

Safety Data Sheet

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

1.1. Product identifier

Code: **DIL--000694**
Product name **Brush Cleaner**
Metallorganic compound for 3rd. fire.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use **third firing decoration in the glass/ceramics/porcelain sectors**

1.3. Details of the supplier of the safety data sheet

Name **COLOROBRIA S.P.A.**
Full address **Via A. Gramsci 14**
District and Country **50056 Montelupo Fiorentino (FI)**
Italia
Tel. **+39 0571 70 81**
Fax **+39 0571 708.800**

e-mail address of the competent person
responsible for the Safety Data Sheet **ambientemsds@colorobbia.it**

1.4. Emergency telephone number

For urgent inquiries refer to **+39 0571 709.565**

2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Danger Symbols: **F-Xn-N**

R phrases: **11-20/21/22-36/38-43-50/53-65**

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

2.2. Label elements.

Hazard labelling pursuant to Directives 67/548/EEC and 1999/45/EC and subsequent amendments and supplements.



R11 HIGHLY FLAMMABLE.
R20/21/22 HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R36/38 IRRITATING TO EYES AND SKIN.
R43 MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R50/53 VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R65 HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
S 9 KEEP CONTAINER IN A WELL-VENTILATED PLACE.
S29 DO NOT EMPTY INTO DRAINS.

S36/37 WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.
S61 AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEETS.
S62 IF SWALLOWED, DO NOT INDUCE VOMITING: SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.

Contains: Decahydronaphthalene
TURPENTINE
CYCLOHEXANE

2.3. Other hazards.

Information not available.

3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
Decahydronaphthalene			
CAS. 91-17-8	10 - 25	R10, R53, Xn R20, Xn R65	Fam. Liq. 3 H226, Acute Tox. 4 H332, Asp. Tox. 1 H304, Aquatic Chronic 4 H413
EC. 202-046-9			
INDEX. -			
1,2,3,4-tetrahydronaphthalene			
CAS. 119-64-2	2,5 - 5	R19, Xi R36/38, N R51/53	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Chronic 2 H411, EUH019
EC. 204-340-2			
INDEX. 601-045-00-4			
TURPENTINE			
CAS. 8006-64-2	10 - 25	R10, Xn R20/21/22, Xn R65, Xi R36/38, Xi R43, N R51/53	Fam. Liq. 3 H226, Acute Tox. 4 H332, Acute Tox. 4 H312, Acute Tox. 4 H302, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC. 232-350-7			
INDEX. 650-002-00-6			
CYCLOHEXANE			
CAS. 110-82-7	40 - 60	R67, F R11, Xn R65, Xi R38, N R50/53	Fam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Acute 1 H400, Aquatic Chronic 1 H410
EC. 203-806-2			
INDEX. 601-017-00-1			
CYCLOHEXANOL			
CAS. 108-93-0	1 - 5	Xn R20/22, Xi R37/38	Acute Tox. 4 H332, Acute Tox. 4 H302, STOT SE 3 H335, Skin Irrit. 2 H315
EC. 203-630-6			
INDEX. 603-009-00-3			

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

4. First aid measures.

4.1. Description of first aid measures.

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

INHALATION: Remove to open air. If breathing is irregular, seek medical advice.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed.

For symptoms and effects caused by the contained substances see chap. 11.

4.3. Indication of any immediate medical attention and special treatment needed.

Follow doctor's orders.

5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING MEDIA

The extinction equipment should contain carbon dioxide, foam or chemical powders. For product leaks and spills that have not caught fire, nebulised water can be used to dispel flammable fumes and protect the individuals taking part in stemming the leak.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion.

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

5.3. Advice for firefighters.

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with ties around arms, legs and waist) work gloves (fireproof, cut proof and dielectric), self-respirator (self-protector).

6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Eliminate sources of ignition (cigarettes, flames, sparks, etc.) from the area in which the leak occurred. If there are no contraindications, spray solid products with water to prevent the formation of dust. Use breathing equipment if fumes or powders are released into the air.

Block the leakage if there is no hazard. Do not handle damaged containers or leaked product before donning appropriate protective gear. Send away individuals who are not suitably equipped. For information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, refer to the other sections of this sheet.

