Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **37V**
Product name **NORPHEN ESC NF (B)**

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

Intended use **CONDUCTIVE EPOXY TOP COAT**

1.3. Details of the supplier of the safety data sheet

Name **NORD RESINE S.p.A.**
Full address **Via Fornace Vecchia, 79**
District and Country **31058 Susegana (TV)**
Italia
Tel. +39 0438-437511
Fax +39 0438-435155
e-mail address of the competent person responsible for the Safety Data Sheet **annabreda@nordresine.com**

Supplier: **NORD RESINE S.p.A.**

1.4. Emergency telephone number

For urgent inquiries refer to **+39 0438 437511**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Reproductive toxicity, category 1B	H360F	May damage fertility.
Acute toxicity, category 4	H302	Harmful if swallowed.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

SECTION 2. Hazards identification ... / >>

Hazard statements:

H360F	May damage fertility.
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.
	Restricted to professional users.

Precautionary statements:

P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P201	Obtain special instructions before use.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER / doctor.

Contains:
4,4'-ISOPROPYLIDENEDIPHENOL
4-TERT-BUTYLPHENOL
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)
N-[(9E)-octadec-9-en-1-yl]propane-1,3-diamine
M-PHENYLENEBIS (METHYLAMINE)
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
Phenol, 4,4-(1-methylethylidene)bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane
PHENOL,4,4'- (1-METHYLETHYLIDENE) BISPOLYMER WITH 1,3-BENZENEDIMETHANAMINE AND FORMALDEHYDE
Trimethylhexamethylenediame

VOC (Directive 2004/42/EC) :
Two - pack performance coatings.

VOC given in g/litre of product in a ready-to-use condition :		140,72
Limit value:		500,00
- Catalysed with :	220,00 %	NORPHEN ESC NF (A)

2.3. Other hazards

PBT substances contained:
PHENOL, 4-NONYL-, BRANCHED

The product contains substances with endocrine disrupting properties in concentration ≥ 0.1%.
4-TERT-BUTYLPHENOL
SALICYLIC ACID
4,4'-ISOPROPYLIDENEDIPHENOL
PHENOL, 4-NONYL-, BRANCHED

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
BENZYL ALCOHOL		
CAS *100-51-6*	25 ≤ x < 35	**Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319**
EC *202-859-9*		**LD50 Oral: 1620 mg/kg, STA Inhalation vapours: 11 mg/l**
INDEX *603-057-00-5*		
REACH Reg. *01-2119492630-38*		
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)		
CAS *1761-71-3*	10 ≤ x < 12	**Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1A H314, Eye Dam. 1 H318, Skin Sens. 1 H317**
EC *217-168-8*		**STA Oral: 500 mg/kg**
INDEX		

SECTION 3. Composition/information on ingredients ... / >>

REACH Reg. *01-2119541673-38*
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
CAS *2855-13-2* 8 ≤ x < 12 **Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317**
EC *220-666-8* **Skin Sens. 1A H317: ≥ 0,001%**
INDEX *612-067-00-9* **LD50 Oral: 1030 mg/kg**
REACH Reg. *01-2119514687-32*
Phenol, 4,4-(1-methylethylidene)bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane
CAS *113930-69-1* 8 ≤ x < 12 **Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 2 H411**
EC *500-302-7*
INDEX
REACH Reg. *01-2119965162-39*
M-PHENYLENEBIS (METHYLAMINE)
CAS *1477-55-0* 5 ≤ x < 8 **Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1B H317, Aquatic Chronic 3 H412, EUH071**
EC *216-032-5* **STA Oral: 500 mg/kg, STA Inhalation vapours: 11 mg/l**
INDEX
REACH Reg. *01-2119480150-50*
4-TERT-BUTYLPHENOL
CAS *98-54-4* 4 ≤ x < 8 **Repr. 2 H361f, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 1 H410 M=1**
EC *202-679-0*
INDEX
REACH Reg. *01-2119489419-21*
PHENOL,4,4'- (1-METHYLETHYLIDENE) BISPOLYMER WITH 1,3-BENZENEDIMETHANAMINE AND FORMALDEHYDE
CAS *161278-17-7* 3 ≤ x < 4 **Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 4 H413**
EC *500-607-5* **STA Oral: 500 mg/kg, STA Dermal: 1100 mg/kg**
INDEX
Trimethylhexamethylenediame
CAS *25513-64-8* 1 ≤ x < 3 **Acute Tox. 4 H302, Skin Corr. 1A H314, Eye Dam. 1 H318, Skin Sens. 1A H317**
EC *247-063-2* **LD50 Oral: 910 mg/kg**
INDEX
REACH Reg. *01-2119560598-25*
SALICYLIC ACID
CAS *69-72-7* 1 ≤ x < 3 **Repr. 2 H361d, Acute Tox. 4 H302, Eye Dam. 1 H318**
EC *200-712-3* **LD50 Oral: 891 mg/kg**
INDEX
REACH Reg. *01-2119486984-17*
N-[(9E)-octadec-9-en-1-yl]propane-1,3-diamine
CAS *7173-62-8* 1 ≤ x < 2,5 **Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=10**
EC *230-528-9* **STA Oral: 500 mg/kg**
INDEX
REACH Reg. *01-2119487002-46*
4,4'-ISOPROPYLIDENEDIPHENOL
CAS *80-05-7* 0,3 ≤ x < 1 **Repr. 1B H360F, Eye Dam. 1 H318, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic Chronic 2 H411**
EC *201-245-8*
INDEX *604-030-00-0*
REACH Reg. *01-2119457856-23*
PHENOL, 4-NONYL-, BRANCHED
CAS *84852-15-3* 0,25 ≤ x < 1 **Repr. 2 H361fd, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=10**
EC *284-325-5* **STA Oral: 500 mg/kg**
INDEX *601-053-00-8*
REACH Reg. *01-2119510715-45*

