



Materiale autoportante costituito da strati di carta kraft nera impregnata con resine termoindurenti e da uno o più strati superficiali di carta decorativa impregnata con resine aminoplastiche, pressati ad alta pressione e alta temperatura. La superficie non è tossica, è chimicamente inerte e fisiologicamente sicura, provata per contatto con gli alimenti. Per la sua alta resistenza agli agenti chimici, è particolarmente adatto per l'impiego in laboratori fisici e chimici, fotografici, cosmetici, elettronici, nucleari, per scuole e per cucine industriali.

Self-supporting material consisting of layers of black kraft paper impregnated with thermosetting resins and layers of decorative paper impregnated with aminoplastic resins; all bonded together by means of high pressure and heat. The surface is non-toxic, chemically inert and physiologically safe. It is approved for use in contact with foodstuffs. For its outstanding resistance to chemicals, it is particularly suitable for applications in chemistry, physics, photography, cosmetics, electronics and nuclear laboratories, for schools and industrial kitchens.

CARATTERISTICA PROPERTY	METODO DI PROVA TEST METHOD (EN 438:2016)	PROPRIETÀ O ATTRIBUTO PROPERTY OR ATTRIBUTE	UNITÀ UNIT (max o min) (max or min)	VALORI VALUES										
Spessore Thickness	EN 438 - 2.5	Spessore Thickness	mm	<table> <tr> <td>8.0 < t < 12.0</td> <td>± 0.50</td> </tr> <tr> <td>12.0 < t < 16.0</td> <td>± 0.60</td> </tr> <tr> <td>16.0 < t < 20.0</td> <td>± 0.70</td> </tr> <tr> <td>20.0 < t < 25.0</td> <td>± 0.80</td> </tr> <tr> <td>25.0 < t</td> <td>da concordare to be agreed</td> </tr> </table>	8.0 < t < 12.0	± 0.50	12.0 < t < 16.0	± 0.60	16.0 < t < 20.0	± 0.70	20.0 < t < 25.0	± 0.80	25.0 < t	da concordare to be agreed
8.0 < t < 12.0	± 0.50													
12.0 < t < 16.0	± 0.60													
16.0 < t < 20.0	± 0.70													
20.0 < t < 25.0	± 0.80													
25.0 < t	da concordare to be agreed													
Planarità Flatness	EN 438 - 2.9	Scostamento massimo * Maximum deviation *	mm/m	<p>due facce decorative two decorative sides</p> <table> <tr> <td>2.0 ≤ t < 6.0</td> <td>≤ 8.0</td> </tr> <tr> <td>6.0 ≤ t < 10.0</td> <td>≤ 5.0</td> </tr> <tr> <td>10.0 ≤ t</td> <td>≤ 3.0</td> </tr> </table>	2.0 ≤ t < 6.0	≤ 8.0	6.0 ≤ t < 10.0	≤ 5.0	10.0 ≤ t	≤ 3.0				
2.0 ≤ t < 6.0	≤ 8.0													
6.0 ≤ t < 10.0	≤ 5.0													
10.0 ≤ t	≤ 3.0													
Lunghezza e larghezza Length and width	EN 438 - 2.6	Lunghezza e larghezza Length and width	mm	+ 10 / - 0										
Linearità dei bordi Edges Straightness	EN 438 - 2.7	Scostamento massimo Maximum deviation	mm/m	1.5										
Ortogonalità Squareness	EN 438 - 2.8	Scostamento massimo Maximum deviation	mm/m	1.5										
Resistenza all'usura della superficie Resistance to surface wear	EN 438 - 2.10	res. all'usura wear resistance	giri revolutions	IP ≥ 150 ¹										



