

Tribos Automotive Detailing

Training Manual Ver 1.0 (May 20226)

Part B – Safety



Internal Training Reference

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Table of contents

1. Safety Handling of Car Cleaning Chemicals and Equipment
2. General Area Safety Training

Training Manual

Safety Handling of Car Cleaning Chemicals and Equipment

For Car Wash and Automotive Detailing Operators

1. Purpose of This Manual

This manual provides general safety guidance for operators involved in:

- Manual car washing
- Automotive detailing
- Glass treatment services
- Upholstery and interior cleaning
- Engine bay cleaning
- Machine-assisted cleaning operations

The objective is to minimize:

- Personal injury
- Chemical exposure
- Fire hazards
- Respiratory irritation
- Equipment accidents
- Environmental contamination

This document is intended for workplace awareness and operator training.

2. General Safety Principles

Operators must:

- Always read product labels before use
- Never mix chemicals unless specifically instructed
- Use appropriate personal protective equipment (PPE)
- Work in well-ventilated areas
- Keep chemicals away from children and unauthorized personnel
- Avoid eating, drinking, or smoking during chemical handling
- Wash hands after handling chemicals
- Report damaged equipment immediately
- Keep floors dry to prevent slipping

3. Types of Chemicals Commonly Used

3.1 Surfactant-Based Cleaners

Examples:

- Car shampoos
- APC (all-purpose cleaners)
- Upholstery cleaners
- Degreasers
- Foam detergents

Typical hazards:

- Skin dryness
- Mild eye irritation
- Respiratory discomfort from mist or vapors

Generally low hazard when used properly.

3.2 Siloxane-Based Products

Examples:

- Paint protection coatings
- Glass protectors
- Interior protectants
- Hydrophobic coatings

Potential concerns:

- Vapors in enclosed spaces
- Slippery surfaces if spilled
- Eye irritation
- Skin irritation in sensitive individuals

3.3 PTFE / Teflon-Type Coatings

Examples:

- Protective spray coatings
- Water repellents
- Paint sealants

Potential concerns:

- Aerosol inhalation
- Respiratory irritation during spraying
- Slippery overspray on floors

Never spray in confined unventilated areas.

3.4 Cerium Oxide Glass Polishing Compounds

Used for:

- Deep glass cleaning
- Water spot removal
- Glass polishing

Potential hazards:

- Fine powder inhalation
- Dust irritation to eyes and lungs
- Skin dryness

Operators should avoid breathing polishing dust.

3.5 IPA (Isopropyl Alcohol) Neutralizers

Used for:

- Surface wipe-down
- Glass neutralizing
- Oil removal before coating

Hazards:

- Flammable liquid
- Eye irritation
- Dizziness from excessive inhalation
- Dry skin

Keep away from:

- Sparks
- Cigarettes
- Open flames
- Hot machinery

3.6 Mildly Acidic Glass Protectors

Potential hazards:

- Eye irritation
- Skin irritation
- Surface damage if misused
- Respiratory irritation from vapors

Avoid contact with:

- Eyes
- Open wounds
- Sensitive skin

4. Personal Protective Equipment (PPE)

Minimum Recommended PPE

Gloves

Recommended:

- Latex gloves
- Nitrile gloves

Purpose:

- Prevent skin irritation
- Prevent chemical absorption
- Protect against detergents and solvents

Replace gloves if:

- Torn
- Contaminated internally
- Excessively worn

Eye Protection

Recommended:

- Safety glasses
- Splash-resistant goggles

Required when:

- Spraying chemicals
- Using pressure washers
- Mixing concentrates
- Polishing glass
- Working overhead

Respiratory Protection

Recommended:

- Dust mask
- Respirator mask for spraying operations

Important during:

- Cerium oxide polishing
- Aerosol spraying
- Steam cleaning
- Confined-space detailing

Protective Clothing

Recommended:

- Long sleeves
- Waterproof aprons
- Slip-resistant footwear

Avoid:

- Loose clothing near machinery
- Open sandals

5. Chemical Handling Procedures

Storage

Store chemicals:

- In labelled containers
- In cool dry locations
- Away from direct sunlight
- Away from heat sources

Never:

- Store chemicals in beverage bottles
- Mix different products together
- Leave containers open

Mixing and Dilution

Operators must:

- Follow manufacturer dilution instructions
- Add chemicals carefully to prevent splashing
- Use measuring containers where required

Never:

- Guess dilution ratios
- Mix acidic and alkaline products
- Mix chemicals with bleach unless specifically approved

Spill Management

Small spills:

- Isolate the area
- Absorb with cloth or absorbent material
- Wash area thoroughly

Large spills:

- Stop access to area
- Notify supervisor immediately
- Use ventilation if fumes are present

Slippery floors must be cleaned immediately.

