

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

1.1. Product identifier

Code: Product name UFI : F_228 LANA e DELICATI a Mano e in Lavatrice AMACASA 5ED3-G01R-A006-YY23

1.2. Relevant identified uses of the substance or m	nixture and uses advised agai	nst	
Identified Uses	Industrial	Professional	Consumer
laundry detergent	-	~	✓
Uses Advised Against			
Do not use for uses other than those indicated			
1.3. Details of the supplier of the safety data sheet Name Full address District and Country	NEW FADOR S.r.I. via Mario Calderara, 31 25018 Montichiari (BS) Italia Tel. +39 030961 243 www.newfador.it		
e-mail address of the competent person responsible for the Safety Data Sheet	info@newfador.it		
1.4. Emergency telephone number For urgent inquiries refer to	NEW FADOR S.r.I. +39 030961 243 (08.30 - 17.30)		
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: Eye irritation, category 2	H319	Causes serious eye irritation.

Classified based on the results of the ICE-PH-15/0339 study

Warning

2.2. Label elements

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

Hazard pictograms:



Signal words:

Hazard statements:

H319 EUH208 Causes serious eye irritation. Contains: 2-OCTYL-2H-ISOTHIAZOL-3-ONE, 1,2-BENZISOTHIAZOL-3(2H)- ONE

NEW FADOR	MATERIAL SAFETY DATA SHEET Conforms to Reg. (EU) 878/2020					Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date Rev. n° Edited by Approved by Filed by				Page	
02/16	26.01.2022	3	RLAB	DG	RLAB	2 di 14

May produce an allergic reaction.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue
	rinsing.
P337+P313	If eye irritation persists: Get medical advice / attention.

Ingredients according to Regulation (EC) No. 648/2004

Less than 5%	soap
5% or over but less than	anionic surfactants
15%	

perfumes

Preservation agents: OCTYLISOTHIAZOLINONE, BENZISOTHIAZOLINONE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration >= 0.1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification BENZENESULFONIC ACID, C10- 13-ALKYL DERIVS., SODIUM SALTS	x = Conc. %	Classification 1272/2008 (CLP)
CAS 68411-30-3	5≤x< 6	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 3 H412
EC 270-115-0		LD50 Oral: 1080 mg/kg
INDEX -		
REACH Reg. 01-2119489428-22		
ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS		
CAS 68891-38-3	3≤x< 3,5	Eye Dam. 1 H318, Skin Irrit. 2 H315, Aguatic Chronic 3 H412
EC 500-234-8		Eye Dam. 1 H318: ≥ 10%, Eye Irrit. 2 H319: ≥ 5%
INDEX -		
REACH Reg. 01-2119488639-16		
Fatty acids, coco, potassium salts		
CAS 61789-30-8	1 ≤ x < 1,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 263-049-9		
INDEX -		

NEW FADOR	MATERIAL SAFETY DATA SHEET Conforms to Reg. (EU) 878/2020					Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date Rev. n° Edited by Approved by Filed by					Page
02/16	26.01.2022	3	RLAB	DG	RLAB	3 di 14

1,2-BENZISOTHIAZOL-3(2H)- ONE

CAS 2634-33-5 EC 220-120-9 INDEX 613-088-00-6 REACH Reg. 01-2120761540-60	0 ≤ x < 0,05	Acute Tox. 1 H330, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411 Skin Sens. 1 H317: \geq 0,05% STA Oral: 500 mg/kg, STA Inhalation vapours: 0,05 mg/l, STA Inhalation mists/powders: 0,005 mg/l, STA Inhalation gas: 10 ppm
2-OCTYL-2H-ISOTHIAZOL-3-ONE		
CAS 26530-20-1 EC 247-761-7 INDEX 613-112-00-5	0 ≤ x < 0,0015	Acute Tox. 2 H330, Acute Tox. 3 H301, Acute Tox. 3 H301, Skin Corr. 1 H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100, EUH071 Skin Sens. 1A H317: \geq 0,0015% LD50 Oral: 125 mg/kg, LD50 Dermal: 311 mg/kg, LC50 Inhalation
MORPHOLINE		mists/powders: 0,27 mg/L
CAS 110-91-8	0 ≤ x < 0,05	Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314,
EC 203-815-1		Eye Dam. 1 H318 LD50 Oral: 1050 mg/kg, STA Dermal: 1100 mg/kg, STA Inhalation vapours:
INDEX 613-028-00-9 REACH Reg. 01-2119496057-30		11 mg/l

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.