CARATTERISTICA PROPERTY	METODO DI PROVA TEST METHOD (EN 438:2016)	PROPRIETÀ O ATTRIBUTO PROPERTY OR ATTRIBUTE	UNITÀ UNIT (max o min) (max or min)	VALORI VALUES		
Res. all'immersione in acqua bollente <i>Resistance to immersion in boiling water</i>	EN 438 - 2.12	aspetto <i>appearance</i>	classificazione <i>rating</i>	≥ 4		
		aumento massa <i>mass increase</i>	%	CGS	CGF	
		aumento spessore <i>thickness increase</i>	%	5 ≤ t	≤ 2	≤ 3
		aspetto superficie <i>surface appearance</i> bordo <i>edge</i>	classificazione <i>rating</i>	≥ 4		≥ 3
Resistenza al calore secco (160 °C) <i>Resistance to dry heat</i>	EN 438 - 2.16	aspetto <i>appearance</i>	classificazione <i>rating</i>	≥ 4		
Resistenza al calore umido (100 °C) <i>Resistance to wet heat</i>	EN 438 - 2.18	aspetto <i>appearance</i>	classificazione <i>rating</i>	≥ 4		
Stabilità dimensionale a temperatura elevata <i>Dimensional stability at elevated temperature</i>	EN 438 - 2.17	variazione dimensionale cumulativa <i>cumulative dimensional change</i>	% long. long. % trasv. transv.	5 ≤ t ≤ 0,30 ≤ 0,60		
Res. all'urto con sfera di grande diametro <i>Res. to impact by large diameter ball</i>	EN 438 - 2.21	altezza di caduta <i>drop height</i> diametro impronta <i>indentation diameter</i>	mm (min) mm (max)	1800 10		
Resistenza alle fessurazioni (laminato stratificato) <i>Resistance to crazing (thick laminates)</i>	EN 438 - 2.24	aspetto <i>appearance</i>	classificazione <i>rating</i>	≥ 4		
Resistenza alla scalfittura <i>Resistance to scratching</i>	EN 438 - 2.25	forza finitura liscia <i>force smooth finish</i>	classificazione <i>rating</i>	≥ 2		
		forza finitura strutturata <i>force textured finish</i>		≥ 3		
Resistenza alle macchie <i>Resistance to staining</i>	EN 438-2.26	aspetto gruppi 1 e 2 <i>appearance groups 1 and 2</i>	classificazione <i>rating</i>	5		
		aspetto gruppo 3 <i>appearance group 3</i>		4		
Solidità dei colori Alla luce <i>Lightfastness</i>	EN 438-2.27	contrasto <i>contrast</i>	grado scala grigi <i>grey scale rating</i>	≥ 4		
Resistenza al vapore d'acqua <i>Resistance to water vapour</i>	EN 438-2.14	aspetto <i>appearance</i>	classificazione <i>rating</i>	≥ 4		
Conduttività termica <i>Thermal conductivity</i>	EN 12664: 2001	-	W/mK	0,25		
Resistenza elettrica <i>Electrical resistance</i>	EN 61340-4-1	RV (23° C / 50% RH)	Ohm	1x10 ⁹ - 1x10 ¹¹		



CARATTERISTICA PROPERTY	METODO DI PROVA TEST METHOD (EN 438:2016)	PROPRIETÀ O ATTRIBUTO PROPERTY OR ATTRIBUTE	UNITÀ UNIT (max o min) (max or min)	VALORI VALUES
Resistenza a flessione <i>Flexural strength</i>	EN ISO 178	forza <i>stress</i>	MPa	≥ 100
Modulo di elasticità a flessione (E) <i>Flexural modulus (E)</i>	EN ISO 178	forza <i>stress</i>	MPa	≥ 10000
Densità <i>Density</i>	ISO 1183	densità <i>density</i>	g/cm ³	≥ 1.35
Resistenza ai prodotti chimici <i>Resistance to chemical products</i>	Conforme al protocollo SEFA 8 Per ulteriori sostanze chimiche vedere allegato <i>SEFA 8 protocol compliant</i> For further info on specific chemical agent see annex			

* A condizione che siano rispettate le modalità e le condizioni di stoccaggio del laminato consigliate dal produttore.
Provided that the laminate is stored in the manner and conditions recommended by the manufacturer.

Nota: Si consiglia di contattare il produttore per dettagli sui rapporti delle prove di comportamento al fuoco e sui certificati ottenuti e per informazioni sui metodi di prova di comportamento al fuoco e relative specifiche.

Note: The laminate manufacturer should be contacted for details of fire test reports and certifications held, and for information on fire test methods and specifications.



RESISTENZA A SOSTANZE E REAGENTI

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La seguente lista, pur non esaustiva, offre una panoramica della resistenza della superficie del laminato PRINT HPL LABGRADE all'azione delle sostanze chimiche più comunemente incontrate o utilizzate all'interno di laboratori di analisi. Per quelle non elencate in questo documento, si prega di contattare il Servizio Commerciale Abet Laminati.

Data la similarità e la facilità interpretative della nomenclatura comune (non IUPAC), i nomi delle sostanze chimiche sono riportati in lingua inglese per una più agevole identificabilità.

SEZIONE A

La superficie decorativa del LABGRADE resiste alle seguenti sostanze chimiche dopo 24 ore di contatto, senza che queste ne alterino l'aspetto o la funzionalità.