6. Safety Around Equipment and Machinery

High-Pressure Washers

Hazards:

- Skin penetration injuries
- Eye injuries
- Electrical hazards
- Slips and falls

Safety rules:

- Never point nozzle at people
- Never spray electrical components directly
- Inspect hoses regularly
- Maintain stable footing
- Disconnect power before maintenance

High-pressure water can cause serious injury even without visible bleeding.

Soap Foaming Machines

Hazards:

- Slippery floors
- Chemical mist inhalation
- Hose whipping if disconnected

Operators should:

- Ensure fittings are secure
- Avoid excessive foam accumulation on walkways
- Use proper ventilation

Steam Cleaning Equipment

Used for:

- Upholstery
- Interior surfaces
- Sanitization

Hazards:

- Burns
- Scalding
- Steam inhalation

- Moisture damage to electrical systems

Never:

- Direct steam at skin
- Open pressurized tanks while hot
- Use damaged hoses

Allow equipment to cool before servicing.

Vacuum Cleaners

Hazards:

- Electrical shock
- Dust inhalation
- Trip hazards

Operators should:

- Check cords regularly
- Empty dust containers safely
- Avoid vacuuming flammable liquids

Compressed Air Systems

Used for:

- Drying
- Dust removal
- Tight-area cleaning

Hazards:

- Eye injuries
- Flying debris
- Hearing damage
- Air injection injuries into skin

Never:

- Point compressed air at people
- Blow dust toward faces
- Use excessive pressure

Eye protection is mandatory.

7. Fire Safety

Particular attention required with:

- IPA-based products
- Aerosol coatings
- Solvent-containing products

Keep away from:

- Open flames
- Welding equipment
- Cigarettes
- Hot surfaces

Operators should know:

- Fire extinguisher locations
- Emergency exits
- Shutdown procedures

Never block:

- Emergency exits
- Electrical panels
- Fire extinguishers

8. First Aid Procedures

Eye Exposure

If chemicals enter eyes:

- Flush immediately with clean water
- Continue flushing for at least 15 minutes
- Remove contact lenses if possible
- Seek medical attention if irritation persists

Do not rub eyes.

Skin Exposure

If irritation occurs:

- Wash thoroughly with soap and water
- Remove contaminated clothing
- Stop use of offending chemical

Seek medical attention if:

- Rash develops
- Burning continues
- Blistering occurs

Inhalation Exposure

Symptoms may include:

- Dizziness
- Headache
- Coughing
- Breathing difficulty

Procedure:

- Move person to fresh air immediately
- Loosen tight clothing
- Keep person calm

Call emergency services if:

- Breathing difficulty continues
- Person loses consciousness
- Chest pain occurs

Ingestion

If chemicals are swallowed:

- Do not induce vomiting unless instructed
- Rinse mouth with water
- Seek medical attention immediately

Bring:

- Product label
- SDS (Safety Data Sheet) if available

9. Emergency Procedures

Ambulance and Emergency Response

In serious emergencies:

- Call ambulance services immediately
- Notify supervisor
- Stop work in affected area

Emergency numbers may vary by country.

Examples:

- Singapore ambulance: 995
- Japan emergency/ambulance: 119
- Police emergency in Japan: 110

Operators should know local emergency numbers for their location.

