



**NUOVA TECNODELTA
RESTRICTED SUBSTANCE MATERIALS STANDARD**

1 Scope

The purpose of this Standard is to define a list of restrictions pertaining to certain substances. These substances shall be restricted in or excluded from parts, materials, equipment, machinery and/or tooling, hereinafter referred to as "product(s)", supplied to and/or manufactured by NUOVA TECNODELTA S.p.A. or intended for use in NUOVA TECNODELTA S.p.A. products.

This Standard supplements but does not supersede the responsibility to comply with laws and regulations (international and specific of the production country).

2. Application

The requirements established by this Standard apply to all products supplied to and produced in NUOVA TECNODELTA S.p.A.

2 Definitions

INTENTIONALLY INTRODUCED:

Deliberately utilised in the formulation of a material or component where its continued presence is desired in the final product to provide a specific characteristic, appearance or quality. The use of recycled materials as feedstock for the manufacture of new products, where some portion of the recycled materials may contain RSMS/RSL-listed substances, are not to be considered as intentionally introduced.

MATERIAL:

Within the text of this Standard means the primary medium that may contain a "substance", which is restricted by this Standard, such as a friction material (e.g. clutch or brake pad) containing lead sulfide.


PERCENT (%) BY WEIGHT:

Unless otherwise stated, the ratio of the masses of the individual substance and material (see definition of "Material" above) containing the substance multiplied by 100.

$$\frac{\text{Mass Substance}}{\text{Mass Material}} \times 100 = \text{Percent Weight}$$

PRODUCT(S):

Is the entity that is supplied to NUOVA TECNODELTA S.p.A., which can be an assembly, part (component), sub-component, material, or substance. This could include the restricted substance itself (e.g. lead sulfide), a material containing the restricted substance (e.g. a friction material containing lead sulfide), or a component or assembly containing the restricted substance (e.g. a brake assembly with a lead-containing friction material).

				EMESSO DA: M. Allais 03/2009
				APPROVATO DA: P. Fassio 03/2009
1	03/09	Agg. §3 e Agg per Re (EC) No 1907/2006 (REACH)	Tutte	 <small>NUOVA TECNODELTA S.p.A. HYDRAULIC PARTS FOR BRAKES AND CLUTCHES FRAZ. POCOLA, 62 - 14016 TIGLIOLE (AT) ITALIA TEL. 0141/668111 - FAX 0141/668145</small>
ESP.	DATA	DESCRIZIONE MODIFICA	PAGINE	



**NUOVA TECNODELTA
RESTRICTED SUBSTANCE MATERIALS STANDARD**

PROHIBITED:

Substances designated, as "Prohibited" shall not be supplied in any products, subject to the stated directions on content threshold and affected applications. A maximum concentration value of 0.1% by weight and per homogeneous material shall be tolerated for these substances, provided these substances are not intentionally introduced, or subject to specific threshold limits specified by this Standard. For the purpose of this standard monomers, catalysts, and accelerators remaining in cured polymeric articles (including paints) as residual content **are not** considered "intentionally introduced." If Prohibited substances conflicting with the above definition are identified in products supplied to Ford Motor Company, they must be reported (see Reporting Matrix – Appendix 3) and suppliers must institute immediate corrective measures. See special requirements for Post Consumer Recyclate (PCR) materials.

PROHIBITED WITH THRESHOLD:

Substances designated as "Prohibited with Threshold" may be supplied in any products, up to but not exceeding applicable threshold content limits in affected applications, provided such substances are not intentionally introduced. For the purpose of this standard, monomers, catalysts, and accelerators remaining in cured polymeric articles (including paints) as residual content **are not** considered "intentionally introduced." If intentionally added substances are present at or below applicable threshold content limits, suppliers need not report these unless otherwise specified in the Standard. Prohibited substances exceeding applicable threshold content limits must be reported (see Reporting Matrix – Appendix 3) and suppliers must institute immediate corrective measures. See special requirements for Post Consumer Recyclate (PCR) materials.

RESTRICTED:

Substances designated, as "Restricted" may not be desirable in some applications. Future prohibition is possible. Technically and economically feasible substitutes should be investigated. These substances shall not be supplied in any products without prior reporting

RESTRICTED WITH THRESHOLD:

Substances designated, as "Restricted with Threshold" may not be desirable in some applications above the applicable threshold content limit. Future prohibition is possible. Technically and economically feasible substitutes should be investigated. These substances shall not be supplied in any products above the applicable threshold content limit without prior reporting.

SUBSTANCE:

The basic chemical or chemical compound listed in this Standard, e.g., lead or lead sulfide.