6.2. Environmental precautions.

The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

6.3. Methods and material for containment and cleaning up.

For liquid products, suck into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired.

Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage.

7.1. Precautions for safe handling.

Avoid the accumulation of electrostatic charges.

Vapours may ignite with explosion, it is therefore necessary to avoid accumulation keeping the windows and doors open, ensuring crossventilation. Without adequate ventilation, the vapours may accumulate at the bottom and ignite at a distance, if triggered off, with the risk of flashback. Keep far away from sources of heat, sparks and bright flames. Do not smoke, use matches or lighters. Keep the containers earthed while decanting and wear antistatic boots.

Vigorous stirring and flow through the pipings and equipment may cause the formation and accumulation of electrostatic charges due to the low conductivity of the product. In order to avoid the risk of fire outbreak and explosion never use compressed air during movement.

7.2. Conditions for safe storage, including any incompatibilities.

Store the containers sealed and in a well ventilated place.

7.3. Specific end use(s).

Information not available.

8. Exposure controls/personal protection.

8.1. Control parameters.

Name	Type	Country	TWA/8h		STEL/15min		
			mg/m3	ppm	mg/m3	ppm	
Decahydronaphthalene	TLV-ACGIH		100				
1,2,3,4-tetrahydronaphthalene	TLV-ACGIH		50				
TURPENTINE	TLV-ACGIH		111				
	OEL	IRL		100		150	
	WEL	UK		100		150	
CYCLOHEXANE	TLV-ACGIH			100			
	OEL	EU	700	200			
	OEL	IRL		100		300	
	WEL	UK		100		300	
CYCLOHEXANOL	TLV-ACGIH			50			Skin
	OEL	IRL		50			Skin
	WEL	UK		50			Skin

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

HAND PROTECTION

Protect hands with category II (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVC, neoprene, nitril or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

EYE PROTECTION

Wear protective airtight goggles (ref. standard EN 166).

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an B or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

The use of breathing protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

An emergency eye washing and shower system must be provided.

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid
Colour	Not available.
Odour	characteristic
Odour threshold.	Not available.
pH.	Not available.
Melting or freezing point.	Not available.

Boiling point.	Not available.
Distillation range.	Not available.
Flash point.	19 - 19 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Specific gravity.	1,000
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available.
Ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Reactive Properties	Not available.

9.2. Other information.

Information not available.

10. Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

TURPENTINE: dissolves rubber.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

The vapours may also form explosive mixtures with the air.

TURPENTINE: reacts violently with strong oxidants and chlorine. May ignite on contact with tin chloride, dissolves rubber. In oxygen atmospheres it generates explosive peroxides. Generates a strongly exothermic reaction on contact with: calcium hypochlorite, chromium trioxide, chromium oxychloride, tin (IV) chloride. Risk of explosion on contact with nitric acid, fluorine.

CYCLOHEXANE: can react violently with strong oxidising agents and liquid nitric oxide. Forms explosive mixtures with the air.

CYCLOHEXANOL: risk of explosion on contact with nitric acid, strong antioxidants. Can react dangerously with: alkaline metals, chromium trioxide. Forms explosive mixtures with the air.

10.4. Conditions to avoid.

Avoid overheating, electrostatic discharge and all sources of ignition.

CYCLOHEXANOL: avoid exposure to sources of heat and naked flames.

10.5. Incompatible materials.

CYCLOHEXANE: butyl and natural rubber, neoprene, PVC, polyethylene.

CYCLOHEXANOL: plastic (it attacks it), strong oxidising agents.

10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, vapours potentially dangerous to health may be released.

TURPENTINE: acyclic and monocyclic terpenes, hydroterpenes, pyrones; cymenes.

11. Toxicological information.

Informazioni riferite al 1,2,3,4-tetraidronaftalene:

LD50 orale ratto : 2860 mg/Kg

LD50 pelle coniglio: 16710 mg/Kg

Pelle : moderatamente irritante

Non sensibilizzante

Occhi : non irritante

11.1. Information on toxicological effects.

Acute effects: inhalation, cutaneous absorption and ingestion of this product are harmful. This product may irritate mucosae, the upper respiratory tract, and eyes. Exposure symptoms may include: stinging and irritated eyes, mouth, nose, throat; cough, respiratory

disorders, dizziness, headache, nausea and sickness.