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

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

SECTION 4. First aid measures ... / >>

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

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 used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
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.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering

SECTION 7. Handling and storage ... / >>

places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2021

BENZYL ALCOHOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	40	8,88	80	17,76		
AGW	DEU	22	5	44	10	SKIN	11
NDS/NDSCh	POL	240					
MV	SVN	22	5	44	10	SKIN	

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,526 mg/kg bw/d				
Inhalation					0,073 mg/m3	0,073 mg/m3		

SECTION 8. Exposure controls/personal protection ... / >>

Phenol, 4,4-(1-methylethylidene)bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00146	mg/l
Normal value in marine water	0,00014	mg/l
Normal value of STP microorganisms	6 8,889	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,05 mg/kg bw/d				
Inhalation				0,074 mg/m3				0,493 mg/m3
Skin				0,05 mg/kg bw/d				0,14 mg/kg bw/d

M-PHENYLENEBIS (METHYLAMINE)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	FRA			0,1		
MV	SVN	0,1				
TLV-ACGIH				0,018 (C)		SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,094	mg/l
Normal value in marine water	0,009	mg/l
Normal value for fresh water sediment	0,43	mg/kg
Normal value for marine water sediment	0,043	mg/kg
Normal value for water, intermittent release	0,152	mg/l

SALICYLIC ACID

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,2	mg/l
Normal value in marine water	0,02	mg/l
Normal value for fresh water sediment	1,42	mg/kg
Normal value for marine water sediment	0,142	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Skin							VND	2 mg/kg

SECTION 8. Exposure controls/personal protection ... / >>

4,4'-ISOPROPYLIDENEDIPHENOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	2		5		INHAL
AGW	DEU	5		5 (C)		INHAL
VLEP	FRA	2				
AK	HUN	2				
GVI/KGVI	HRV	2				INHAL
VLEP	ITA	2				INHAL
VLEP	ITA	2				SKIN
TGG	NLD	2				INHAL
VLE	PRT	2				INHAL
NDS/NDSCh	POL	2				INHAL
TLV	ROU	2				INHAL
MV	SVN	2		2		INHAL
WEL	GBR	2				
OEL	EU	2				INHAL

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,018	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	1,2	mg/kg
Normal value for marine water sediment	0,24	mg/kg
Normal value for water, intermittent release	0,011	mg/l
Normal value of STP microorganisms	320	mg/l
Normal value for the terrestrial compartment	3,7	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		0,004 mg/kg bw/d		0,004 mg/kg bw/d				
Inhalation	1 mg/m3	1 mg/m3	1 mg/m3	1 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3	2 mg/m3
Skin					0.019 mg/kg bw/d	0,031 mg/kg bw/d	0.019 mg/kg bw/d	0,031 mg/kg bw/d

PHENOL, 4-NONYL-, BRANCHED

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00061	mg/l
Normal value in marine water	0,000527	mg/l
Normal value for fresh water sediment	4,62	mg/kg
Normal value for marine water sediment	1,23	mg/kg
Normal value for water, intermittent release	0,00017	mg/l
Normal value of STP microorganisms	9,5	mg/l
Normal value for the terrestrial compartment	2,3	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	0,4 mg/kg/d	VND	0,05 mg/kg/d				
Inhalation	VND	0,8 mg/m3	VND	0,4 mg/m3	VND	1 mg/m3	VND	0,5 mg/m3
Skin	VND	7,6 mg/kg/d	VND	3,8 mg/kg/d	VND	15 mg/kg	VND	7,5 mg/kg/d

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.