Sostanza	Formula chimica bruta		
A-naphthaline	C ₁₀ H ₇ NH ₂	Carbolic acid	C ₆ H ₅ OH
A-naphthole	C ₁₀ H ₇ OE	Carbon tetra chloride	CCl ₄
Acetic acid	CH ₃ COOH	Caseine	
Acetic acid ethyl ester	CH ₃ COOC ₂ H ₅	Castor oil	
Acetic acid iso-amyl ester	CH ₃ COCH ₅ H ₁₁	Caustic soda up to 10%	NaOH
Active Carbon		Cedar wood oil, thickened	
Alcoholic beverages	ROH	Chloral hydrate	CCl ₃ CH(OH) ₂
Alcohols		Chlorobenzene	CHCl ₃
- Primary	RCH ₂ OH	Cholesterol	C ₂₇ H ₄₅ OH
- Secondary	RR'CHOH	Citric acid	C ₆ H ₈ O ₇
- Tertiary	RR'R'COH	Clay	
Aldehydes	RCHO	Coal	
Alum solution	KAl(SO ₄) ₃	Cocaine C ₁₇ H ₂₁ O ₄ N	
Aluminium sulphate	Al ₂ (SO ₄) ₃	Coffee	
Amides RCONH ₂		Caffeine	
Amines		Cooking salt	NaCl
- Primary	RNH ₂	Copper sulphate	CuSO ₄
- Secondary	(RR')NH	Cosmetics	
- Tertiary	(RR'R'')N	Cresol	CH ₃ C ₆ H ₄ OH
Ammonia	NH ₄ OH	Cresylic acid	CH ₃ C ₆ H ₄ COOH
Ammonium chloride	NH ₄ Cl	Cyclo hexane	C ₆ C ₁₁ OH
Ammonium sulphate	(NH ₄) ₂ SO ₄	Cyclo hexanol	C ₆ C ₁₂
Ammonium thiocyanate	NH ₄ SCN	Detergents	
Amyl acetate	CH ₃ COOC ₅ H ₁₁	Dextrose	C ₆ H ₁₂ O ₆
Amyl alcohol	C ₅ H ₁₁ OH	Digitonine	C ₅₆ H ₉₂ O ₂₉
Aniline	C ₆ H ₅ NH ₂	Dimethyl formamide	HCON(CH ₃) ₂
Animal fats		Dioxane C ₄ H ₈ O ₂	
Animal feedstock		Dulcete	C ₆ H ₁₄ O ₆
Arabinose	C ₅ H ₁₀ O ₅	Dyes, paints	
Ascorbic acid	C ₆ H ₈ O ₆	Dimethyl sulphoxide	(CH ₃) ₂ SO
Asparagic acid	C ₄ H ₇ O ₄ N	Earth	
Asparagine	C ₄ H ₈ O ₃ N ₂	Ethanol C ₂ H ₅ OH	
Baking yeast		Ethyl acetate	CH ₃ COOC ₂ H ₅
Barium chloride	BaCl ₂	Ethylene chloride	
Barium sulphate	BaSO ₄	(di-chloro-ethylene)	CH ₂ :CC ₁₂
Benzaldehyde	C ₆ H ₅ CHO	Fats	
Benzene	C ₆ H ₆	Feedstuffs	
Benzidine	NH ₂ C ₆ H ₄ C ₆ H ₄ NH ₂	Foodstuffs	
Benzoic acid	C ₆ H ₅ COOH	Formaldehyde	HCHO
Biogel		Formic acid up to 10%	HCOOH
Blood		Fructose	C ₆ H ₁₂ O ₆
Blood test seren		Galactose	
Boric acid	H ₃ BO ₃	Gelatin	
Butyl acetate	CH ₃ COOC ₄ H ₉	Glacial acetic acid	CH ₃ COOH
Butyl alcohol	C ₄ H ₉ OH	Glucose C ₆ H ₁₂ O ₆	
Cadmium acetate	Cd(CH ₃ COO) ₂	Glycerine	CH ₂ OH.CHOH.CH ₂ OH
Cadmium sulphate	CdSO ₄	Glyocol	NH ₂ CH ₂ COOH
Calcium carbonate (chalk)	CaCO ₃	Ethylene Glycol	HOCH ₂ .CH ₂ OHC
Calcium chloride	CaCl ₂	Graphite	
Calcium hydroxide	Ca(OH) ₂	Gypsum CaSO ₄ .2H ₂ O	
Calcium nitrate	Ca(NO ₃) ₂	Heparine	C ₂ 6H ₄ 2N ₂ O ₃ 7S ₅
Cane sugar	C ₁₂ H ₂₂ H ₁₁	Heptanol	C ₇ H ₁₅ OH
Carbol-xylene	C ₆ H ₅ OH-C ₆ H ₄ (CH ₃) ₂	Hexane C ₆ H ₁₄	



