

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : DURA-INK® 15, 25, 55, 60, 200 Red

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Marking

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
Parc Industriel de la Plaine de
l'Ain - Allée des Combes.
01150.BLYES.France.
Phone: +33 (0)4 74 46 23 23
Fax: +33 (0)4 74 46 23 29
E-mail: info@eu.laco.com
Web: http://www.markal.com

1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Officieel adviesorgaan	Adres	Noodnummer
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 18-20 1090 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifocentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Tottleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Na Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifflinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirrberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungsstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777
HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyváradi tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166
LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1038 Riga	+371 67 04 24 73

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbová 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giftinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225

Skin Irrit. 2 H315

Eye Dam. 1 H318

STOT SE 3 H336

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

GHS07

Signal word (CLP) :

Danger

Hazardous ingredients :

1-Butanol; Isopropanol; 1-Methoxy-2-propanol; propan-1-ol

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour
H315 - Causes skin irritation
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P261 - Avoid breathing mist, vapours
P264 - Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective gloves
P302+P352 - IF ON SKIN: Wash with plenty of water
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER/doctor
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use carbon dioxide (CO₂), Dry powder., foam to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5	60 - 75	Flam. Liq. 2, H225
1-Butanol	(CAS No) 71-36-3 (EC no) 200-751-6 (EC index no) 603-004-00-6	5 - 10	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
1-Methoxy-2-propanol	(CAS No) 107-98-2 (EC no) 203-539-1 (EC index no) 603-064-00-3	5 - 10	Flam. Liq. 3, H226 STOT SE 3, H336
Isopropanol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	0 - 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
propan-1-ol	(CAS No) 71-23-8 (EC no) 200-746-9 (EC index no) 603-003-00-0	0 - 5	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336
3',6'-bis(diethylamino)spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3-one	(CAS No) 509-34-2 (EC no) 208-096-8	0 - 1.5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
4,4'-carbonimidoylbis[N,N-diethylaniline] monohydrochloride; Basic Yellow 37	(CAS No) 6358-36-7 (EC no) 228-770-5	0 - 1	Eye Dam. 1, H318 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Foam. Dry powder.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
-------------	---------------------------------------

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.

Protection during firefighting : Wear a self contained breathing apparatus. Wear fire/flamm resistant/retardant clothing. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.

Emergency procedures : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so.

Methods for cleaning up : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like cerniculite, sand, or earth to soak up the product and place into a container for later disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Avoid breathing mist, vapours. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong acids. Strong bases. Strong oxidizers.

Incompatible materials : Heat sources.

Heat and ignition sources : Keep away from heat, sparks and flame.

Prohibitions on mixed storage : Incompatible materials.

Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Marking.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol (64-17-5)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	3800 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	2000 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	960 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Spain	VLA-ED (mg/m ³)	1910 mg/m ³
Spain	VLA-ED (ppm)	1000 ppm
Spain	Notes	s,

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

1-Butanol (71-36-3)		
Austria	MAK (mg/m ³)	150 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	600 mg/m ³ max. 4x15 min./Schicht
Austria	MAK Short time value (ppm)	200 ppm max. 4x15 min./Schicht
Belgium	Limit value (mg/m ³)	62 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Remark (BE)	D
Czech Republic	Expoziční limity (PEL) (mg/m ³)	300 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	99 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	600 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	198 ppm
Czech Republic	Remark (CZ)	I
Finland	HTP-arvo (8h) (mg/m ³)	150 mg/m ³
Finland	HTP-arvo (8h) (ppm)	50 ppm
Finland	HTP-arvo (15 min)	230 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	75 ppm
Finland	Huomautus (FI)	iho
France	VLE (mg/m ³)	150 mg/m ³
France	VLE (ppm)	50 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	310 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm
Germany	TRGS 903 (BGW)	2 mg/g Kreatinin 1-Butanol (Urin; vor nachfolgender Schicht) 10 mg/g Kreatinin 1-Butanol (Urin; Expositionsende bzw. Schichtende)
Hungary	AK-érték	45 mg/m ³
Hungary	CK-érték	90 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	Notes (IE)	SK
Lithuania	IPRV (mg/m ³)	45 mg/m ³
Lithuania	IPRV (ppm)	15 ppm
Lithuania	NRV (mg/m ³)	90 mg/m ³
Lithuania	NRV (ppm)	30 ppm
Lithuania	Remark (LT)	Ū O
Poland	NDS (mg/m ³)	50 mg/m ³
Poland	NDSch (mg/m ³)	150 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	310 mg/m ³ krátkodobý: kategória I.
Slovakia	NPHV (priemerná) (ppm)	100 ppm krátkodobý: kategória I. 2 ppm (M,d) 10 ppm (M,b)
Spain	VLA-EC (mg/m ³)	154 mg/m ³
Spain	VLA-EC (ppm)	50 ppm
Spain	Notes	vía dérmica,
Sweden	nivågränsvärde (NVG) (mg/m ³)	45 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	15 ppm
Sweden	takgränsvärde (TGV) (mg/m ³)	90 mg/m ³
Sweden	takgränsvärde (TGV) (ppm)	30 ppm
Sweden	Anmärkning (SE)	H
United Kingdom	WEL STEL (mg/m ³)	154 mg/m ³
United Kingdom	WEL STEL (ppm)	50 ppm
United Kingdom	Remark (WEL)	(Sk)
Norway	Grenseverdier (Takverdi) (mg/m ³)	75 mg/m ³
Norway	Grenseverdier (Takverdi) (ppm)	25 ppm

