LCY CHEMICAL CORP.

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Regulatory Affairs Product Stewardship Information Data Sheet
(RAPIDS)

Products: Globalene

PT181	**PD402**	**PC366-3**	**PC366-5**	**6331-8**	**6331-11**
6331	**6231-20**	**PT331M**	**PT231**	**PC932**	**6570**
6721	**6102**				

Supplier information

The products are manufactured by Da-She site of LCY Chemical Corp.

REACH (EC 1907/2006) compliance

REACH (EC 1907/2006) is a European regulation establishing the safe use of chemical substances. It requires the **R**egistration, **E**valuation, **A**uthorization and restriction of **Ch**emical substances. We confirm that all substances of the products are compliant with the pre-registration or registration required or exempted under REACH, and that we have the actions to proceed with the registration of these substances, or to procure substances only from suppliers aware of their REACH requirements.

If you export our products into the EU, you are considered as a downstream user (DU) and may have no registration obligations for our products. However, you should provide us the information of your product uses and yearly Tonnage importing into EU. Those will be included in the total volumes that we must provide to the OR (Only Representative of LCY or monomer supplier for registration to REACH) to fulfill our registration record-keeping requirements. And you may need our pre-registration or registration numbers of certain monomers in accordance with EC 1907/2006, please contact your LCY Sales Representative for more details.

The products do not intentionally contain any substance specified in Annex XIV (Authorization list) and Annex XVII (Restriction list) to REACH regulation including their amendment up to the issued date of this document, and do not contain any **SVHCs (Substances of Very High Concern, updated on Jun. 10, 2022)** above the threshold limits of 0.1%(w/w).

Latest Annex XIV linking to ECHA website: https://echa.europa.eu/authorisation-list
Latest Annex XVII linking to ECHA website: https://echa.europa.eu/substances-restricted-under-reach
Latest 224 SVHCs: http://echa.europa.eu/web/guest/candidate-list-table

Chemical inventories

All ingredients intentionally added in the products are in compliance with the following chemical inventories:

United States: Toxics Substances Control Act Inventory (TSCA)

Canada: Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL)
Europe: EINECS/ELINCS or replaced by REACH
Australia: Australian Inventory of Chemical Substances (AICS)
New Zealand: New Zealand Inventory of Chemicals (NZIoC)
Korea: Korean Existing Chemicals List (KECL)
Japan: Japanese Inventory of Existing and New Chemical Substances (ENCS)
The Philippines: Philippines Inventory of Chemicals and Chemical Substances (PICCS)
China: Inventory of Existing Chemical Substances Manufactured or Imported in China (IECSC)
Taiwan: Taiwan Chemical Substance Inventory (TCSI)

Food contact compliance: Regulation (EU) NO. 10/2011

The products comply with the relevant requirements of regulation 1935/2004/EC (Framework Regulation) and 2023/2006/EC (GMP, Good Manufacturing Practice) applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes).

The monomers and additives intentionally added in the products are positive listed in the Union List of Authorized Substances of Regulation 10/2011/EC (Table 1 of Annex I) or applicable to ***Article 6*** (Derogations for substances not included in the Union list), and comply with its amendment as below.

Commission Regulation (EU):

321/2011 of 1 April 2011	1282/2011 of 28 November 2011	1183/2012 of 30 November 2012
202/2014 of 3 March 2014	2015/174 of 5 February 2015	2016/1416 of 24 August 2016
2017/752 of 28 April 2017	2018/79 of 18 January 2018	2018/213 of 12 February 2018
2018/831 of 5 June 2018	2019/37 of 10 January 2019	2019/1338 of 8 August 2019
2020/1245 of 3 September 2020		

Dual use additive:

- Calcium salts of fatty acid (E 470a)

There is no "intentionally added additive" with a SML specified in Union list.

In case customer needs the identity of the components, a secrecy agreement is required through sale channel to be established with LCY Chemical Corp.

The overall migration limit (OML: 10mg/dm^2 maximum under 10/2011/EC) and SML should be determined or carried out on the finished articles under actual foodstuff or the appropriate simulants at the real time/temperature conditions of use, which are the responsibility of manufacturer of finished plastic materials and articles intended for contact with food.