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

NEW FADOR	MATERIAL SAFETY DATA SHEET Conforms to Reg. (EU) 878/2020					Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date Rev. n° Edited by Approved by Filed by				Page	
02/16	26.01.2022	3	RLAB	DG	RLAB	4 di 14

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 firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with selfcontained 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 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:

NEW FADOR	MATERI	_	FETY [to Reg. (EU) 8	_	IEET	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	5 di 14

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
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
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes guímicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία``»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők
	6, 6	hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Praviľnika 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
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v znení neskorších predpisov
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 2009/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

BENZENESULFONIC ACID, C10-13-ALKYL DERIVS., SODIUM SALTS

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,268	mg/l
Normal value in marine water	0,027	mg/l
Normal value for fresh water sediment	8,1	mg/kg
Normal value for marine water sediment	6,8	mg/kg
Normal value for water, intermittent release	0,017	mg/l
Normal value of STP microorganisms	3,43	mg/l
Normal value for the terrestrial compartment	35	mg/kg

Health - Derived no-effect level - DNEL / DMEL Effects on consumers

	consumers				WORKERS			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic
				systemic		systemic		systemic
Oral				0,425 mg/kg				
				bw/d				
Inhalation			1,5	1,5 mg/m3			6	6 mg/m3
Skin				42,5 mg/kg				85 mg/kg
				bw/d				bw/d

Effects on

workers

ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS

Predicted no-effect concent	ration - PNEC							
Normal value in fresh water				0,24	mg	g/l		
Normal value in marine wate	er			0,024	mg	g/I		
Normal value for fresh water sediment			0,917	mg/kg				
Normal value for marine wa	ter sediment			0,092	mg	g/kg		
Normal value for water, inte	rmittent release			0,071	mg	g/I		
Normal value of STP microc	organisms			10	g/l			
Normal value for the terrest	ial compartment			7,5	mg	g/kg		
Health - Derived no-eff	ect level - DNEL / D Effects on consumers	MEL			Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic

NEW FADOR	MATERI	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1				
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	6 di 14