10. Ventilation and Indoor Safety

Poor ventilation increases risk from:

- IPA vapors
- Aerosol coatings
- Steam
- Chemical mist

Recommended:

- Fans
- Open doors
- Exhaust systems

Avoid prolonged work in:

- Small enclosed garages
- Sealed detailing bays
- Underground areas without ventilation

11. Operator Hygiene

Operators should:

- Wash hands regularly
- Avoid touching face during work
- Change contaminated clothing
- Shower after prolonged exposure

Do not:

- Store food near chemicals
- Eat while handling detailing chemicals

12. Environmental Considerations

Do not:

- Pour chemicals directly into drains unless approved
- Dump concentrated chemicals outdoors
- Dispose of containers improperly

Follow local regulations for:

- Chemical disposal
- Wastewater management
- Hazardous waste

13. Operator Awareness and Responsibility

All operators are responsible for:

- Safe chemical handling
- Safe machine operation
- Reporting hazards
- Protecting coworkers and customers

Unsafe behavior may result in:

- Injury
- Chemical exposure
- Equipment damage
- Fire
- Legal liability

14. Final Safety Reminder

Most car detailing chemicals are safe when used correctly and responsibly. However:

- Even mild chemicals can cause injury if misused
- Machinery can cause serious accidents
- PPE should never be ignored
- Good ventilation is essential
- Operators should never work carelessly or while fatigued

Safety awareness protects:

- Operators
- Customers
- Vehicles
- The workplace
- The business reputation

General Area Safety Training Manual

Manual Car Wash and Car Detailing Centers

1. Purpose of This Manual

This manual establishes general workplace safety requirements for all personnel working in a manual car wash and automotive detailing environment.

The objective is to:

- Prevent injuries and accidents
- Promote safe work practices
- Reduce operational risks and liabilities
- Protect customers, employees, contractors, and visitors
- Maintain a safe and professional workplace

This manual supplements:

- Chemical safety procedures
- Machinery and equipment safety procedures
- Fire safety procedures
- Workplace emergency response procedures

2. General Safety Principles

All employees must:

- Work safely at all times
- Follow instructions from supervisors
- Use common sense and situational awareness
- Immediately report hazards, accidents, near misses, and unsafe conditions
- Wear required Personal Protective Equipment (PPE)
- Keep work areas clean and organized
- Never engage in horseplay or reckless behavior

Safety is the responsibility of every employee.

3. Authorized Personnel and Restricted Areas

Only authorized personnel are permitted inside designated work areas.

Work zones may be identified using:

- Green boundary lines
- Floor markings

- Safety barriers
- Signage

Employees must:

- Keep customers and visitors outside work zones
- Prevent children from entering operational areas
- Ensure vehicles are moved only by authorized staff
- Maintain clear access to exits and emergency routes

Unauthorized access increases the risk of:

- Injury
- Collision
- Slips and falls
- Electrical shock
- Equipment damage

4. Situational Awareness

All personnel must remain aware of:

- Moving vehicles
- Co-workers
- Equipment movement
- Water hoses and cables
- Slippery surfaces
- Elevated work activity
- Customers walking nearby

Employees must:

- Frequently check surroundings
- Avoid walking behind reversing vehicles
- Maintain visual contact when guiding vehicles
- Avoid distractions such as excessive phone usage
- Communicate clearly with team members

Never assume another person sees you.

5. Slip, Trip, and Fall Hazards

Slip-and-fall incidents are among the most common injuries in car wash and detailing operations.

Common Causes

- Standing water
- Soap residue
- Wax overspray
- Wet platforms
- Loose hoses
- Electrical cables
- Oil or grease contamination
- Uneven flooring

Prevention Measures

- Keep floors clean and drained
- Remove excess water regularly
- Use non-slip footwear
- Route hoses and cables safely
- Immediately clean spills
- Avoid running inside work areas
- Use caution signs for wet floors
- Maintain good housekeeping standards

Employees must immediately report:

- Damaged flooring
- Drain blockages
- Excessive water pooling
- Loose floor mats or coverings

6. Safety When Using Platforms and Step Stools

Low platforms and step stools are commonly used to access:

- Vehicle roofs
- SUVs
- Vans
- Windscreens
- Roof rails and roof racks

Hazards

- Slipping from wet platforms
- Overreaching
- Loss of balance
- Falling onto vehicles or flooring
- Platform movement

Safety Requirements

- Use only approved platforms or step stools
- Ensure surfaces are dry and stable
- Never stand on buckets or unstable objects
- Do not jump on or off platforms
- Maintain three points of contact when climbing
- Avoid excessive leaning or stretching
- Reposition the platform instead of overreaching
- Inspect platforms daily for damage

Workers must never use damaged:

- Step stools
- Platforms
- Ladders
- Rolling stands

7. Electrical Safety

Water and electricity create a serious risk of:

- Electric shock
- Burns
- Fire
- Electrocutation

Common Electrical Risks

- Wet electrical outlets
- Damaged power cords
- Water entering electrical equipment
- Poor drainage near power sources
- Improper extension cord usage

Safety Rules

- Keep electrical equipment dry
- Never operate electrical equipment with wet hands
- Do not use damaged cords or plugs
- Ensure cables are elevated or protected from standing water
- Use Ground Fault Circuit Interrupter (GFCI/RCD) protection where required
- Disconnect equipment before maintenance
- Report exposed wires immediately
- Never bypass electrical safety devices

Employees must not attempt electrical repairs unless specifically authorized and trained.