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Hexanol C ₆ H ₁₃ OH		Propanol	C ₃ H ₇ OH
Hydroquinone	HOC ₆ H ₄ OH	1.2-propylene glycol	CH ₃ CHOH ₂ OH
Hypophysine		Pyridine	C ₅ H ₅ N
Immersion oil		Quinine	
Inorganic salts and their mixtures		Rafinose	C ₁₈ H ₃₂ O ₁₅ .5H ₂ O
Inosite	C ₆ H ₆ (OH) ₆	Rhamnose	C ₆ H ₁₂ O ₅ .H ₂ O
Insecticides		Rochelle salt	
Iso-propional	C ₃ H ₆ OH	Saccharose = raw sugar	
Lactic acid	CH ₃ CHOHCOOH	Salicylic acid	C ₆ H ₄ OHCOOH
Lactic sugar	C ₁₂ H ₂₂ O ₁₁	Salicylic aldehyde	C ₆ H ₄ OH.CHO
Lactose C ₁₂ H ₂₂ O ₁₁		Soap	
Lead acetate	Pb(CH ₃ COO) ₂	Sodium acetate	CH ₃ COONa
Lead nitrate	Pb(NO ₃) ₂	Sodium bisulfite	NaHSO ₃
Levulose	C ₆ H ₁₂ O ₆	Sodium carbonate	Na ₂ CO ₃
Lipstick		Sodium chloride	NaCl
Lithium Hydroxide up to 10%	LiOH	Sodium citrate	Na ₃ C ₆ H ₅ O ₇ .5H ₂ O
Lithium carbonate	Li ₂ CO ₃	Sodium di-ethyl-barbiturate	NaC ₈ H ₁₁ N ₂ O ₃
Magnesium carbonate	MgCO ₃	Sodium carbonate	Na ₂ CO ₃
Magnesium chloride	MgCl ₂	Sodium bicarbonate	NaHCO ₃
Magnesium hydroxide	Mg(OH) ₂	Sodium hypo-sulphate	Na ₂ S ₂ O ₄
Magnesium sulphate	MgSO ₄	Sodium nitrate	NaNO ₃
Maltose C ₁₂ H ₂₂ O ₁₁		Sodium phosphate	Na ₃ PO ₄
Mannite C ₆ H ₁₄ O ₆		Sodium silicate	Na ₂ SiO ₃
Mannose	C ₆ H ₁₂ O ₆	Sodium sulfate	Na ₂ SO ₄
Methylene chloride		Sodium sulfide	Na ₂ S
DiChloromethane	CH ₂ Cl ₂	Sodium sulphite	Na ₂ SO ₃
Mercury Hg		Sodium tartrate	Na ₂ C ₄ H ₄ O ₆
Mesoinosite	C ₆ H ₆ (OH) ₆	Sodium Thiosulphate	Na ₂ S ₂ O ₃
Methanol	CH ₃ OH	Soot	
Milk		Sorbite	C ₆ H ₁₄ O ₆
Mineral oils		Standard I-agar nutrient	
Mineral salts		Standard II-agar nutrient	
Nail lacquer		Standard I-bouillon nutrient	
Nail lacquer remover		Standard II-bouillon nutrient	
Nickel sulphate	NiSO ₄	Starch	
Nicotine C ₁₀ H ₁₄ N ₂		Starch common salt solution	
Nonne-Apet reagent		Stearic acid	C ₁₇ H ₃₅ COOH
Octanol (Octylalcohol)	C ₈ H ₁₇ OH	Styrene	C ₆ H ₅ .CH:CH ₂
Ointments		Sugar & sugar derivatives	H ₂₂ O ₁₁
Oleic acid	CH ₃ (CH ₂) ₇ CH:CH(CH ₂) ₇ COOH	Sulphur	S
Olive Oil		Talcum	3MgO, 4SiO ₂ , H ₂ O
Organic solvents		Tannin	C ₇₆ H ₅₂ O ₄₆
P-amino aceto-phenone	NH ₂ .C ₆ H ₄ COCH ₃	Tartaric acid	C ₄ H ₈ O ₆
P-nitro phenol	C ₆ H ₄ NO ₂ OH	Tea	
Pandy's reagent		Terpentine	
Paraffin alkane hydrocarbons	C _n H _{2n+2}	Tetra hydro furan	C ₄ H ₈ O
Paraffin oil		Tertraline	C ₁₀ H ₁₂
Pentanol	C ₅ H ₁₁ CH	Thiourea	NH ₂ CSNH ₂
Petroleum benzine (petrol)		Thymol	C ₁₀ H ₁₄ O
Percaulic acid	HClO ₄	Thymol buffer solution	
Phenolphthaleine	C ₂₀ H ₁₄ O ₄	Toluene	C ₆ H ₅ CH ₃
Phenol & phenolic derivates	C ₆ H ₅ OH	Trehalose	C ₁₂ H ₂₂ O ₁₁
Polishes (creams & waxes)		Trichorethylene	C ₂ HCl ₃
Potassium aluminium sulphate	KAl(SO ₄) ₂	Trypsin	
Potassium bromate	KBr	Tryptophane	C ₁₁ H ₁₂ O ₂ N ₂
Potassium bromide	KBrO ₃	Urease	
Potassium carbonate	K ₂ CO ₃	Uric acid	C ₅ H ₄ N ₄ O ₃
Potassium chloride	KCl	Uric acid solution	CO(HN ₂) ₂
Potassium hexa cyano ferrate	K ₄ Fe(CN) ₆	Urine	
Potassium hydroxide up to 10%	KOH	Vanilline	C ₈ H ₈ O ₃
Potassium iodate	KIO ₃	Vaseline	
Potassium nitrate	KNO ₃	Water	H ₂ O
Potassium sodium tartrate	KNaC ₄ H ₄ O ₆	Water colours	
Potassium sulphate	K ₂ SO ₄	Xylene	C ₆ H ₄ (CH) ₂
Potassium tartrate	K ₂ C ₄ H ₄ O ₆	Zinc chloride	ZnCl ₂
Potato starch		Zinc sulphate	ZnSO ₄
Potter's reagent			

