BUTYL ACETATE=1)
- Solubility** : Easily soluble in diethyl ether, n-octanol.
Insoluble in cold water, hot water.
- Octanol/water partition coefficient** : The product is much more soluble in octanol.
- pH** : Not applicable.
- Flash point** : CLOSED CUP: Not Detected PMCC
- Fire Hazards in Presence of Various Substances** : May be flammable after continuous exposure to open flames and sparks, of heat.
- Explosive properties** : Closed containers pose explosive risk on exposure to naked lights/flames.
- Viscosity** : Dynamic: The highest known value is 0.89 cP (Tetrachloroethylene.)

10. Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : Naked flames.
- Materials to avoid** : Reactive with oxidizing agents, metals, acids, alkalis.
Slightly reactive to reactive with reducing agents, organic materials.
- Hazardous Decomposition Products** : Toxic or flammable gases may be produced in fires. Decomposes to form phosgene gas and chloride fumes.

11. Toxicological information

Local effects

- Skin irritation** : Slightly hazardous in case of skin contact (irritant).
- Eye irritation** : Slightly hazardous in case of eye contact (irritant).

- Acute toxicity** : Acute oral toxicity (LD50): >700 mg/kg [Rat - Weighted average theoretically calculated].
Acute dermal toxicity (LD50): >2000 mg/kg [Rat]. (Solvent naphtha petroleum, medium aliphatic.).
Acute toxicity of the vapor (LC50): >5 mg/l 4 hours [Rat]. (Solvent naphtha petroleum, medium aliphatic.).

- Chronic toxicity** : Repeated exposure to a toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Specific effects

- Carcinogenic Effects** : Classified 3 (Possible for human.) by European Union [C/S Solvene 33].
- Mutagenic Effects** : Classified None for human [Tetrachloroethylene.].
- Reproduction toxicity** : Classified Reproductive system/toxin [PROVEN] [Tetrachloroethylene.].

12. Ecological information

- Ecotoxicity** : Ecotoxicity in water:
(LC50): 1360 mg/l [Weight averaged theoretically calculated], 96 hours [Fish].

- Tetrachloroethylene.:




- Ecotoxicity in water:
(LC50): 18.4 mg/l, 96 hours [Fish (Fathead Minnow)].
May cause long-term adverse effects in the aquatic environment.

13. Disposal considerations


- Disposal Consideration** : DO NOT RE-USE CONTAINERS. Puncture all plastic containers. Flatten all metal containers. Shred all polywoven bags.
- Methods of disposal** : Do not re-use containers. Product and containers must be disposed via reputable waste disposal company.
- Waste Classification** : A3140
- European Waste Catalogue (EWC)** : No known data.
- Hazardous Waste** : The classification of the product may meet the criteria for a hazardous waste

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
ADR/RID Class Land - Road/Railway	1897	(Tetrachloroethylene., Solvent naphtha petroleum, medium aliphatic.)	ADR CLASS 6.1: Toxic.	III		-
ADN Class Inland waterways	1897	(Tetrachloroethylene., Solvent naphtha petroleum, medium aliphatic.)	6.1	III		-
IMDG Class Sea	1897	(Tetrachloroethylene., Solvent naphtha petroleum, medium aliphatic.). (Tetrachloroethylene.)	6.1	III		-

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IATA-DGR Class	1897	(Tetrachloroethylene., Solvent naphtha petroleum, medium aliphatic.)	6.1	III		-
Air						

15. Regulatory informationEU Regulations**Hazard symbol(s)**

:

**Classification**

: Harmful

Risk Phrases: R20/22- Harmful by inhalation and if swallowed.
R40- Limited evidence of a carcinogenic effect.**Safety Phrases**: S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.**Product Use**: Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.
- Consumer applications.**16. Other information****Other Special Considerations**

: No additional remark.

HISTORY**Date of issue**

: 11/9/2006.

Date of Previous Issue: No Previous Validation.
: Validated by Louise Wilken on 11/9/2006.
: Verified by Colin Anstis.Notice to Reader

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CHEMSERVE AEROWASH AC-18 S **MEDIUM DUTY SOLVENT DEGREASER**

DESCRIPTION

CHEMSERVE AEROWASH AC-18 S is a concentrated alkaline cleaner containing a synergistic blend of synthetic detergents and organic solvents intended for the cleaning of surfaces soiled with oil, grease and similar soils.

ADVANTAGES

- Economical
- Easy to use
- Bears the SABS 1344 mark of approval

SPECIFICATIONS AND APPROVALS

CHEMSERVE AEROWASH AC-18 S conforms to the following specifications :

- MIL-C-87936A/25769
- CSS285/18.40

TYPICAL APPLICATIONS

CHEMSERVE AEROWASH AC-18 S can be used for cleaning:

- Painted and unpainted surfaces
- Plastic surfaces
- Surfaces of equipment
- Walls and floors, etc
- Aircraft exterior and interior cleaning.