Inhalation Skin MORPHOLINE Threshold Limit Value Type Country TWA/8h TLV BGR 20 TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 VLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 VLE PRT 36 VLE BR 36 VLE BR 36 VLE GBR 36 VEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Vormal value in fresh water	ppm 10 10 10 10 10 10 10 10 10 10	bw/d 52 mg/m3 1650 mg/kg bw/d STEL/15min mg/m3 70 72 72 72 72 72 72 72 72 72 72	ppm 20 20 20 20 20 20 20 20 20 20	Remarks Observat SKIN SKIN SKIN SKIN SKIN SKIN SKIN		175 mg/m3 2750 mg/kg bw/d
MORPHOLINE Treshold Limit ValueTypeCountryTWA/8hTLVBGR20TLVCZE35AGWDEU36MAKDEU36TLVDNK36YLAESP36VLAESP36VLFPFRA36TLVGRC36XKHUN70GVI/KGVIHRV36VLEPITA36VLEPSVK36VLEPESP36VLEPITA36TGGNLD36VLEPRT36NDS/NDSChPOL36WELGBR36OELEU36TLV-ACGIH71Predicted no-effect concentration - PNECNormal value in fresh water	10 10 10 10 10 10 10 10 10 10 10	bw/d STEL/15min mg/m3 70 72 72 72 72 72 72 72 72 72 72 72 72 72	20 20 20 20 20 20 20 20 20 20	Observat SKIN SKIN SKIN SKIN SKIN		
Threshold Limit Value Type Country TWA/8h mg/m3 TLV BGR 20 TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 YLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 VLEP FRA 36 VLEP ITA 36 VLEP RC 36 VLEP FRA 36 VLEP ITA 36 VLEP SVK 36 VLE PRT 36 NDS/NDSCh POL 36 WEL GBR 36 OEL EU 3	10 10 10 10 10 10 10 10 10 10 10	mg/m3 70 72 72 72 72 72 72 72 72 70 72 72 72 72	20 20 20 20 20 20 20 20 20 20	Observat SKIN SKIN SKIN SKIN SKIN		
Type Country TWA/8h mg/m3 TLV BGR 20 TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 VLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 VLEP RC 36 VLEP ITA 36 VLE PRT 36 NDS/NDSCh POL 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 </td <td>10 10 10 10 10 10 10 10 10 10 10</td> <td>mg/m3 70 72 72 72 72 72 72 72 72 70 72 72 72 72</td> <td>20 20 20 20 20 20 20 20 20 20</td> <td>Observat SKIN SKIN SKIN SKIN SKIN</td> <td></td> <td></td>	10 10 10 10 10 10 10 10 10 10 10	mg/m3 70 72 72 72 72 72 72 72 72 70 72 72 72 72	20 20 20 20 20 20 20 20 20 20	Observat SKIN SKIN SKIN SKIN SKIN		
mg/m3 TLV BGR 20 TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 VLA ESP 36 VLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 VLE PRT 36 NDS/NDSCh POL 36 WEL GBR 36 OEL EU 36 TLV-ACGIH	10 10 10 10 10 10 10 10 10 10 10	mg/m3 70 72 72 72 72 72 72 72 72 70 72 72 72 72	20 20 20 20 20 20 20 20 20 20	Observat SKIN SKIN SKIN SKIN SKIN		
TLV BGR 20 TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 YLA ESP 36 VLA ESP 36 VLA GRC 36 TLV GRC 36 VLEP FRA 36 VLEP ITA 36 VLEP ITA 36 VLEP ITA 36 VLEP ITA 36 VLE PRT 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC SVEC	10 10 10 10 10 10 10 10 10 10 10	70 72	20 20 20 20 20 20 20 20 20 20	SKIN SKIN SKIN SKIN SKIN		
TLV CZE 35 AGW DEU 36 MAK DEU 36 TLV DNK 36 VLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 VLEP ITA 36 VLEP ITA 36 VLEP BR 36 VLEP ITA 36 VLEP ITA 36 VLEP BR 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC SVR Normal value in fresh water SVE <td>10 10 10 10 10 10 10 10 10 10</td> <td>72 72 72 72 72 72 70 72 72 72 72</td> <td>20 20 20 20 20 20 20 20</td> <td>SKIN SKIN SKIN SKIN SKIN</td> <td></td> <td></td>	10 10 10 10 10 10 10 10 10 10	72 72 72 72 72 72 70 72 72 72 72	20 20 20 20 20 20 20 20	SKIN SKIN SKIN SKIN SKIN		
AGW DEU 36 MAK DEU 36 TLV DNK 36 VLA ESP 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 VLEP BRT 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10 10 10 10 10 10 10	72 72 72 72 72 72 70 72 72 72 72	20 20 20 20 20 20 20 20	SKIN SKIN SKIN SKIN		
MAK DEU 36 TLV DNK 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 TLV GRC 36 AK HUN 70 GV/KGVI HRV 36 VLEP ITA 36 VLEP SVK 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10 10 10 10 10 10 10	72 72 72 72 72 70 72 72 72	20 20 20 20 20 20 20 20	SKIN SKIN SKIN		
TLV DNK 36 VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 VLE PRT 36 NDS/NDSCh POL 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10 10 10 10 10	72 72 72 70 72 72 72 72	20 20 20 20 20 20 20	SKIN SKIN		
VLA ESP 36 VLEP FRA 36 TLV GRC 36 AK HUN 70 GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 VLE SVK 36 NDS/NDSCh POL 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10 10 10 10	72 72 70 72 72 72	20 20 20 20 20	SKIN SKIN		
VLEP FRA 36 TLV GRC 36 AK HUN 70 GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10 10 10	72 72 70 72 72 72	20 20 20 20 20	SKIN		
TLV GRC 36 AK HUN 70 GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10 10	72 70 72 72	20 20 20	SKIN		
AK HUN 70 GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10 10	70 72 72	20 20	SKIN		
GVI/KGVI HRV 36 VLEP ITA 36 TGG NLD 36 VLE PRT 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10	72 72	20	SKIN		
VLEP ITA 36 TGG NLD 36 VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10 10	72	20			
TGGNLD36VLEPRT36NDS/NDSChPOL36NPELSVK36WELGBR36OELEU36TLV-ACGIH71Predicted no-effect concentration - PNECNormal value in fresh water	10			SKIN		
VLE PRT 36 NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Sorted and the state		72	00			
NDS/NDSCh POL 36 NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10		20	SKIN		
NPEL SVK 36 WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water		72	20			
WEL GBR 36 OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water		72				
OEL EU 36 TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10	72				
TLV-ACGIH 71 Predicted no-effect concentration - PNEC Normal value in fresh water	10	72	20	SKIN		
Predicted no-effect concentration - PNEC Normal value in fresh water	10	72	20			
Normal value in fresh water	20			SKIN		
Normal value in marine water		0,1	mg/	/I		
		0,01	mg/	/I		
Normal value for fresh water sediment		0,01	mg/	/kg		
Normal value for marine water sediment		1,49	mg/			
Normal value for water, intermittent release		0,28	mg/	/I		
Normal value of STP microorganisms		10	mg/			
Normal value for the terrestrial compartment		0,239	mg/			
Health - Derived no-effect level - DNEL / DMEL			0			
Effects on consumers			Effects on workers			
Route of exposure Acute local Acute systemic		Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral 38 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation 18 mg/m3	3,2 mg/m3	45 mg/m3			36 mg/m3	91 mg/m3
Skin		0,52 mg/kg			5	1,04 mg/kg

