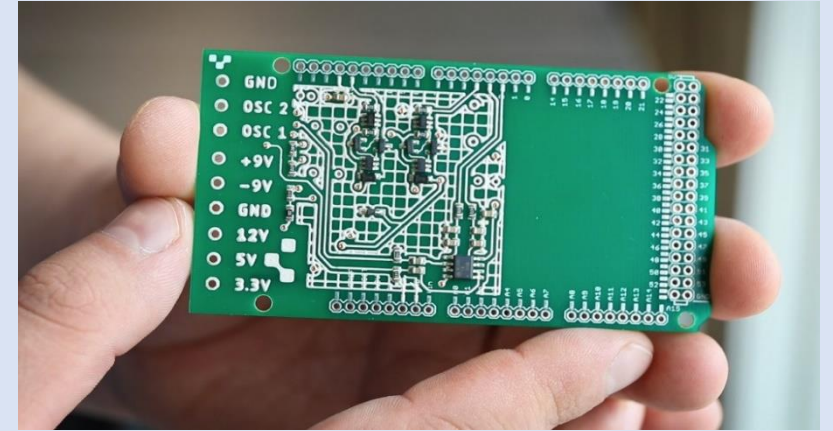


HIESN 5 June 2025



SAFE CHEMICALS FOR ELECTRICAL EQUIPMENT AND COMPONENTS

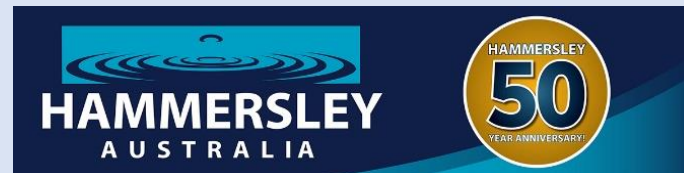
Bede Boyle **HAMMERSLEY** Australia

PRESENTATION TO HIESN ON SAFE CHEMICALS FOR ELECTRICAL EQUIPMENT AND COMPONENTS

My presentation is based on executive briefing paper
**EFFECTIVE WHS AND ESG CHEMICAL RISK MANAGEMENT
IN MINING AND INDUSTRY**

In the context of NSW Resource Regulator directives and
Safe Work Australia on Hazardous Chemicals

Available free on request to bede@hammersley.com.au



SAFE CHEMICALS FOR ELECTRICAL EQUIPMENT AND COMPONENTS

1 Hammersley +50 year R&D Focus on Solving Industry Problems

2 NSW Resources Regulator Directives on Hazardous Chemicals

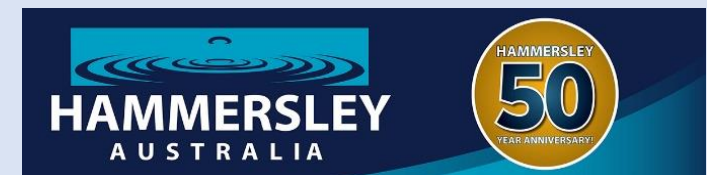
3 Safe Work Australia on Hazardous Chemicals

4 HAMMERSLEY Chemicals Electrical Safety Revolution

5 Hammersley Extensive Mining and Industry Product Range

6 About Hammersley Australia

7 Contact Hammersley Australia



1 Hammersley +50 year R&D Focus on Solving Industry Problems

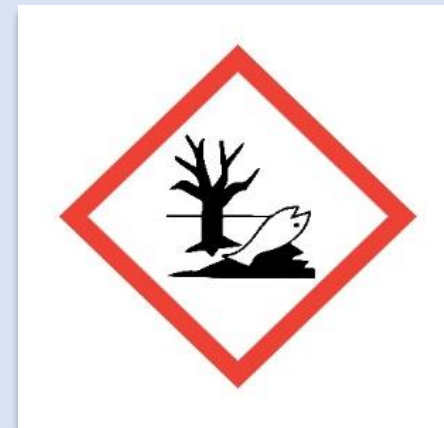
Many chemical solvents widely used in mining and industrial maintenance are Highly Toxic with N-propyl bromide [1-Bromopropane], Trichloroethylene and Perchloroethylene [Tetrachloroethylene] still used in cleaning formulas.



Highly Toxic



Extremely Flammable



Harmful to the Environment

HAMMERSLEY is a R&D Company who for over 50 years has focussed on development of high performing chemical products that solve cleaning problems for mining and industry with innovative formulas that are fit for purpose, non-flammable, non-toxic and biodegradable.