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

1-Butanol (71-36-3)		
Norway	Merknader (NO)	H
Switzerland	VME (mg/m ³)	150 mg/m ³
Switzerland	VME (ppm)	50 ppm
Switzerland	VLE (mg/m ³)	150 mg/m ³
Switzerland	VLE (ppm)	50 ppm
1-Methoxy-2-propanol (107-98-2)		
EU	IOELV TWA (mg/m ³)	375 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	568 mg/m ³
EU	IOELV STEL (ppm)	150 ppm
EU	Notes	Skin
Austria	MAK (mg/m ³)	187 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	187 mg/m ³
Austria	MAK Short time value (ppm)	50 ppm
Austria	Remark (AT)	(gemessen als Momentanwert), (H)
Belgium	Limit value (mg/m ³)	375 mg/m ³
Belgium	Limit value (ppm)	100 ppm
Belgium	Short time value (mg/m ³)	568 mg/m ³
Belgium	Short time value (ppm)	150 ppm
Belgium	Remark (BE)	D
Czech Republic	Expoziční limity (PEL) (mg/m ³)	270 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	73.17 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	550 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	149.05 ppm
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (langvarig) (mg/m ³)	185 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Denmark	Grænseværdie (kortvarig) (mg/m ³)	370 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m ³)	370 mg/m ³
Finland	HTP-arvo (8h) (ppm)	100 ppm
Finland	HTP-arvo (15 min)	560 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	150 ppm
Finland	Huomautus (FI)	iho
France	VME (mg/m ³)	188 mg/m ³
France	VME (ppm)	50 ppm
France	VLE (mg/m ³)	375 mg/m ³
France	VLE (ppm)	100 ppm
France	Note (FR)	Peau
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	370 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	740 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	200 ppm
Hungary	AK-érték	375 mg/m ³
Hungary	CK-érték	568 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	375 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	100 ppm
Ireland	OEL (15 min ref) (mg/m ³)	568 mg/m ³
Ireland	OEL (15 min ref) (ppm)	150 ppm
Lithuania	IPRV (mg/m ³)	190 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	300 mg/m ³

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

1-Methoxy-2-propanol (107-98-2)		
Lithuania	TPRV (ppm)	75 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	375 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	563 mg/m ³
Netherlands	Remark (MAC)	(H)
Poland	NDS (mg/m ³)	180 mg/m ³
Poland	NDSch (mg/m ³)	360 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	375 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	100 ppm
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	375 mg/m ³
Spain	VLA-ED (ppm)	100 ppm
Spain	VLA-EC (mg/m ³)	568 mg/m ³
Spain	VLA-EC (ppm)	150 ppm
Spain	Notes	vía dérmica, VLI
Sweden	nivågränsvärde (NVG) (mg/m ³)	190 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	300 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	75 ppm
Sweden	Anmärkning (SE)	H
United Kingdom	WEL TWA (mg/m ³)	375 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	560 mg/m ³
United Kingdom	WEL STEL (ppm)	150 ppm
Norway	Grenseverdier (AN) (mg/m ³)	180 mg/m ³
Norway	Grenseverdier (AN) (ppm)	50 ppm
Norway	Merknader (NO)	H
Switzerland	VME (mg/m ³)	360 mg/m ³
Switzerland	VME (ppm)	100 ppm 20 ppm (urina; fine dell'esposizione / del turno)
Switzerland	VLE (mg/m ³)	720 mg/m ³
Switzerland	VLE (ppm)	200 ppm
propan-1-ol (71-23-8)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	1000 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Spain	VLA-EC (mg/m ³)	1000 mg/m ³
Spain	VLA-EC (ppm)	400 ppm
Spain	Notes	vía dérmica,
Isopropanol (67-63-0)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	980 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Germany	TRGS 903 (BGW)	50 mg/l Aceton (Blut; Expositionsende bzw. Schichtende)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	650 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	250 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	500 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Spain	VLA-ED (mg/m ³)	500 mg/m ³ VLB, s
Spain	VLA-ED (ppm)	200 ppm VLB, s 40 ppm F, I "(Acetona en orina; Final de la semana, laboral 1)"
Spain	VLA-EC (mg/m ³)	1000 mg/m ³ VLB, s
Spain	VLA-EC (ppm)	400 ppm VLB, s

8.2. Exposure controls

Appropriate engineering controls

: Ensure good ventilation of the work station. Eyewash stations.