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. Personal protective equipment must be CE marked, showing that it complies with applicable standards. Provide an emergency shower with face and eye wash station.

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.

NEW FADOR	MATERIA		FETY [to Reg. (EU) 8		IEET	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	7 di 14

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 I 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 airtight protective goggles (see standard EN 166).

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.

Information

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value
Appearance	liquid
Colour	pink
Odour	characteristic
Melting point / freezing point	Not available
Initial boiling point	Not available
Flammability	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
рН	$8,5 \pm 0,5$
Kinematic viscosity	Not available
Dynamic viscosity	300 ± 50 mPa*s
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Density and/or relative density	1,02 ± 0,01
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

Explosive properties

Oxidising properties

not classified as explosive, contains no explosive substances according to CLP Art. (14 (2)) the product is not an oxidizing substance



MATERIAL SAFETY DATA SHEET

Conforms to Reg. (EU) 878/2020

Edited by

RLAB

Approved by

DG

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Revision date

26.01.2022

MORPHOLINE On contact with: strong oxidising agents, reducing agents, strong acids, strong bases. May develop: heat.

Rev. n°

3

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.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other infor Information not available Information on likely routes of exposure Information not available Delayed and immediate effects as well as chronic effects from s Information not available Interactive effects Information not available	
ACUTE TOXICITY ATE (Inhalation) of the mixture: ATE (Oral) of the mixture: ATE (Dermal) of the mixture:	Not classified (no significant component) >2000 mg/kg Not classified (no significant component)
BENZENESULFONIC ACID, C10-13-ALKYL DERIVS., SODIUN LD50 (Oral): LD50 (Dermal):	/I SALTS 1080 mg/kg rat > 2000 mg/kg rat
ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM S LD50 (Oral): LD50 (Dermal):	SALTS > 2000 mg/kg rat > 2000 mg/kg rat
1,2-BENZISOTHIAZOL-3(2H)- ONE 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 (Inhalation mists/powders):	0,005 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)
STA (Inhalation vapours):	0,05 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)
STA (Inhalation gas):	10 ppm estimate from table 3.1.2 of Annex I of the CLP

NEW FADOR	MATERI	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1				
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	9 di 14

125 mg/kg

311 mg/kg

0,27 mg/l

(figure used for calculation of the acute toxicity estimate of the mixture)

2-OCTYL-2H-ISOTHIAZOL-3-ONE LD50 (Oral): LD50 (Dermal): LC50 (Inhalation mists/powders):

MORPHOLINE LD50 (Oral): LD50 (Dermal): STA (Dermal):