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SEZIONE B

La superficie decorativa del LABGRADE non viene funzionalmente alterata dalle sostanze chimiche sotto elencate (specialmente se allo stato liquido), a patto che entro 10 minuti dall'avvenuto contatto accidentale, l'area interessata venga tamponata con un panno asciutto, poi pulita con un panno inumidito con acqua, quindi risciacquata con acqua e infine asciugata con un panno di carta assorbente.

Sostanza	Formula chimica bruta		
Aluminium chloride	AlCl ₃	Mercuric chloride solution	HgCl ₂
Amino-sulphonic acid up to 10%	NH ₂ SO ₃ H	Mercuric dichromate	HgCr ₂ O ₇
Ammonium hydrogen sulphate	NH ₄ .HSO ₄	Millon's reagent	Hg(NO ₃) ₂
Aniline dyes		Nylander's reagent	
Arsenic acid up to 10%	H ₃ AsO ₄	Oxalic acid	COOH.COOH
Sodium hydroxide over 10%	NaOH	Picric acid	C ₆ H ₂ OH(NO ₂) ₃
Crystal violet (gentian violet)	C ₂₄ H ₂₆ N ₃ Cl	Potassium chromate	K ₂ CrO ₄
Esbach's reagent	C ₁₆ H ₁₆ N ₃ CIS	Potassium dichromate	K ₂ Cr ₂ O ₇
Ferric chloride	FeCl ₃	Potassium hydrogen sulphate	KHSO ₄
Ferrous chloride	FeCl ₂	Potassium hydroxide over 10%	KOH
Fuchsine	C ₁₉ H ₁₉ N ₃ O	Potassium iodine	KI
Hair dyeing & bleaching agents		Potassium permanganate	KMnO ₄
Hydrochloric acid up to 10%	HCl	Sodium hydrogen sulphate	NaHSO ₄
Inorganic acids up to 10%		Sodium hypochlorite	NaClO
Iodine	I ₂	Sulphuric acid up to 10%	H ₂ SO ₄
Lithium hydroxide over 10%	LiOH		

SEZIONE C

Le sostanze chimiche sottoelencate devono essere rimosse immediatamente in caso di contatto accidentale con la superficie decorativa del LABGRADE in quanto possono danneggiarla irreparabilmente anche solo a seguito di un tempo di contatto dell'ordine di pochi secondi.

Sostanza	Formula chimica bruta		
Amino sulphonic acid* ³	NH ₂ SO ₃ H	Chrome – sulphuric acid	K ₂ Cr ₂ O ₇ +H ₂ SO ₄
Inorganic acids *e.g.		1 part potassium dichromate; 1.5 parts water; 18.4 parts concentrated sulfuric acid (95.5 - 96.5%)	
Aqua regia	HNO ₃ +HCl molar ratio 1:3	Hydrochloric acid	HCl
Arsenic acid	H ₃ AsO ₄	Hydrobromic acid	HBr

* In concentration higher than 10%

SEZIONE D

Ripetute esposizioni a vapori corrosivi delle sostanze chimiche di seguito elencate possono provocare l'alterazione della superficie decorativa del LABGRADE.

Sostanza	Formula chimica bruta
Acid Fumes	
Bromine	Br ₂
Chlorine	Cl ₂
Nitrous fumes	N _x O _y
Sulphur dioxide	SO ₂



RESISTANCE TO CHEMICAL SUBSTANCES

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The following list whilst not claiming to be exhaustive gives a survey of the resistance of PRINT HPL LABGRADE to the action of commonly encountered or used substances. For resistance to chemicals not listed hereunder please contact Abet Laminati Sales Office.

