

MACJAMES® MMDC-11 - MULTISURFACE DEGREASER/CLEANER PRODUCT TECHNICAL DATA SHEET

INNOVATIVE FEATURES

- *Multisurface*
- *Safe on surfaces*
- *safe on environment*
- *Safe on users*
- *Biodegradable*
- *Non-toxic*
- *Emulsifying*
- *High foaming*
- *Low Viscosity*
- *Non-acidic*
- *Non-flammable*
- *Non organic solvent - based*
- *100% Water soluble*

BENEFITS

- ✓ *Highly economical.*
- ✓ *Reduces man hour and Labour costs.*
- ✓ *Sanitizes pathogenic substrates.*
- ✓ *improves efficiency, esthetics and integrity of substrates.*
- ✓ *Not destructive to metals and non-metals.*
- ✓ *heavy duty, and light duty when water-diluted.*
- ✓ *Removes organic and inorganic soils.*
- ✓ *Effective in soft and hard water*
- ✓ *Blendable with hot water for special degreasing jobs*

PRODUCT DESCRIPTION

MACJAMES® MMDC-11 - MULTISURFACE DEGREASER/CLEANER

(NAFDAC REG.NO.:02-8179L and DPR/HSE.04/003.700/2019/002) is an economical multi-surface/multipurpose Oilfield-Industrial and Household-Institutional (OI&HI) degreaser/cleaner that emulsifies and cleanses a large array of organic and inorganic dirt from various washable surfaces/substrates (metal, plastic, wood, concrete, rubber, PVC, ceramic, leather, glass, rugs, fabric, etc) without deforming them, harming the users or environment. It is a surface-active emulsifying, non-solvent based, non-acidic, and non-toxic foaming degreaser/cleaner. It emulsifies grease, oil, rust, asphalt, heavy dirt, carbon deposits, grime, slag, sludge, mud, scales, soot, mildew and mould, others alike, with it and cleanses them from the various washable substrates without deforming their surfaces, unlike most degreasers/cleaners in the market today. It is an economically efficient heavy and light duty (water-diluted only) ready-and-easy to apply degreaser/cleaner with safe surface-active strength and emulsifying properties.

It is produced using refined organic and inorganic chemical raw materials and is water-based, environmentally friendly and biodegradable. One of the vital features of this innovation is that it saves the health and lives of users as it does not contain any traces of petroleum distillates or organic solvents, unlike other degreasers popularly in use today that contain solvents which have been confirmed harmful to users and environment by causing systems failure, damage to the peripheral nervous system, infertility, lungs and liver damage/cancers, seizure and death on overexposure, etc and ground/surface water/air contamination (Ref: The Agency for Toxic Substances and Disease Registry (ATSDR), Federal Public Health Agency of the U.S. Department of Health and Human Services;(www.atsdr.cdc.gov/emes/public/docs/Health%20Effects%20of%20Chemical%20Exposure%20FS.pdf)), among others.

As a daily need, it solves both economic and health hazard problems of numerous consumers using acidic, solvent-based, petroleum distillates/solvents and aerosol degreasers/cleaners which are surface-selective, inefficient, and cost more with confirmed environ-health hazards.

It has been tested, confirmed and being used by HI&I cleaning companies, among others in degreasing/cleaning; Water Treatment equipment [Reverse Osmosis (RO) membranes/systems, Ultra-filtration (UF), etc], drains/channels, sludge pumps, automotive engines, boats and vessels, factory machinery/lines, tyres and wheels, grimy tables and boards,

mildew and mould, abattoirs, soiled walls and floors, grills and smokers, tanks/silos, condensers, radiators, engine rooms, farm houses, work platforms, mixers, metals before painting, and other heavily soiled substrates.