Food contact compliance: US Food and Drug Administration (FDA)

The base resin in the products meet the FDA requirements contained in the Code of Federal Regulations in 21 CFR 177.1520(a)(1)(i) and (c)1.1a. According to our information, all other ingredients intentionally added in the products meet the requirements of their respective FDA regulations or 21 CFR 177.1520(b). The products meet the FDA criteria in 21 CFR 177.1520 for used in contact with food types as listed in Table 1 of 21 CFR 176.170(c), and under condition of use A through H listed in Table 2 of 176.170(c).

Food contact compliance: China National Food Safety Standards

The products comply with China National Food Safety Standards listed below:
GB4806.1-2016: General safety requirements of food contact materials and articles

GB4806.6-2016: Food contact plastic resins
GB9685-2016: Standard for uses of additives in food contact materials and articles
GB31603-2015: General hygienic practice for production of food contact materials and articles

As for migration test requirements (overall migration limit/OML; specific migration limit/SML; total specific migration limit/SML(T)), the actual use of the final food articles must be considered, using real food or appropriate food simulations. Testing at actual use time and temperature often requires the final manufacturer of finished article to be discussed and performed for the intended use of the article.

Compliance with phthalates restriction or regulations

The products do not contain phthalate as intentionally added component, and comply with threshold limits associated with the following regulations and standards. Besides, historical test record show Phthalate is "not detected" under PQL (practical quantification limit) which is the lowest concentration that can be reliably measured within specified limits of precision.

- **REACH SVHCs threshold limits:** 0.1%w/w.
- **U.S. Consumer Product Safety Improvement Act (CPSIA):** < 0.1% w/w
- **EN 14372 (Child use and care articles - Cutlery and feeding utensils - Safety requirements and tests:**
  - Phthalates (DEHP+DBP+BBP+DINP+DIDP+DNOP) < 0.1%w/w
- **Taiwan Sanitation Standard for Food Utensils, Containers and Packages**
  - Phthalates content (DEHP, DBP, BBP, DIDP, DINP, DMP, DNOP, and DEP) each less than 0.1%w/w
  - Phthalates extractable content in n-Heptane: DEHP < 1.5 ppm; DBP < 0.3 ppm; BBP < 30 ppm; DIDP < 9 ppm; DINP < 9 ppm; DEHA < 18 ppm

Restriction of Hazardous Substances in Electric and Electronic Equipment (RoHS 2)-2011/65/EU and its amendment /Directive (EU) 2015/863

Cadmium, lead, hexavalent chromium, mercury, PBBs, PBDEs, DEHP, BBP, DBP and DIBP are not intentionally used in formulation of the products. The incidental concentrations do not exceed the limits established by Directive 2011/65/EU and its amendment Directive (EU) 2015/863 as tabulated.

Substances	maximum concentration values tolerated by weight in homogeneous materials
Cadmium	0.01%
Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated biphenyls (PBB)	0.1%
Polybrominated diphenyl ethers (PBDE)	0.1%
Bis(2-ethylhexyl) phthalate (DEHP)	0.1%
Benzyl butyl phthalate (BBP)	0.1%
Dibutyl phthalate (DBP)	0.1%
Diisobutyl phthalate (DIBP)	0.1%

The Toxics in Packaging Clearinghouse (TPCH, formerly known as CONEG)

The products do not contain heavy metal (lead, cadmium, mercury and hexavalent chromium) or its compounds, phthalates, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) as intentionally added components, and reasonably comply TPCH (updated in February 2021).

ELV (End of Life Vehicles) Directive 2000/53/EC and its amendments

The products do not contain heavy metals (cadmium, lead, hexavalent chromium and mercury) or its compounds as intentionally added components, and reasonably comply with the threshold limits given

in Annex II (Note) of the Directive 2005/673/EC (amending Annex II of Directive 2000/53/EC), as tabulated.

Heavy metals	**Threshold limits, ppm**
Cadmium	100
Lead	1000
Hexavalent Chromium	1000
Mercury	1000

Packaging and packaging waste - EU Directive 94/62/EC and its amendments

The products do not contain heavy metals (cadmium, lead, hexavalent chromium, and mercury) or its compounds as intentionally added components, and reasonably meet requirements of less than 100 ppm for total incidental cadmium, lead, hexavalent chromium, and mercury. In addition, the products have the potential to be recycled according to these requirements.