In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Upon contact with skin, this product may irritate it, causing an increase in skin temperature, swelling and itchiness.

Ingestion of even small amounts of this product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurves, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas.

Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary edema.

CYCLOHEXANE: irritant to the skin and mucous membranes; may be absorbed by the skin; neurolesive actions may occur at high doses and to a great extent is due to its metabolite, cyclohexanone.

TURPENTINE

LD50 (Oral): 5760 mg/Kg Rat

CYCLOHEXANE

LD50 (Oral): > 5000 mg/kg Rat

LD50 (Dermal): > 2000 mg/kg Rabbit

LC50 (Inhalation): 13,9 mg/l/4h Rat

12. Ecological information.

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it may even have negative effects on aquatic environment.

12.1. Toxicity.

CYCLOHEXANE

LC50 (96h): 4,53 mg/l/96h Pimephales promelas

IC50 (72h): 32,7 mg/l/72h Chlorella vulgaris

EC50 (48h): 3,89 mg/l/48h Daphnia magna

12.2. Persistence and degradability.

Petroleum distillates, charcoal, vegetable extracts: they are mixtures of paraffinic, naphthenic, diterpenic and aromatic hydrocarbons.

Their behaviour on the environment depends on the concentration. In each case use, according to good working practices, avoiding disposal in the environment. As a rule, the product is poorly biodegradable.

TURPENTINE: Oil distillates, coal, plant extracts: they are blends of parafin hydrocarbons, naphthenes, diterpenes and aromatics. Their behaviour in the environment depends on their composition. In any case they should be used according to good working practice, avoiding discharge into the environment. In general the product is poorly biodegradable.

CYCLOHEXANE: not easily biodegradable.

12.3. Bioaccumulative potential.

CYCLOHEXANE: moderate bioaccumulation potential (log Ko/w>3).

12.4. Mobility in soil.

CYCLOHEXANE: slightly mobile in soil.

12.5. Results of PBT and vPvB assessment.

Information not available.

12.6. Other adverse effects.

Information not available.

13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class: 3 UN: 1263
 Packing Group: II
 Label: 3
 Nr. Kemler: 33
 Limited Quantity: 5 lt
 Tunnel restriction code: (D/E)
 Proper Shipping Name: PAINT or PAINT RELATED MATERIAL
 Special Provision: 640D



Carriage by sea (shipping):

IMO Class: 3 UN: 1263
 Packing Group: II
 Label: 3
 EMS: F-E, S-E
 Marine Pollutant: YES
 Proper Shipping Name: PAINT or PAINT RELATED MATERIAL (CYCLOHEXANE)



Transport by air:

IATA: 3 UN: 1263
 Packing Group: II
 Label: 3
 Cargo:
 Packaging instructions: 364 Maximum quantity: 60 L
 Pass.:
 Packaging instructions: 353 Maximum quantity: 5 L
 Special Instructions: A3, A72
 Proper Shipping Name: PAINT or PAINT RELATED MATERIAL



15. Regulatory information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

Seveso category. 7b, 9i

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.

Point. 3 - 40

Contained substance.

Point. 57 CYCLOHEXANE

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic toxicity category 4
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity category 2
Skin Sens. 1	Respiratory / skin sensitization, category 1
Flam. Liq. 2	Flammable liquid, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity category 1
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H312	Harmful in contact with skin.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH019	May form explosive peroxides.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R10	FLAMMABLE.
R11	HIGHLY FLAMMABLE.
R19	MAY FORM EXPLOSIVE PEROXIDES.
R20	HARMFUL BY INHALATION.
R20/21/22	HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R20/22	HARMFUL BY INHALATION AND IF SWALLOWED.
R36/38	IRRITATING TO EYES AND SKIN.
R37/38	IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
R38	IRRITATING TO SKIN.
R43	MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R50/53	VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R53	MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R65	HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atq. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. The Merck Index. - 10th Edition
8. Handling Chemical Safety
9. Niosh - Registry of Toxic Effects of Chemical Substances
10. INRS - Fiche Toxicologique (toxicological sheet)
11. Patty - Industrial Hygiene and Toxicology
12. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product .

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Changes to previous review:

The following sections were modified:

02 / 16.