It has wide degreasing and cleaning applications in many areas:

- Water treatment equipment cleaning/maintenance (Reverse Osmosis (RO), Ultra-filtration (UF), etc)
- Oilfield equipment
- Drilling and mining
- Petrochemicals and refineries
- Rigs and superstructures
- Marine and dredging.
- Manufacturing/factories
- Foundries and casting
- Agriculture/farms
- Civil/metal construction
- Automobile and rail
- Mechanical workshop
- Abattoirs
- Boats and Vessels
- Households
- Hotel/food processing.
- Power/electricity equipment.
- Other heavily soiled surfaces and substrates.

PACKAGING SIZES: 12 x 1 Litre : 4 x 4 Litres : 20 Litres : 25 Litres : 200 Litres : IBC tank (1,000 Litres), others on request.

APPLICATION INFORMATION:

DIRECTIONS FOR USE:

- ✓ Use on all washable water-safe surfaces only.
- ✓ Spray, apply with brush, or soak soiled surfaces and substrates.
- ✓ Allow solution to penetrate for 1 - 5 minutes, depending on soil level.
- ✓ Scouring or Scrubbing or high-pressure application is recommended to remove stubborn deposits.
- ✓ Rinse or flush with clean water until surface is free from dirt and chemical.

DILUTION RATIO

The ratios in the table below are approximations and guides only. Actual requirements may vary due to soil composition, surfaces and contact time.

DEGREE OF DIRT/SOIL	THICKNESS OF DIRT/SOIL	DILUTION REQUIRED MMDC-11 : H ₂ O
Very Heavy	1/4" and over	Full strength
Heavy	1/8" to 1/4"	1:1 to 1:5
Medium	1/16" to 1/8"	1:5 to 1:10
Light	Less than 1/16"	1:10 to 1:50

IN THE RIGHT DILUTION, POWER OR PRESSURE WASH CAN BE USED ON SURFACES AND INACCESSIBLE SOILED AREAS.

MACJAMES®MMDC-11 - MULTISURFACE DEGREASER/CLEANER is known to be environmentally friendly, non-toxic and safe for general health but commonsense precautions are recommended.

PRECAUTIONS:

- Keep away from children
- Use hand gloves during application and approved chemical PPE.
- Do not drink.
- Avoid contact with eyes or skin, otherwise flush with plenty water.
- Wash hands with water after using chemicals.
- If swallowed, drink water and see a doctor.
- Dilute with plenty water before disposal.

INGREDIENTS: It is manufactured from De-ionized water, organic and inorganic surfactants, preservative, others. (Refer to MSDS)

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH	0	0 - Minimal
FLAMMABILITY	0	1 - Slight
PHYSICAL HAZARD	0	2 - Moderate
PERSONAL PROTECTION	B	3 - High
		4 - Very High

NB: The Material Safety Data Sheet (MSDS), NAFDAC, and Department of Petroleum Resources (DPR) approvals of **MACJAMES® MMDC-11 - MULTISURFACE DEGREASER/CLEANER** are readily available for more information or contact us at info@macjamesglobal.com.

PHYSICAL PROPERTIES			
Appearance	Light Lemon to colourless	Foaming Tendency	High
Odour	Industrial detergent or fruit fragrance	Concentration Monitoring Techniques	Titration
Specific Gravity @ 20°C	1.02	Water solubility	Complete
Viscosity	3.1p	Rinsability	Excellent
pH	8.5 - 10	Flash Point	none
Freezing Point	Approx. -5°C	Boiling Point	>105°C

MACJAMES® MMDC-11 SIZES AND APPEARANCES:



TYPICAL PHOTOS OF MACJAMES® MMDC-11 DEGREASING, STRIPPING AND CLEANING APPLICATIONS



MACJAMES® MMDC-11 - MULTISURFACE DEGREASER/CLEANER in use; Onsite degreasing/cleaning of longtime-soiled welding machine. After cleaning, the paints/coatings, rubber seals, tyres ,etc were not deformed but regained their lustre. (MMDC-11 is biodegradable and contains no acids, petroleum distillates, organic solvents or environ-human hazards) .