SECTION 8. Exposure controls/personal protection ... / >>

Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).
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.
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value	Information
Appearance		liquid	
Colour		colourless	
Odour		amino	
Melting point / freezing point		Not available	
Initial boiling point	>	235 °C	
Flammability		Not available	
Lower explosive limit		Not available	
Upper explosive limit		Not available	
Flash point	>	110 °C	
Auto-ignition temperature		Not available	
pH		11	
Kinematic viscosity		Not available	
Solubility		Not available	
Partition coefficient: n-octanol/water		Not available	
Vapour pressure		Not available	
Density and/or relative density		1,048 kg/l	
Relative vapour density		Not available	
Particle characteristics		Not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2004/42/EC) :	34,53 %	-	361,82	g/litre
VOC (volatile carbon)	26,62 %	-	278,95	g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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

BENZYL ALCOHOL
Decomposes at temperatures above 870°C/1598°F.Possibility of explosion.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

BENZYL ALCOHOL
May react dangerously with: hydrobromic acid,iron,oxidising agents,sulphuric acid.Risk of explosion on contact with: phosphorus trichloride.
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
May react dangerously with: strong oxidising agents,concentrated inorganic acids.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

BENZYL ALCOHOL
Avoid exposure to: air,sources of heat,naked flames.
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
Avoid contact with: strong acids,strong oxidants.

10.5. Incompatible materials

BENZYL ALCOHOL
Incompatible with: sulphuric acid,oxidising substances,aluminium.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	1076,20 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

SECTION 11. Toxicological information ... / >>

Corrosive to the respiratory tract.

BENZYL ALCOHOL
LD50 (Dermal): 2000 mg/kg Rabbit
LD50 (Oral): 1620 mg/kg Rat
LC50 (Inhalation vapours): > 4,1 mg/l/4h Rat
STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
LD50 (Oral): 1030 mg/kg

M-PHENYLENEBIS (METHYLAMINE)
LD50 (Dermal): 3100 mg/kg Rat
LD50 (Oral): > 200 mg/kg Rat - Sprague-Dawley
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LC50 (Inhalation vapours): 1,34 mg/l Rat - Wistar
STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

4-TERT-BUTYLPHENOL
LD50 (Dermal): > 16000 mg/kg Rabbit
LD50 (Oral): > 2000 mg/kg Rat

PHENOL,4,4'- (1-METHYLETHYLIDENE) BISPOLYMER WITH 1,3-BENZENEDIMETHANAMINE AND FORMALDEHYDE
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Dermal): 1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

Trimethylhexamethylenediame
LD50 (Oral): 910 mg/kg Rat

SALICYLIC ACID
LD50 (Dermal): > 2 mg/kg Rat
LD50 (Oral): 891 mg/kg Rat

N-[(9E)-octadec-9-en-1-yl]propane-1,3-diamine
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

4,4'-ISOPROPYLIDENEDIPHENOL
LD50 (Dermal): 3000 mg/kg Rabbit
LD50 (Oral): 4100 mg/kg Rat

PHENOL, 4-NONYL-, BRANCHED
LD50 (Dermal): 3160 mg/kg Rabbit

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitization

Information not available

SECTION 11. Toxicological information ... / >>

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

May damage fertility

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

May cause damage to organs

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product contains the following endocrine disruptors in concentrations of 0.1% or greater by weight that may have endocrine disrupting effects on humans and cause adverse effects on the exposed individual or his or her progeny:
SALICYLIC ACID
4,4'-ISOPROPYLIDENEDIPHENOL

SECTION 12. Ecological information

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

SECTION 12. Ecological information ... / >>

12.1. Toxicity

M-PHENYLENEBIS (METHYLAMINE)

LC50 - for Fish	87,6 mg/l/96h Oryzias latipes
EC50 - for Crustacea	15,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	20,3 mg/l/72h Pseudokirchnerella subcapitata