✓ Superior Performance ✓ Non-toxic ✓ Non-flammable ✓ Biodegradable

2 NSW Resources Regulator Directives on Hazardous Chemicals

Exposure to hazardous chemicals can cause serious illness, irritations, injury or even death. All workplaces must manage health and safety risks associated with the use, storage and handling of hazardous chemicals.

NSW Resources Regulator POSITION PAPER September 2020

HAZARDOUS CHEMICALS AT MINES AND PETROLEUM SITES IN NSW

Hazardous chemicals are used extensively throughout the NSW mining industry, in forms ranging from fuels and oils for plant operations, cyanides and caustics for ore processing plants, radioactive elements in testing and explosive precursors. **Some of these chemicals are highly toxic, are physically dangerous causing fire and damage, and can pose security risks if not managed appropriately.**

2 NSW Resources Regulator Directives on Hazardous Chemicals

For mine and petroleum sites, hazardous chemicals are regulated under provisions outlined in Chapter 7 of the Work Health and Safety Regulation 2017, in addition to the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022.

A partial list of duties relating to hazardous chemicals include:

- Ensuring all hazardous chemicals are labelled and classified under the [Globally Harmonised System \(GHS\)](#)
- Obtaining current safety data sheets prior to use of the hazardous chemical and providing them to workers, emergency services personnel or anyone who requests the information
- Keeping of a register that lists all hazardous chemicals used, stored or handled onsite

3 Safe Work Australia on Hazardous Chemicals

Safe Work Australia [SWA] provides valuable information on hazardous chemicals used for Mining and Industrial Cleaning and Maintenance.

SWA Hazardous Chemical Information System (HCIS)

<https://hcis.safeworkaustralia.gov.au/>

Hazard Statement Extracts:

N-propyl bromide [1-Bromopropane] Hazard Statement

H225 Highly flammable liquid and vapour

H336 May cause drowsiness or dizziness

H351 Suspected of causing cancer

H319 Causes serious eye irritation

H315 Causes skin irritation

H335 May cause respiratory irritation

H373 May cause damage to organs through prolonged or repeated exposure

H360Fd May damage fertility. Suspected of damaging the unborn child

3 Safe Work Australia on Hazardous Chemicals

Hazard Statement Extracts - continued:

Perchloroethylene [Tetrachloroethylene] Hazard Statement

H351 Suspected of causing cancer

H411 Toxic to aquatic life with long-lasting effects

Trichloroethylene Hazard Statement

H350 May cause cancer

H341 Suspected of causing genetic defects

H319 Causes serious eye irritation

H315 Causes skin irritation

H336 May cause drowsiness or dizziness

4 HAMMERSLEY Chemicals Electrical Safety Revolution

1 NS14 Electrical Safety Solvent – Chlorinated Hydrocarbon Base
Cleaning and degreasing with maximum flammability protection

2 NS22 Dewatering Safety Solvent – Chlorinated Hydrocarbons
Fast and safe removal of water from electrical equipment

3 NS25 Non Chlorinated Electrical & General Cleaning Solvent
Safely replaces products containing Chlorinated Hydrocarbons

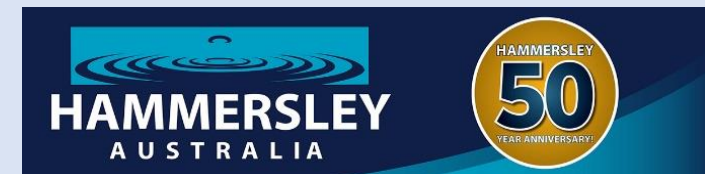
4 NS36 Non Chlorinated Cleaning Solvent, Electrical and General
Very high flashpoint and can be used in in-service motor cleaning

5 The Good Oil Penetrating Lubricant and Protectant
Revolutionary, renewable, plant based formula – no petroleum ingredients

6 QD Contact Cleaner Flammable Aerosol
Rapid drying precision cleaning solvent

7 NONFLAM Precision Cleaner for all Electrical Equipment & Parts
New generation solvent that replaces Chlorinated Hydrocarbons

8 NONFLAM Aerosol Contact Cleaner
Rapid drying, no residue, precision cleaning solvent



4.1 NS14 Electrical Safety Solvent - Cleaning and degreasing with maximum flammability protection for all electrical equipment



FEATURES

- Maximum flammability protection - non-flammable
- Low toxic values – maximum allowable conc. 500ppm
- High flash point – no flash point even at its boiling point
- Complete electric safety - dielectric strength > 25Kv
- Efficient degreasing – fast evaporation with no residues
- Does not corrode metals – 10 days corrosion tests
- Plastic safety – safe for many plastic components