Toys safety compliance: Directive 2009/48/EC, EN 71-3: 2019+A1:2021, and ASTM F963

The products do not contain restricted chemical substances and have no heavy metal element over its lowest migration limit regulated by 2009/48/EC, EN71-3: 2019+A1:2021 and ASTM F963.

Element	Migration limits (soluble threshold), mg/kg			
	ASTM F963	**EN71-3, 2009/48/EC** dry, brittle, powder-like or pliable toy material	**EN71-3, 2009/48/EC** liquid or sticky toy material	**EN71-3, 2009/48/EC** scraped-off toy material
Aluminum	-	2250	560	28130
Antimony	60	45	11.3	560
Arsenic	25	3.8	0.9	47
Barium	1000	1500	375	18750
Boron	-	1200	300	15000
Cadmium	75	1.3	0.3	17
Chromium (III)	60	37.5	9.4	460
Chromium (VI)		0.02	0.005	0.053
Cobalt		10.5	2.6	130
Copper	-	622.5	156	7700
Lead	90	2.0	0.5	23
Manganese	-	1200	300	15000
Mercury	60	7.5	1.9	94
Nickel	-	75	18.8	930
Selenium	500	37.5	9.4	460
Strontium	-	4500	1125	56000
Tin	-	15000	3750	180000
Organic tin	-	0.9	0.2	12
Zinc	-	3750	938	46000
*** Total Lead**	**100**	**-**	**-**	**-**

Toys safety compliance: EN71-9: 2007

The products are polymeric material in compliant with the threshold limits of monomers migration, solvent migration, solvent inhalation and plasticizers migration subject to EN71-9.

Compliance with EU cosmetics Regulation NO 1223/2009/EC and its amendment (EU 2019/680; 2019/681; 2019/831)

Substances specified as carcinogenic, mutagenic or toxic for reproduction (CMR) with category of 1A, 1B or 2 under Regulation No 1272/2008/EC, and prohibited & restricted substance listed in Annex II & III of 1223/2009/EC, as well as nanomaterials are not used in formulation of the products. The

products meet the requirements for plastics used in package of cosmetics. The manufacturer or supplier of cosmetics should perform a safety assessment associated with finished cosmetics products prior to being placed on the EU market.

California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

The products do not contain reportable levels of substance subject to California Proposition 65 list (updated on **Feb. 25, 2022)** as intentionally added components. Basically, it is required for the California business owner to develop his or her own regulatory compliance plan in accordance with requirements of Proposition 65.

Compliance with Washington Children's Safe Product Act (WAC 173-334)

The products do not contain reportable levels of substance listed in 85 CHCCs (Chemicals of High Concern to Children in the updated CSPA Reporting Rule, on September 29, 2017) as intentionally added component.

Compliance with Consumer Product Safety Improvement Act (CPSIA or H.R.4040) and its amendment on Oct. 18, 2017

The products do not contain lead and phthalates (DEHP, DBP, BBP, DINP, DIBP, DPENP, DHEXP, and DCHP) as intentionally added components, and comply with the threshold limit of lead and phthalates regulated in CPSIA or H.R.4040.

Non-use of tallow or animal derived substances; TSE (Transmissible Spongiform Encephalopathy) or BSE (Bovine Spongiform Encephalopathy) free

Tallow or animal derived substances/additives are not used in formulation and production of the products, and it is reasonable the products have no significant infectious agents for a disease of TSE or BSE.

Compliance with IEC 61249-2-21:2003 definition of Halogen-Free. (Cl<900 ppm; Br<900ppm; Cl+Br<1500ppm)

The elements or compounds of fluorine, bromine, iodine and astatine are not intentionally used in formulation of the products, however catalyst composed of metal chloride is used in polymerization of the products and may have a residue which is not detectable (ND) under historical testing with MDL (method detection limit) of 50 ppm, and meet the requirements for (IEC 61249-2-21:2003) definition of Halogen-Free.

Compliance with “Conflict Minerals Reporting Template” updated on April 27 of 2018

The products do not contain metals or its compounds of gold(Au), tantalum(Ta), tungsten(W), cobalt(Co) and tin(Sn) in formulation and reasonably comply with the requirements of *“**Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act- Conflict Minerals**”* which regulates no metal derived from or sourced from Democratic Republic of Congo(DRC) region including South Sudan, Uganda, Rwanda, Burundi, Tanzania, Zambia, Angola, Republic of Congo, and the Central Republic of Africa, or illegally taxed on trade routes, either of which are controlled by non-governmental military groups, or unlawful military factions.