SECTION A

The decorative surface of LABGRADE withstand to the following chemical for 24 hours of contact without any change of appearance or reduction of the service life.

Chemical	Gross chemical formula		
A-naphthaline	C ₁₀ H ₇ NH ₂	Caustic soda up to 10%	NaOH
A-naphthole	C ₁₀ H ₇ OH	Cedar wood oil, thickened	
Acetic acid	CH ₃ COOH	Chloral hydrate	CCl ₃ CH(OH) ₂
Acetic acid ethyl ester	CH ₃ COOC ₂ H ₅	Chlorobenzene	CHCl ₃
Acetic acid iso-amyl ester	CH ₃ COCH ₅ H ₁₁	Cholesterol	C ₂₇ H ₄₅ OH
Active Carbon		Citric acid	C ₆ H ₈ O ₇
Alcoholic beverages	ROH	Clay	
Alcohols		Coal	
- Primary	RCH ₂ OH	Cocaine	C ₁₇ H ₂₁ O ₄ N
- Secondary	RR'CHOH	Coffee	
- Tertiary	RR'R'COH	Caffeine	
Aldehydes	RCHO	Cooking salt	NaCl
Alum solution	KAl(SO ₄) ₃	Copper sulphate	CuSO ₄
Aluminium sulphate	Al ₂ (SO ₄) ₃	Cosmetics	
Amides	RCONH ₂	Cresol	CH ₃ C ₆ H ₄ OH
Amines		Cresylic acid	CH ₃ C ₆ H ₄ COOH
- Primary	RNH ₂	Cyclo hexane	C ₆ C ₁₁ OH
- Secondary	(RR')NH	Cyclo hexanol	C ₆ C ₁₂
- Tertiary	(RR'R'')N	Detergents	
Ammonia	NH ₄ OH	Dextrose	C ₆ H ₁₂ O ₆
Ammonium chloride	NH ₄ Cl	Digitonine	C ₅₆ H ₉₂ O ₂₉
Ammonium sulphate	(NH ₄) ₂ SO ₄	Dimethyl formamide	HCON(CH ₃) ₂
Ammonium thiocyanate	NH ₄ SCN	Dioxane	C ₄ H ₈ O ₂
Amyl acetate	CH ₃ COOC ₅ H ₁₁	Dulcitate	C ₆ H ₈ (OH) ₆
Amyl alcohol	C ₅ H ₁₁ OH	Dyes, paints	
Aniline	C ₆ H ₅ NH ₂	Dimethyl sulphoxide	(CH ₃) ₂ SO
Animal fats		Earth	
Animal feedstock		Ethanol	C ₂ H ₅ OH
Arabinose	C ₅ H ₁₀ O ₅	Ethyl Ether	C ₄ H ₁₀ O
Ascorbic acid	C ₆ H ₈ O ₆	Ethyl acetate	CH ₃ COOC ₂ H ₅
Asparagic acid	C ₄ H ₇ O ₄ N	Ethylene chloride	
Asparagine	C ₄ H ₈ N ₂ O ₃	(di-chloro-ethylene)	C ₂ H ₂ Cl ₂
Baking yeast		Fats	
Barium chloride	BaCl ₂	Feedstuffs	
Barium sulphate	BaSO ₄	Foodstuffs	
Benzaldehyde	C ₆ H ₅ CHO	Formaldehyde	HCHO
Benzene	C ₆ H ₆	Formic acid up to 10%	HCOOH
Benzidine	C ₁₂ H ₁₂ N ₂	Fructose	C ₆ H ₁₂ O ₆
Benzonic acid	C ₆ H ₅ COOH	Galactose	
Biogel		Gelatin	
Blood		Glacial acetic acid	CH ₃ COOH
Blood test seren		Glucose	C ₆ H ₁₂ O ₆
Boric acid	H ₃ BO ₃	Glycerine	CH ₂ OH.CHOH.CH ₂ OH
Butyl acetate	CH ₃ COOC ₄ H ₉	Glycolol	NH ₂ CH ₂ COOH
Butyl alcohol	C ₄ H ₉ OH	Ethylene Glycol	HOCH ₂ .CH ₂ OH
Cadmium acetate	Cd(CH ₃ COO) ₂	Graphite	
Cadmium sulphate	CdSO ₄	Gypsum	CaSO ₄ .2(H ₂ O)
Calcium carbonate (chalk)	CaCO ₃	Heparine	C ₂₆ H ₄₂ N ₂ O ₃₇ S ₅
Calcium chloride	CaCl ₂	Heptanol	C ₇ H ₁₅ OH
Calcium hydroxide	Ca(OH) ₂	Hexane	C ₆ H ₁₄
Calcium nitrate	Ca(NO ₃) ₂	Hexanol	C ₆ H ₁₃ OH
Cane sugar	C ₁₂ H ₂₂ H ₁₁	Hydroquinone	HOC ₆ H ₄ OH
Carbol-xylene	C ₆ H ₅ OH-C ₆ H ₄ (CH ₃) ₂	Hypophysine	
Carbolic acid	C ₆ H ₅ OH	Immersion oil	
Carbon tetra chloride	CCl ₄	Inorganic salts and their mixtures	
Caseine		Inosite	C ₆ H ₆ (OH) ₆
Castor oil		Insecticides	