THRESHOLD

Certain substances are subject to a specified upper threshold, stated as weight percent content in a material. Where no threshold is specified, suppliers must report such content if substances are "intentionally introduced" or exceed 0.1% by weight per homogeneous material. Intentionally introduced monomers, catalysts and accelerators remaining in cured polymeric articles (including paints) as residual content need not be reported at less than 0.1% by weight per homogeneous material, unless subject to explicit threshold content limits specified by this standard. Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

3 List of substance restrictions

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Alkylphenol ethoxylates	Prohibited		Immediate	Detergent and cleaner products
Aminobiphenyl and its salts	Prohibited	0.01%	Immediate	
Asbestos	Prohibited	Not intentionally introduced	Immediate	
Azodyes cleavable to carcinogenic amines	Prohibited		Immediate	
Benzene (free)	Restricted		Immediate	
Benzidine and its salts	Prohibited	0.01%	Immediate	
Biocides	Prohibited		Immediate	
Organoarsenic compounds	Prohibited	0.01%	Immediate	
Trialkyl- and Triaryltin compounds (triorganotin comp.)	Restricted	0.05%	Immediate	
BIS(chloromethyl) ether [BCME]	Prohibited	0.001%	Immediate	(es: formaldehyde and hydrogen chloride)
Brominated flame retardants (organic compounds);	Restricted		Immediate	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 → "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Cadmium and its compounds	Prohibited	Not intentionally introduced	Immediate	
Carbon black	Restricted		Immediate	
Carbon disulfide (free) All Products Immediate	Restricted		Immediate	
Carbon tetrachloride All Products Immediate	Prohibited		Immediate	
Carcinogenic substances All Products Immediate	Restricted		Immediate	
Chlorofluorocarbons (CFCs)	Restricted		Immediate	includes halocarbon/ CFC – on old tool - if legally permitted
Chlorinated hydrocarbons (free)	Restricted		Immediate	
Chlorinated paraffin's (chloroalkanes)	Prohibited		Immediate	Liquid or solid chlorinated products of paraffin's with a chain length of more than 6 carbon atoms and a chlorine content between 15 to 70 %)
Chromium, hexavalent (Cr6+)	Prohibited		Ref. EC 2000/53 annex II	
Dichloromethane (methylenechloride)	Restricted		Immediate	All solvent uses
Dimethylformamide (free)	Restricted		Immediate	
Ecotoxic substances	Restricted		Immediate	
Hydrochlorofluorocarbons (HCFCs)	Prohibited		Immediate	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 → "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Fibers, mineral and synthetic ≤ 5 microns in diameter with a length: diameter ratio $\geq 3:1$	Restricted		Immediate	
Formaldehyde (free)	Restricted	10 mg/ kg	Immediate	
Halons	Prohibited		Immediate	
Hexachlorobutadiene	Prohibited	0.01%	Immediate	
Hexamine	Restricted	0.2%	Immediate	
n-Hexane	Restricted	1%	Immediate	All products except gasoline
Hydrobromofluorocarbons (HBFCs)	Prohibited		Immediate	
Hydrofluorocarbons (HFCs)	Prohibited		Immediate	
Lead and its compounds - Steel alloy for machining purposes containing $> 0.35\%$ lead	Prohibited	Ref. EC 2000/53 annex II	Ref. EC 2000/53 annex II	
Lead and its compounds - Aluminum alloy for machining purposes containing $> 2\%$ lead	Prohibited	Ref. EC 2000/53 annex II	Ref. EC 2000/53 annex II	
Lead and its compounds - Aluminum alloy for machining purposes - containing $> 1\%$ lead	Prohibited	Ref. EC 2000/53 annex II	Ref. EC 2000/53 annex II	
Lead and its compounds - Aluminum alloy for machining purposes - containing $> 0,4\%$ lead	Prohibited	Ref. EC 2000/53 annex II	Ref. EC 2000/53 annex II	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 \rightarrow "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Lead and its compounds - Copper alloy for machining purposes containing > 4% lead	Prohibited	Ref. EC 2000/53 annex II	Ref. EC 2000/53 annex II	
Lead and its compounds - Vulcanizing agents/ stabilizers in elastomers	Prohibited		Immediate	
Mercury and its compounds	Prohibited		Immediate	
Methyl bromide	Prohibited		Immediate	
Methyl chloroform - (1, 1, 1- trichloroethane)	Prohibited		Immediate	
4.4'Methylenedianiline (4,4'-Diaminodiphenylmethane)	Prohibited		Immediate	
Monoethylene glycol ethers/acetates (free)	Restricted		Immediate	
Mutagenic substances	Restricted		Immediate	
2-Naphthylamine and its salts	Prohibited	0.01%	Immediate	
Nickel and its compounds	Restricted		Immediate	All products <u>except</u> stainless steels and alloys containing metallic nickel
4-Nitrobiphenyl and its salts	Prohibited	0.01%	Immediate	
N- nitrosamines/N- nitrosamides	Prohibited		Immediate	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 → "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Perfluorocarbons (PFC's; Gaseous)	Prohibited		Immediate	
Perchloroethene - (tetrachloroethylene)	Restricted		Immediate	Future Prohibition is possible (31 Jan. 2005)
Perfluoroalkyl sulfonates	Restricted		Immediate	Including perfluorooctanesulfonic acid (PFOS)
Phenol (free)	Restricted		Immediate	
Phenyl- 2- naphthylamine	Prohibited		Immediate	
Butylbenzyl phthalate (BBP)	Restricted		Immediate	
Dibutyl phthalate (DBP)	Restricted		Immediate	
Di(2- ethylhexyl) phthalate (DEHP)	Restricted		Immediate	
Diisononyl phthalate (DINP)	Restricted		Immediate	
Polyaromatic hydrocarbons (PAHs)	Prohibited	3% (total)	Immediate	Petroleum mineral oil base stocks in lubricants
Polybrominated biphenyls (PBBs)	Prohibited	0.001%	Immediate	
Polybrominated diphenylethers (PBDEs)	Prohibited		Immediate	except those containing decabromodiphenyloxide
Polychlorinated biphenyls (PCBs)	Prohibited	0.001%	Immediate	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 → "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Polychlorinated terphenyls (PCTs)	Prohibited	0.001%	Immediate	
Polyvinylchloride (PVC)	Reportable		Immediate	
Products of endangered species	Prohibited		Immediate	
Radioactive substances	Prohibited		Immediate	
Reproductive toxicants	Prohibited		Immediate	
Sensitizing substances	Restricted		Immediate	
Sulfur hexafluoride	Prohibited		Immediate	For processing (casting) of magnesium effective date will be 31/01/2004 – For closed system (normally hermetically closed) substance is only restricted
Trichloromethane (chloroform)	Restricted		Immediate	
Toluene disocyanate	Restricted		Immediate	(All isomeric monomers)
Trichloroethene	Restricted		Immediate	
Trichloromethane (chloroform)	Restricted		Immediate	All products <u>except</u> laboratory reagents
Tris (1- aziridiny) phosphine oxide	Prohibited		Immediate	