Not subject to Biocidal Product Regulation (EC) No 528/2012 (BPR)

The products do not contain any active substance and are not intended for biocidal application, and it is reasonably not subject to **Biocidal Product Regulation (EC) No 528/2012 (BPR).**

Non-use of Flame Retardants (toys or consumer safety)

The products do not contain any flame retardant as intentionally added components, including flame retardants tabulated below that are concerned for toys or consumer safety.

Flame Retardants	**CAS No.**
Tris (2,3-dibromopropyl) phosphate	126-72-7
Tris (aziridinyl) phosphinoxide	545-55-1
Tri-*o*-cresyl phosphate	78-30-8
Tris(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5
Tris (1,3-Dichloro-2-propyl) phosphate (TDCPP)	13674-87-8
Polychlorinated terphenyls (PCTs)	-

Non-use of Polycyclic Aromatic Hydrocarbons

The products do not contain any tabulated Polycyclic Aromatic Hydrocarbons (PAHs) as intentionally added components, and reasonably comply with maximum PAH limit given in AfPS GS 2019:01 PAK.

Substances	**CAS No.**	**Maximum limits(mg/kg)**
Benzo[a]pyrene	50-32-8	< 0.2
Benzo[e]pyrene	192-97-2	< 0.2
Benz[a]anthracene	56-55-3	< 0.2
Benzo[b]fluoranthene	205-99-2	< 0.2
Benzo[j]fluoranthene	205-82-3	< 0.2
Benzo[k]fluoranthene	207-08-9	< 0.2
Chrysene	218-01-9	< 0.2
Dibenz[a,h]anthracene	53-70-3	< 0.2
Indeno[1,2,3-cd]pyrene	193-39-5	< 0.2
Phenanthrene, Pyrene, Anthracene, Fluoranthene	85-01-8 129-00-0 120-12-7 206-44-0	< 1 Sum
Naphthalene	91-20-3	< 1
Sum 15 PAH	-	< 1

Not subject to Nanomaterial Regulation (2011/696/EU)

The products do not contain any intentional component subject to the EU Commission Recommendation on the definition of nanomaterial (2011/696/EU, Oct. 18, 2011) which defines nanomaterial as a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1nm - 100nm.

Food allergens free

According to Food Allergy Research and Education (FARE), many types of foods can be allergens, and cow's milk, eggs, peanuts, fish, shellfish, tree nuts (such as cashews or walnuts), wheat, and soy are responsible for 90 percent of food allergies. The products do not contain above mentioned food allergens as intentionally added components.

Non-use of GMO (Genetically Modified Organism) substances

To our knowledge, GMO means an organism in which the genetic material has been altered in a way that does not occur naturally through fertilization and/or natural recombination. GMOs may be plants, animals or micro-organisms, such as bacteria, parasites and fungi. The products do not contain any GMO as intentionally added components.

Non-use of environment and health-related substances to be controlled

The products do not contain substance subject to "Environment and health-related substances to be controlled" as intentionally added component, and comply with threshold limits associated with the following regulations or standards.

- **SONY technical standards SS-00259 20th Edition**
- **GADSL (Global Automotive Declarable Substance List), revised on 2022/08/01**
- **Maine State - List of Chemicals of High Concern (49 CHCs)**

Compliance with Stockholm Convention on persistent organic pollutants (POPs), Regulation (EU) 2019/1021, and its amendment (EU) 2020/1203, 2020/1204, 2021/277

The products do not contain substance subject to POPs as intentionally added component.

Waste Framework Directive (2008/98/EC) on SCIP (Substances of Concern In Products) control

The products do not contain substance subject to SVHCs of REACH as intentionally added component.

Note:

(1) Customers shall determine these products are suitable for the intended use, and their use of products is safe and lawful (including but not limited to above information).

(2) RAPIDS will be revised according to amendment or changes in the laws and regulations. LCY Chemical Corp. recommends customer to get latest version of RAPIDS via sales channel. The RAPIDS shall be effective for 1 year from its issued date unless there is later version.

(3) The information illustrated in the RAPIDS is only applicable for on-prime Globalene products as they are provided by LCY Chemical Corp. or an authorized LCY distributor.

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