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Iso-proponal	C_3H_6OH	Rafinose	$C_{18}H_{32}O_{15} \cdot 5H_2O$
Lactic acid	$CH_3CHOHCOOH$	Rhamnose	$C_6H_{12}O_5 \cdot H_2O$
Lactic sugar	$C_{12}H_{22}O_{11}$	Rochelle salt	$KNaC_4H_4O_6 \cdot 4H_2O$
Lactose	$C_{12}H_{22}O_{11}$	Saccharose = raw sugar	
Lead acetate	$Pb(CH_3COO)_2$	Salicylic acid	$C_6H_4OHCOOH$
Lead nitrate	$Pb(NO_3)_2$	Salicylic aldehyde	C_6H_4OHCHO
Levulose	$C_6H_{12}O_6$	Soap	
Lipstick		Sodium acetate	CH_3COONa
Lithium Hydroxide up to 10%	LiOH	Sodium bisulfite	$NaHSO_3$
Lithium carbonate	Li_2CO_3	Sodium carbonate	Na_2CO_3
Magnesium carbonate	$MgCO_3$	Sodium chloride	NaCl
Magnesium chloride	$MgCl_2$	Sodium citrate	$Na_3C_6H_5O_7 \cdot 5H_2O$
Magnesium hydroxide	$Mg(OH)_2$	Sodium di-ethyl-barbiturate	$NaC_8H_{11}N_2O_3$
Magnesium sulphate	$MgSO_4$	Sodium carbonate	Na_2CO_3
Maltose	$C_{12}H_{22}O_{11}$	Sodium bicarbonate	$NaHCO_3$
Mannite	$C_6H_{14}O_6$	Sodium hyposulphite	$Na_2S_2O_3$
Mannose	$C_6H_{12}O_6$	Sodium nitrate	$NaNO_3$
Methylene chloride		Sodium phosphate	Na_3PO_4
Dichloromethane	CH_2Cl_2	Sodium silicate	Na_2SiO_3
Mercury	Hg	Sodium sulfate	Na_2SO_4
Mesoinosite	$C_6H_6(OH)_6$	Sodium sulfide	Na_2S
Methanol	CH_3OH	Sodium sulphite	Na_2SO_3
Milk		Sodium tartrate	$Na_2C_4H_4O_6$
Mineral oils		Sodium Thiosulphate	$Na_2S_2O_3$
Mineral salts		Soot	
Nail lacquer		Sorbite	$C_6H_{14}O_6$
Nail lacquer remover		Standard I-agar nutrient	
Nickel sulphate	$NiSO_4$	Standard II-agar nutrient	
Nicotine	$C_{10}H_{14}N_2$	Standard I-bouillon nutrient	
Nonne-Apet reagent		Standard II-bouillon nutrient	
Octanol (Octylacohol)	$C_8H_{17}OH$	Starch	
Ointments		Starch common salt solution	
Oleic acid	$CH_3(CH_2)_7CH:CH(CH_2)_7COOH$	Stearic acid	$C_{17}H_{35}COOH$
Olive Oil		Styrene	$C_6H_5 \cdot CH:CH_2$
Organic solvents		Sugar & sugar derivatives	$C_{12}H_{22}O_{11}$
P-amino aceto-phenone	$NH_2 \cdot C_6H_4COCH_3$	Sulphur	S
P-nitro phenol	$C_6H_4NO_2OH$	Talcum	$3MgO, 4SiO_2, H_2O$
Pandy's reagent		Tannin	$C_{76}H_{52}O_{46}$
Paraffin alkane hydrocarbons	C_nH_{2n+2}	Tartaric acid	$C_4H_8O_6$
Paraffin oil	$C_{15}H_{31}ClO_7$	Tea	
Pentanol	$C_5H_{11}CH$	Terpentine	
Petroleum benzine (petrol)		Tetra hydro furan	C_4H_8O
Percaulic acid	HClO4	Tertraline	$C_{10}H_{12}$
Phenolphthaleine	$C_{20}H_{14}O_4$	Thiourea	NH_2CSNH_2
Phenol & phenolic derivates	C_6H_5OH	Thymol	$C_{10}H_{14}O$
Polishes (creams & waxes)		Thymol buffer solution	
Potassium aluminium sulphate	$KAl(SO_4)_2$	Toluene	$C_6H_5CH_3$
Potassium bromate	KBr	Trehalose	$C_{12}H_{22}O_{11}$
Potassium bromide	$KBrO_3$	Trichorethylene	C_2HCl_3
Potassium carbonate	K_2CO_3	Trypsin	
Potassium chloride	KCl	Tryptophane	$C_{11}H_{12}O_2N_2$
Potassium hexa cyano ferrate	$K_4Fe(CN)_6$	Urease	
Potassium hydroxide up to 10%	KOH	Uric acid	$C_5H_4N_4O_3$
Potassium iodate	KIO_3	Uric acid solution	$CO(HN_2)_2$
Potassium nitrate	KNO_3	Urine	
Potassium sodium tartrate	$KNaC_4H_4O_6$	Vanilline	$C_8H_8O_3$
Potassium sulphate	K_2SO_4	Vaseline	
Potassium tartrate	$K_2C_4H_4O_6$	Water	H_2O
Potato starch		Water colours	
Potter's reagent		Xylene	$(CH_3)_2C_6H_4$ Yeasts
Propanol	C_3H_7OH	Zinc chloride	$ZnCl_2$
1.2-propylene glycol	CH_3CHOH_2OH	Zinc sulphate	$ZnSO_4$
Pyridine	C_5H_5N		
Quinine			