BENEFITS

NS14 SOLVENT Technical and Safety Data Sheets

<https://hammersley.com.au/products/ns14-electrical-safety-solvent/>

4.2 NS22 Dewatering Safety Solvent

Fast and safe removal of water from all electrical equipment



FEATURES

- Fast dewatering – penetrates and disperses water
– flooded motors can be started in minutes
- Decontaminates – powerful solvent action
- flushes away grease, oils, gums, dirt and dust
- Dries completely – evaporates to completely dry
- leaving no oily residues to attract dust
- Electrical Safety – non conductive, non-flammable

BENEFITS

NS22 SOLVENT Technical and Safety Data Sheets

<https://hammersley.com.au/products/ns22-electrical-safety-solvent/>

4.3 NS25 **Non Chlorinated** Electrical & General Cleaning Solvent

Safely replaces products containing Chlorinated Hydrocarbons



FEATURES

- Efficient cleaner
 - strong solvent power no residues
 - however, slower evaporation to complete dryness
- Safer to use
 - very high flash point 80°C
 - non-flammable and non-dangerous goods
 - contains no chlorinated hydrocarbons
- Very low acute toxicity
 - contains no polycyclic aromatic hydrocarbons

BENEFITS

NS25 SOLVENT Technical and Safety Data Sheets

<https://hammersley.com.au/products/ns25-cleaning-electrical-solvent/>

4.4 NS36 **Non Chlorinated** Cleaning Solvent, Electrical and General

Very high flashpoint and can be used in in-service motor cleaning



FEATURES

- Efficient cleaner
 - evaporates to complete dryness, leaving no residues
- Complete electrical safety
 - does not harm insulation
 - dielectric strength non conductive at 20Kv
- Safer to use
 - high flash point, very low acute toxicity
 - non-flammable and non-dangerous goods
 - contains no chlorinated hydrocarbons

BENEFITS

NS36 SOLVENT Technical and Safety Data Sheets

<https://hammersley.com.au/products/ns36-non-chlorinated-cleaning-electrical-solvent/>

4.5 The Good Oil Penetrating Lubricant and Protectant

Revolutionary, renewable, plant based formula – no petroleum ingredients



FEATURES

- Unequaled penetration
 - Seeps into difficult areas
 - Loosens corroded and frozen parts
- Low surface tension
 - Displaces and repels moisture
- Non-drying
 - reduces friction
- Non-flammable
 - fire safe for workplace protection
- Non-toxic
 - safe for confined spaces and underground
- Renewable plant based
 - No environmental impact

BENEFITS

Technical and Safety Data Sheets

<https://hammersley.com.au/products/the-good-oil-aerosol/>

4.6 QD Contact Cleaner Flammable Aerosol

Rapid drying precision cleaning solvent



FEATURES

- Non corrosive
- Evaporates completely
- Contains no lubricants
- Plastic safe
- Safe and effective cleaning

BENEFITS

- safe to use on all metal surfaces
- dries quickly with no residues
- no oily contaminations
- No dismantling required in most circumstances
- use with confidence

Technical and Safety Data Sheets

<https://hammersley.com.au/products/qd-contact-cleaner/>

4.7 NONFLAM Precision Cleaner for all Electrical Equipment & Parts

New generation solvent that replaces Chlorinated Hydrocarbons



FEATURES

- Non flammable
- Evaporates completely
- Non corrosive
- Safe for most plastics
- Contains no lubricants
- Safe underground
- **Ultimate in Safety - Classified NON DANGEROUS GOOD**
 - NO carcinogens
 - NON ozone depleting

BENEFITS

- safer for use around all electrical equipment
- dries quickly with no residue
- safe to use on all metal surfaces
- allows in place cleaning
- leaves no oily contaminations
- can be used in underground mining

4.8 **NONFLAM** Aerosol Contact Cleaner

Rapid drying, no residue, precision cleaning solvent

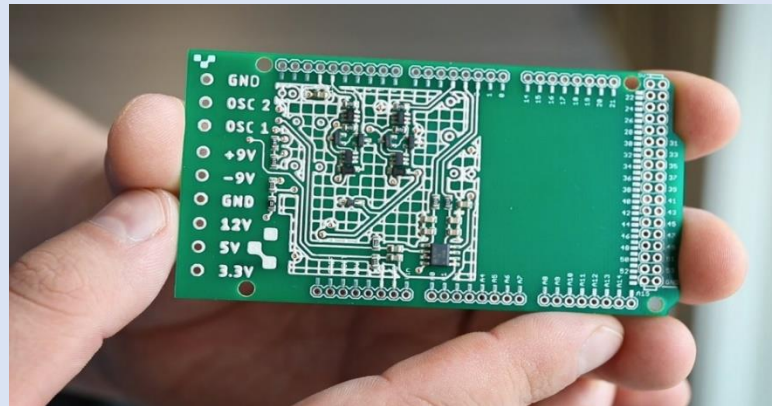


FEATURES

- Non flammable
- Evaporates completely
- Non corrosive
- Safe for most plastics

- safe to use around electrical equipment
- dries quickly with no residue
- safe to use on all metal surfaces
- in place cleaning