8. Water Drainage and Housekeeping

Effective drainage is essential for safe operation.

Requirements

- Drains must remain clear at all times
- Standing water must be removed promptly
- Wash bays should not overflow into walkways
- Equipment areas must remain dry where possible

Housekeeping Standards

- Return tools after use
- Store hoses properly
- Keep walkways unobstructed
- Remove trash and debris regularly
- Clean chemical spills immediately

Poor housekeeping creates:

- Slip hazards
- Fire hazards
- Equipment damage
- Increased liability exposure

9. Vehicle Movement Safety

Vehicle movement inside detailing facilities presents significant risk.

Employees Must

- Follow traffic flow instructions
- Drive slowly within work areas
- Use spotters when necessary
- Ensure pathways are clear before moving vehicles
- Confirm vehicle gear position before exiting
- Engage parking brakes where appropriate

Never

- Stand directly behind moving vehicles
- Walk between closely parked vehicles unnecessarily
- Leave vehicles running unattended inside enclosed areas unless ventilation requirements are met

10. Personal Protective Equipment (PPE)

Required PPE may include:

- Non-slip safety footwear
- Eye protection
- Gloves
- Face masks or respirators where applicable
- Hearing protection in noisy areas
- Waterproof aprons or clothing

Employees must:

- Wear PPE correctly
- Replace damaged PPE
- Maintain PPE cleanliness

Failure to use PPE properly may result in disciplinary action.

11. Emergency Procedures

All personnel must know:

- Emergency exits
- Evacuation routes
- Assembly points
- Fire extinguisher locations
- First aid station locations
- Emergency contact numbers

In Case of Emergency

- Stop work immediately
- Follow supervisor instructions
- Evacuate calmly
- Do not block exits
- Assist injured persons only if safe to do so

Never re-enter the facility until authorized.

12. Daily Safety Briefings

Safety briefings should be conducted:

- At the beginning of each shift
- Before high-risk work
- After safety incidents
- During severe weather conditions

Briefings May Include

- Work hazards
- Equipment status
- Staffing assignments
- Emergency reminders
- Weather-related concerns
- Customer traffic conditions
- Incident reviews

Employees are expected to participate actively.

13. Incident and Injury Reporting

All incidents must be reported immediately, including:

- Slips or falls
- Near misses
- Equipment damage
- Electrical incidents
- Injuries
- Unsafe conditions

Prompt reporting helps:

- Prevent repeat accidents
- Protect employees
- Reduce legal liability
- Improve workplace safety

Failure to report incidents may increase risk exposure for both employees and the company.

14. Liability and Workplace Responsibility

Unsafe actions may expose:

- Employees
- Supervisors
- Customers
- The company

to:

- Injury claims
- Legal liability
- Insurance claims
- Regulatory penalties

All employees are expected to:

- Follow procedures
- Work responsibly
- Protect customer property
- Prevent unsafe behavior

15. Weather and Environmental Conditions

Additional caution is required during:

- Heavy rain
- Thunderstorms
- High humidity
- Strong winds

Wet conditions increase:

- Slip hazards
- Electrical risks
- Visibility issues

Outdoor work may need to stop during dangerous weather conditions.

16. Fatigue and Physical Condition

Employees must not work while:

- Excessively fatigued
- Impaired by alcohol or drugs
- Medically unfit
- Unable to safely perform duties

Hydration and regular rest are important, especially in hot environments.

17. Final Safety Reminder

Safety is not optional.

Every employee has the authority and responsibility to:

- Stop unsafe work
- Report hazards
- Protect themselves and others
- Maintain a safe working environment

A clean, organized, and safety-conscious detailing center protects:

- Employees
- Customers
- Vehicles
- Business reputation
- Operational continuity