BENZYL ALCOHOL

LC50 - for Fish	10 mg/l/96h Bluegill

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LC50 - for Fish	110 mg/l/96h Fish
EC50 - for Crustacea	23 mg/l/48h Daphnia

4,4'-ISOPROPYLIDENEDIPHENOL

LC50 - for Fish	9,4 mg/l/96h Menidia menidia
EC50 - for Crustacea	10,2 mg/l/48h Daphnia magna

4-TERT-BUTYLPHENOL

LC50 - for Fish	5,14 mg/l/96h Pimephales promelas
EC50 - for Crustacea	4,8 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	11,2 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Fish	0,1 mg/l

4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)

LC50 - for Fish	46 mg/l/96h Leuciscus idus
EC50 - for Crustacea	6,84 mg/l/48h Daphnia magna

PHENOL, 4-NONYL-, BRANCHED

LC50 - for Fish	0,135 mg/l/96h Pimephales promelas
EC50 - for Crustacea	0,035 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0,0563 mg/l/72h Algae
Chronic NOEC for Fish	0,01 mg/l Fish

N-[(9E)-octadec-9-en-1-yl]propane-1,3-diamine

EC50 - for Crustacea	0,1 mg/l/48h Daphnia magna

12.2. Persistence and degradability

M-PHENYLENEBIS (METHYLAMINE)

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

BENZYL ALCOHOL
Rapidly degradable

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Solubility in water	1000 - 10000 mg/l
NOT rapidly degradable	

12.3. Bioaccumulative potential

M-PHENYLENEBIS (METHYLAMINE)

Partition coefficient: n-octanol/water	0,18

BENZYL ALCOHOL

Partition coefficient: n-octanol/water	1,1

Phenol, 4,4-(1-methylethylidene)bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane

BCF	4,77

12.4. Mobility in soil

Information not available

SECTION 12. Ecological information ... / >>

12.5. Results of PBT and vPvB assessment

PBT substances contained:
PHENOL, 4-NONYL-, BRANCHED

12.6. Endocrine disrupting properties

Based on the available data, the product contains the following endocrine disruptors in concentrations of 0.1% or greater by weight that may have endocrine disrupting effects on the environment and on animal species causing adverse effects on the exposed organisms or on their progeny:
4-TERT-BUTYLPHENOL
4,4'-ISOPROPYLIDENEDIPHENOL
PHENOL, 4-NONYL-, BRANCHED

12.7. Other adverse effects

Information not available

SECTION 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.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 2735

14.2. UN proper shipping name

ADR / RID:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-METHYLENEBIS(CYCLOHEXYLAMINE); 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
IMDG:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-METHYLENEBIS(CYCLOHEXYLAMINE); 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE; Phenol, 4,4-(1-methylethylidene)bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane)
IATA:	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-METHYLENEBIS(CYCLOHEXYLAMINE); 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

14.3. Transport hazard class(es)

ADR / RID:	Class: 8	Label: 8	
IMDG:	Class: 8	Label: 8	
IATA:	Class: 8	Label: 8	

14.4. Packing group

ADR / RID, IMDG, IATA: II

SECTION 14. Transport information ... / >>

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous

IMDG: Marine Pollutant

IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80 Special provision: -	Limited Quantities: 1 L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special provision:	A3, A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: E1

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

Product		
Point	3	
Contained substance		
Point	75	
Point	46	PHENOL, 4-NONYL-, BRANCHED REACH Reg.: 01-2119510715-45
Point	30-66	4,4'-ISOPROPYLIDENEDIPHENOL REACH Reg.: 01-2119457856-23

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)
4-TERT-BUTYLPHENOL
REACH Reg.: 01-2119489419-21

4,4'-ISOPROPYLIDENEDIPHENOL
REACH Reg.: 01-2119457856-23

PHENOL, 4-NONYL-, BRANCHED
REACH Reg.: 01-2119510715-45

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
PHENOL, 4-NONYL-, BRANCHED - (NONYLPHENOLS)

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

SECTION 15. Regulatory information ... / >>

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.

VOC (Directive 2004/42/EC) :
Two - pack performance coatings.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

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

Repr. 1B	Reproductive toxicity, category 1B
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
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.
EUH071	Corrosive to the respiratory tract.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006

SECTION 16. Other information ... / >>

- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
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20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

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.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 08 / 09 / 11 / 12 / 15 / 16.