BENEFITS



NONFLAM CONTACT CLEANER Technical and Safety Data Sheets

<https://hammersley.com.au/products/nonflam-contact-cleaner/>

5 HAMMERSLEY EXTENSIVE MINING & INDUSTRY PRODUCT RANGE

MAINTENANCE CLEANING AND HEAVY DUTY DEGREASING

- **DETAR** - Heavy Duty Degreaser Concentrate & Aerosol
- **HYDROSOLV** – Degreaser and Hard Surface Cleaner
- **THE GOOD OIL** - Penetrating Lubricant and Protectant
- **QD CONTACT CLEANER** - Aerosol
- **BRAKE & PARTS CLEANER** – Non Flammable
- **RIM GOLD** – Rim Seal and Wheel Protection
- **MINE KLEAN** Glass Cleaner
- **AQUATRON** – Heavy Duty Water Based Degreaser
- **DC 186 Degreaser** – Powerful Degreaser Concentrate

ELECTRICAL MAINTENANCE

- **THE GOOD OIL** - Penetrating Lubricant and Protectant
- **NONFLAM CONTACT CLEANER** – Bulk and Aerosol
- **NS14** - Electrical Safety Solvent
- **NS 22** - Dewatering Safety Solvent
- **NS 25** - Non Chlorinated Cleaning and Electrical Solvent
- **NS 36** - Non Chlorinated Cleaning and Electrical Solvent

DIESEL EXHAUST MANAGEMENT

- **PROTOL** – Wet Scrubber Box Cleaning Additive

LUBRICATION AND PROTECTION

- **THE GOOD OIL** - Penetrating Lubricant and Protectant
- **FLUID RED RUBBER GREASE** – Lubricant and Protectant

RUST AND CORROSION PROTECTION

- **CORRONIL** – Corrosion Prevention under short and long term storage
- **CORRONIL RS50** – Rust & Corrosion Protection for long term protection of mining equipment and plant

MINE DUST SUPPRESSION

- **DUSTAT** – Residual and Cumulative Dust Control for Mine Haul Roads
- **CF211** – Underground Mining Airborne Dust Control

FACILITIES MAINTENANCE AND PERSONAL CARE

- Complete Personal Care, Kitchen, Toilet and Bathhouse Bulk and Small Pack Range

DEVELOPED FROM OVER 50 YEARS R&D

6 About HAMMERSLEY Australia www.hammersley.com.au

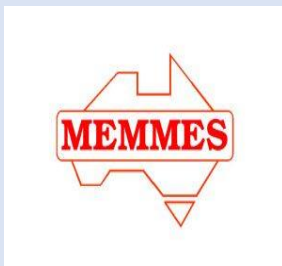
HAMMERSLEY Australia is a R&D company that since its formation in 1972 by Robert Fernance and Brian Mclean has focussed on developing high performing chemical products that solve cleaning problems for mining and industry with innovative formulas that are non-flammable, non-toxic and biodegradable.

Bede Boyle is Strategic Advisor to NSW and QLD export coal industry and METS firms since 1994 and is currently Mining & Industry Advisor to Hammersley Australia.

He was Director Safe Gauge through to securing initial development funding in 2020 and Investment Strategist with Business Drivers Investment Group from 2020.

Bede was mechanical engineering project consultant to coal industry including BHP Collieries, RW Millar and Peko Wallsend prior to joining Coal & Allied 1978 to 1993.

As Manager Technical Services with Coal & Allied he was chair of Australian Coal Association Environmental Committee and member ACA Research Committee.



7 Contact **HAMMERSLEY Australia** www.hammersley.com.au

Head Office & Factory 14 Sandpiper Close, KOORAGANG NSW 2304

• Phone

02 4928 2955

• Sales

sales@hammersley.com.au

• Managing Director

robert@hammersley.com.au

• Technical Director

brian@hammersley.com.au

• CEO and Distributors

johnfernance@hammersley.com.au

• Mining and Industry

bede@hammersley.com.au

For state based specialist product technical and sales support

• National and QLD

jonoewater@hammersley.com.au

• New South Wales

david@hammersley.com.au

• Western Australia

gavin@hammersley.com.au