DIRECTIONS FOR USE

CHEMSERVE AEROWASH AC-18 S can be applied by brush, spraying, wiping or immersion. Dilution factors are as follows:

- Heavy soiling : As supplied or diluted 1:1 with water
Medium soiling : Diluted 1:4 with water
Light soiling : Diluted 1:10 with water

CHEMSERVE AEROWASH AC-18 S

SAFETY PRECAUTIONS

CHEMSERVE AEROWASH AC-18 S should be used in a well-ventilated area. In case of accidental spillage, dilute with water and run to an approved waste.

FIRST AID

In case of contact with skin and eyes; flush adequately with water. In severe eye cases obtain medical attention.

For further information consult the material safety data sheet.

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CHEMSERVE MECHSOL 6

SOLVENT EMULSION DEGREASER

DESCRIPTION

CHEMSERVE MECHSOL 6 is a solvent emulsion degreaser, which incorporates select solvents, detergents and emulsifiers into a balanced cleaning material. The product is designed to efficiently remove soils common to industry, i.e. – grease, oil, tar and carbonaceous deposits. It is not to be use where water is not tolerated.

ADVANTAGES

- Efficient thorough cleaning
- Forms stable emulsion with water
- Rinses well with both hot or cold water
- Safe on all metals
- Meets the requirements of SABS 1216 Type II

TECHNICAL DATA

Physical Form : Red clear liquid

Flash point : Greater than 85°C

Rinsability : Excellent with water

Emulsification : 50% product in water emulsifies completely.

TYPICAL APPLICATIONS

CHEMSERVE MECHSOL 6 can be applied manually by brush, by pressure sprayer, and by tank immersion. Suggested uses include general maintenance cleaning, cleaning of chassis, forklift trucks and associated materials handling equipment, heavy equipment as well as the removal of cutting and stamping compounds, smut, oil, grease and other soils from equipment and floors.

DIRECTIONS FOR USE

Manual Operations

PRODUCT DATA SHEET

Dilute concentrate with water at 1:4 to 1:10. Wipe on, allow the chemical to work for at least 10-15 minutes, then wipe off. High pressure rinsing is more effective.

CHEMSERVE MECHSOL 6

Pressure Spray

Dilute concentrate with water at 1:20. Spray on, allow chemical to work, then spray-rinse off.

Immersion Tank

Mix concentrate with water at 1:4 to 1:10 depending on the degree of soil to be removed. Soak parts until soils are removed, then rinse off, preferably with high-pressure equipment. For extremely heavily soiled surfaces, use **CHEMSERVE MECHSOL 6** concentrate or diluted 1:1 with mineral spirits (Paraffin). When concentrated or mixed 1:1, the product is somewhat viscous and is ideally suited for cleaning vertical surfaces.

SAFETY PRECAUTIONS

CHEMSERVE MECHSOL 6 is an alkaline solvent degreaser and will defat the skin after prolonged contact. The wearing of rubber gloves when working with this product is recommended. If contact is prolonged, flush thoroughly with water and use a hand cream. In the event of accidental eye contact, flush well with water and seek medical attention if necessary.

For further information consult the material safety data sheet.

PRODUCT DATA SHEET



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CHEMSERVE SOLVENE 33

SAFETY SOLVENT FOR CLEANING ELECTRICAL PARTS

DESCRIPTION

CHEMSERVE SOLVENE 33 is ideal for cleaning and degreasing electrical equipment, transformers, business machines, ignition systems and radar equipment.

ADVANTAGES

- Good cleaning – does not require heat
- Fast dissolving action on oils, grease, waxes and tars
- Non-corrosive to metals, including aluminium
- Safe for use on bare metals, painted surfaces, plastics, rubber and ceramics
- Safe in use – does not contain carbon tetrachloride. high flash point
- Replaces toxic and flammable solvents
- Leaves no residue. does not promote electrical conduction on cleaned surfaces

PRODUCT DESCRIPTION

Appearance	:	Clear liquid with characteristic odour
Ingredients	:	An inhibited safety blend of chlorinated and aliphatic solvents
SG	:	0.98 – 1.00
Flash Point	:	Not detected by P.M.C.C.

DIRECTIONS FOR USE

Product may be applied by any of the following methods:

- In spray cleaning equipment, particularly for cleaning prior to overhauling of electric motors and generators.
- Hand spraying, brushing or wiping.

PRECAUTIONS

Avoid prolonged or repeated contact with the skin. For ingestion, consult a physician immediately. Use in well ventilated environment. Test effect of product on new types of plastics and other surfaces before general use.

Health and safety information available on request.

PRODUCT DATA SHEET



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