MACJAMES®MMDC-11 - MULTISURFACE DEGREASER/CLEANER
USER EXPERIENCE PHOTOS IN ACCRA, GHANA, WEST AFRICA

- CAR ENGINE SOILED WITH OIL, GREASE , MUD, RUST, ETC (BEFORE)



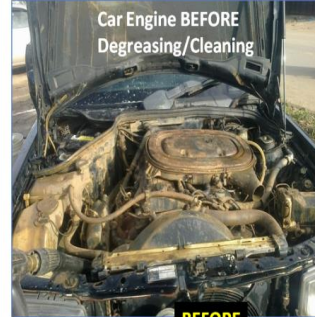
- CAR ENGINE DEGREASED/STRIPPED OFF OIL, GREASE, MUD, RUST, ETC (AFTER)



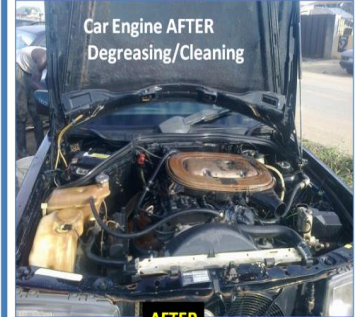
This car engine is an example of substrate with different components' materials (plastic, rubber, metal, PVC, etc) soiled with different dirt (oil, grease, mud, rust, etc) and degreased/cleaned with MACJAMES®MMDC-11 -Multisurface Degreaser/Cleaner without any damage or deformation to any of the materials. (ACCRA, GHANA, MAY 2017).

MACJAMES®MMDC-11 - MULTISURFACE DEGREASER/CLEANER
FIELD TEST SAMPLE PICTURES

- OLD CAR ENGINE SOILED WITH OIL, GREASE , MUD, MOLD, RUST, ETC (BEFORE)



- OLD CAR ENGINE DEGREASED/STRIPPED OFF OIL, GREASE, MUD, MOLD, ETC (AFTER)



This car engine is an example of substrate with different components' materials (plastic, rubber, metal, PVC, etc) degreased and cleaned with Macjames® Multisurface degreaser/cleaner without any damage or deformation. (2011 to 2014 observation period of monthly degreasing/cleaning).



P.S:

MACJAMES® MMDC-11 - MULTISURFACE DEGREASER/CLEANER AS A WORLDCLASS INNOVATION:

2015: Selected for Africa Prize for Engineering Innovation 2014/15 by Royal Academy of Engineering, United Kingdom.
(<http://www.raeng.org.uk/grants-and-prizes/international-research-and-collaborations/africa-prize/current-and-recent-awards>)

2015: Qualified for "Create the Future Design Contest 2015" worldwide, by COMSOL and MOUSER, USA.
(<http://contest.techbriefs.com/2015/entries/consumer-products/5165>)

2014: Qualified for "Create the Future Design Contest 2014" worldwide, by COMSOL and MOUSER, USA.
(<http://contest.techbriefs.com/2014/entries/consumer-products/4281>)

2013: Qualified for "Create the Future Design Contest 2013" worldwide, by SAE International and COMSOL, USA
(<http://contest.techbriefs.com/2013/entries/consumer-products/3424>)

2012: Won Federal Government of Nigeria Youth Enterprise With Innovation (YOUWIN) in Nigeria 2012 National award.

APPROVALS/REGISTRATIONS:

2013: Registered/approved by NAFDAC (**NAFDAC REG. NO.:02-8179L**).

2015: Approved by Department of Petroleum Resources for use in oil & Gas Industry (DPR) - **DPR/HSE.04/003.700/2019/002**

EXPORT AND FOREIGN USERS:

2017: Export to Barkingfield Company in Accra, Ghana.

NON-WARRANTY – All data, statements and recommendations contained herein are based upon the best information available and are believed to be reliable. However, no warranty, either expressed or implied, is made concerning the application of this product since the customer's use cannot be controlled directly by Macjames.