"Prohibited" and "Restricted" substances are defined in Paragraph 2 → "Definitions"

NUOVA TECNODELTA - RESTRICTED SUBSTANCE MATERIALS STANDARD

SUBSTANCE	RESTRICTION	THRESHOLD (NOT TO BE EXCEEDED)	EFFECTIVE DATE	NOTES
Tris(2,3- dibromopropyl) phosphate[TRIS]	Prohibited		Immediate	
Vinyl chloride (monomer)	Prohibited	0.0005%	Immediate	
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====
=====	=====	=====	=====	=====

"Prohibited" and "Restricted" substances are defined in Paragraph 2 , "Definitions"



**NUOVA TECNODELTA
RESTRICTED SUBSTANCE MATERIALS STANDARD**

Are Prohibited all substance present in candidate list of "Substances of Very High Concern (SVHC)" published on the website of the European Chemicals Agency (<http://echa.europa.eu>) last revision.

Supplier must comply with the following legal requirements that has l"egal priority" with ref to this specification

Directive CEE/CEEA/CE 2000/53, annex and successive modifications [concerning the End of life vehicle (ELV)]

REGULATION (EC) No 1907/2006, annex and successive modifications [concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)]

In case of legal requirement change supplier is responsible to immediate act according the requirement lead time even if in contrast with this specification.

5 Supplier reporting

Prohibited and restrictive substance reporting is a directive requiring suppliers to submit all reportable and restrictive substances within their respective components. Based on Product Line requirements (prior to or with PPAP submission), suppliers shall submit data to NUOVA TECNODELTA S.p.A.

Supplier has to notify to Nuova Tecnodelta the use of some of the above restricted components in PPAP documentation.

Without this Suppliers' declaration joined to PPAP (or prior to PPAP) new parts/components/materials will not be accepted.

According to article 33 (Duty to communicate information on substances in articles)of REGULATION (EC) No 1907/2006 REGULATION (EC) No 1907/2006 supplier must:

1. Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.
2. On request by a consumer any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w) shall provide the consumer with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

The relevant information shall be provided, free of charge, within 45 days of receipt of the request.

4 References

Directive CEE/CEEA/CE 2000/53, annex and successive modifications [concerning the End of life vehicle (ELV)]

REGULATION (EC) No 1907/2006, annex and successive modifications [concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)]