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Use rubber gloves. EN374.
Eye protection	: Chemical goggles or safety glasses. EN166.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH. Approved respirator. EN 12083.
Other information	: Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Solid marker containing liquid colored paint.
Colour	: red.
Odour	: alcohol.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 78 °C
Flash point	: 17 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 70 – 100%
-------------	-------------

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Open flame. Direct sunlight. Heat.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

May release flammable gases. Burning produces irritating, toxic and noxious fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
----------------	------------------

ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg
LD50 dermal rabbit	> 20000 mg/kg

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

ethanol (64-17-5)	
LC50 inhalation rat (mg/l)	133.8 mg/l/4h
ATE CLP (oral)	10470.000 mg/kg bodyweight
ATE CLP (vapours)	133.800 mg/l/4h
ATE CLP (dust,mist)	133.800 mg/l/4h
1-Butanol (71-36-3)	
ATE CLP (oral)	500.000 mg/kg bodyweight
1-Methoxy-2-propanol (107-98-2)	
LD50 oral rat	4016 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 inhalation rat (ppm)	> 7000 ppm 6 hr
ATE CLP (oral)	4016.000 mg/kg bodyweight
propan-1-ol (71-23-8)	
LD50 oral rat	5400 mg/kg
LD50 dermal rabbit	4032 mg/kg
LC50 inhalation rat (mg/l)	> 33.8 mg/l/4h
ATE CLP (oral)	5400.000 mg/kg bodyweight
ATE CLP (dermal)	4032.000 mg/kg bodyweight
Isopropanol (67-63-0)	
LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	16.4 ml/kg
LC50 inhalation rat (ppm)	> 10000 ppm/4h
ATE CLP (oral)	5840.000 mg/kg bodyweight
3',6'-bis(diethylamino)spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3-one (509-34-2)	
ATE CLP (oral)	500.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

ethanol (64-17-5)	
LC50 fish 1	14200 mg/l
EC50 Daphnia 1	5012 mg/l
1-Methoxy-2-propanol (107-98-2)	
LC50 fish 1	20800 mg/l
EC50 Daphnia 1	23300 mg/l
ErC50 (algae)	> 1000 mg/l
propan-1-ol (71-23-8)	
LC50 fish 1	4555 mg/l 96 h
EC50 Daphnia 1	1000 mg/l 48 h
Isopropanol (67-63-0)	
LC50 fish 1	10000 mg/l

12.2. Persistence and degradability

ethanol (64-17-5)	
Biodegradation	> 96 % 28 d
1-Methoxy-2-propanol (107-98-2)	
Persistence and degradability	Readily biodegradable.

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

1-Methoxy-2-propanol (107-98-2)	
Biodegradation	96 % 28 d

propan-1-ol (71-23-8)	
Persistence and degradability	Readily biodegradable.
Biodegradation	75 % 20 d

Isopropanol (67-63-0)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

ethanol (64-17-5)	
Bioaccumulative potential	Not expected to bioaccumulate.

1-Methoxy-2-propanol (107-98-2)	
Bioaccumulative potential	Not expected to bioaccumulate.

propan-1-ol (71-23-8)	
BCF fish 1	0.88
Log Pow	0.2

Isopropanol (67-63-0)	
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

DURA-INK® 15, 25, 55, 60, 200 Red	
PBT: not yet assessed	
vPvB: not yet assessed	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
European List of Waste (LoW) code	: For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used
H code	: H3-A - 'Highly flammable' : — liquid substances and preparations having a flash point below 21 °C (including extremely flammable liquids), or — substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or — solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or — gaseous substances and preparations which are flammable in air at normal pressure, or — substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities H4 - 'Irritant': non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not considered a dangerous good for transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR) :

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Inland waterway transport

Carriage prohibited (ADN) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 70 – 100%

15.1.2. National regulations

Germany

Water hazard class (WGK) : 3 - severe hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

according to Regulation (EU) 2015/830

Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	TSCA: Toxic Substances Control Act

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis

DURA-INK® 15, 25, 55, 60, 200 Red

Safety Data Sheet

according to Regulation (EU) 2015/830

STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Flam. Liq. 2	H225	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H336	Calculation method

LA-CO EU CLP SDS

SDS Prepared by: The Redstone Group, LLC
6077 Frantz Rd.
Suite 206
Dublin, OH USA 43016
T 614-923-7472
www.redstonegrp.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product