1050 mg/kg Rat 500 mg/kg Rabbit 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) 35,1 mg/l/1h Rat 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)

LC50 (Inhalation vapours): STA (Inhalation vapours):

SKIN CORROSION / IRRITATION Does not meet the classification criteria for this hazard class SERIOUS EYE DAMAGE / IRRITATION Causes serious eve irritation **RESPIRATORY OR SKIN SENSITISATION** Contains: 2-OCTYL-2H-ISOTHIAZOL-3-ONE, 1,2-BENZISOTHIAZOL-3(2H)- ONE. May produce an allergic reaction. 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** Does not meet the classification criteria for this hazard class STOT - SINGLE EXPOSURE Does not meet the classification criteria for this hazard class STOT - REPEATED EXPOSURE Does not meet the classification criteria for this hazard class **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 does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

MORPHOLINE	
LC50 - for Fish	179 mg/l/96h
EC50 - for Crustacea	45 mg/l/48h
EC50 - for Algae / Aquatic Plants	51 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	31 mg/l 72h
BENZENESULFONIC ACID, C10-13-ALKYL DERIVS., SODIUM SALTS	
LC50 - for Fish	1,67 mg/l/96h
EC50 - for Crustacea	2,9 mg/l/48h
EC50 - for Algae / Aquatic Plants	0,91 mg/l/72h
Chronic NOEC for Fish	0,23 mg/l 72d
Chronic NOEC for Crustacea	0,5 mg/l 7d
Chronic NOEC for Algae / Aquatic Plants	0,5 mg/l 96h
ALCOHOLS, C12-14, ETHOXYLATED,	

> 1 mg/l/96h Danio rerio

NEW FADOR	MATERI	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1				
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	10 di 14

EC50 - for Crustacea EC50 - for Algae / Aquatic Plants	7,2 mg/l/48h Daphnia magna 27 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Fish	0,14 mg/l 28d Oncorhynchus mykiss
Chronic NOEC for Crustacea	0,18 mg/l 21d Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	0,93 mg/l Desmodesmus subspicatus
12.2. Persistence and degradability	
MORPHOLINE	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
BENZENESULFONIC ACID, C10-13-ALKYL DERIVS., SODIUM SALTS Rapidly degradable	
ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS Rapidly degradable	
12.3. Bioaccumulative potential	
MORPHOLINE	
Partition coefficient: n-octanol/water	-2,55
BCF	< 2,8
BENZENESULFONIC ACID, C10-13-ALKYL DERIVS., SODIUM SALTS BCF	159
12.4. Mobility in soil	
MORPHOLINE	
Partition coefficient: soil/water	-0,6196
ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS	
Partition coefficient: soil/water	0,34
12.5. Results of PBT and vPvB assessment	

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

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. CONTAMINATED PACKAGING

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

NEW FADOR	MATERI		FETY [to Reg. (EU) 8		IEET	Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	11 di 14

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number or ID number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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/EC: None

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

Product	
Point	3 - 40

Contained substance Point

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors Not applicable

75

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH) None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None

Substances subject to the Rotterdam Convention: None

Substances subject to the Stockholm Convention: None

NEW FADOR	MATERIAL SAFETY DATA SHEET Conforms to Reg. (EU) 878/2020					Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	12 di 14

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.

Regulation (EC) No. 648/2004 Ingredients according to Regulation (EC) No. 648/2004

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017) WGK 1: Low hazard to waters

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:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
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
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin 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.
H412	Harmful 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 NUMBER: Chemical Abstract Service Number

- CE50: Effective concentration (required to induce a 50% effect)



- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: 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: EC Regulation 1907/2006
- 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 (EU) 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)
- 19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
- 20. Delegated Regulation (UE) 2021/643 (XVI 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.

NEW FADOR	Conforms to Reg. (EU) 878/2020				Board Code S-P4/2-2 Board Date 05/2010 Board Rev. 1	
Document n°	Revision date	Rev. n°	Edited by	Approved by	Filed by	Page
02/16	26.01.2022	3	RLAB	DG	RLAB	14 di 14

The following sections were modified: 01 / 02 / 03 / 04 / 08 / 09 / 11 / 12 / 15 / 16.