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SECTION B

The decorative surface of LABGRADE is not functionally altered by the contact of the chemicals listed here below (especially if in a liquid state), provided that within 10 minutes after the accidental contact the surface area in question is being tamponed with a dry rag, subsequently cleaned with a water dampened rag then rinsed with water and lastly dried by an absorbent paper.

Chemical	Gross chemical formula		
Aluminium chloride	AlCl ₃	Mercuric chloride solution	HgCl ₂
Amino-sulphonic acid up to 10%	NH ₂ SO ₃ H	Mercuric dichromate	HgCr ₂ O ₇
Ammonium hydrogen sulphate	NH ₄ .HSO ₄	Millon's reagent	Hg(NO ₃) ₂
Aniline dyes		Nylander's reagent	
Arsenic acid up to 10%	H ₃ AsO ₄	Oxalic acid	COOH.COOH
Sodium hydroxide over 10%	NaOH	Picric acid	C ₆ H ₂ OH(NO ₂) ₃
Crystal violet (gentian violet)	C ₂₅ H ₃₀ ClN ₃	Potassium chromate	K ₂ CrO ₄
Esbach's reagent	C ₁₆ H ₁₆ N ₃ ClS	Potassium dichromate	K ₂ Cr ₂ O ₇
Ferric chloride	FeCl ₃	Potassium hydrogen sulphate	KHSO ₄
Ferrous chloride	FeCl ₂	Potassium hydroxide over 10%	KOH
Fuchsine	C ₁₉ H ₁₉ N ₃ O	Potassium iodine	KI
Hair dyeing & bleaching agents		Potassium permanganate	KMnO ₄
Hydrochloric acid up to 10%	HCl	Sodium hydrogen sulphate	NaHSO ₄
Inorganic acids up to 10%		Sodium hypochlorite	NaClO
Iodine	I ₂	Sulphuric acid up to 10%	H ₂ SO ₄
Lithium hydroxide over 10%	LiOH		

SECTION C

In case of contact the following substances must be immediately removed from the LABGRADE decorative surface since they can irreparably damage it even after a short contact time of few seconds.

Chemical	Gross chemical formula		
Amino sulphonic acid * ³	NH ₂ SO ₃ H	Chrome – sulphuric acid	K ₂ Cr ₂ O ₇ +H ₂ SO ₄
Inorganic acids * ³ e.g.		1 part potassium dichromate; 1.5 parts water; 18.4 parts concentrated sulfuric acid (95.5 - 96.5%)	
Aqua regia	HNO ₃ +HCl molar ratio 1:3	Hydrochloric acid	HCl
Arsenic acid	H ₃ AsO ₄	Hydrobromic acid	HBr

*³ In concentration higher than 10%

SECTION D

Repeated exposures to corrosive vapours of the following listed chemicals lead to a functional and aesthetic damage of LABGRADE decorative surface.

Chemical	Gross chemical formula
Acid Fumes	
Bromine	Br ₂
Chlorine	Cl ₂
Nitrous fumes	N _x O _y
Sulphur dioxide	SO ₂